

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
1	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Geotail Scientific Satellite Program	Cooperative Agreement	MOU implementing exchange of diplomatic notes agreement JA0134 of 09/25/1989 for the development, launch, and operation of a scientific satellite, designated the Geotail Satellite, to investigate the geomagnetic tail regions of the magnetosphere JA 0134 deleted - dip notes included here.	12/19/1989	12/31/2018
2	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	WIND Mission OPEN Geomagnetic Tail	Cooperative Agreement	Participation by three CNES scientists as Co-Investigators in the investigation "An Experiment to Measure 3-D Plasma and Energetic Particle Distribution in the OPEN Geomagnetic Tail and the Interplanetary Physics Laboratories "during the development, mission operations, and data analysis phases of the Wind mission of the Global Geospace Science (GGS) element of the International Solar-Terrestrial Physics Program (ISTP)	10/15/1990	12/31/2018
3	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Solar Wind and Suprathermal Ion Composition Studies (WIND)/WIND mission	Cooperative Agreement	Participation by three MPI scientists as Co-Investigators on the Solar Wind and Suprathermal Ion Composition Studies investigation of the Global Geospace Science (GGS) element of the International Solar Terrestrial Physics Program (ISTP) Max Planck Institut (MPI), GM	10/18/1990	12/31/2018
4	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	WIND Mission/Experiment to Measure 3-D Plasma and Energetic Particle Distributions	Cooperative Agreement	Participation by G. Paschmann of MPI as a Co-Investigator on the investigation "Experiment to Measure 3-D Plasma and Energetic Particle Distributions in the OPEN Geomagnetic Tail and the Interplanetary Physics Laboratories" of the Global Geospace Science (GGS) element of the International Solar Terrestrial Physics Program (ISTP) Max Planck Institut (MPI), GM No expiration date in the agreement. Investigating whether still active. In meantime, made active with same expiration date as other WIND agreements.	10/18/1990	12/31/2018
5	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	WIND Mission/OPEN Interplanetary Physics Laboratory-Magnetic Field Measurement	Cooperative Agreement	Participation by Dr. F. Neubauer of the University of Koeln as a Co-Investigator on the "Proposal for OPEN Interplanetary Physics Laboratory-Magnetic Field Measurement" investigation of the Global Geospace Science (GGS) element of the International Solar Terrestrial Physics Program (ISTP) Max Planck Institut (MPI), GM No expiration date in the agreement. Investigating whether still active. In meantime, made active with same expiration date as other WIND agreements.	10/18/1990	12/31/2018
6	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	WIND Mission Radio and Plasma Wave Experiment (WAVES)	Cooperative Agreement	Inclusion of the investigation "Wind Radio and Plasma Wave Experiment (WAVES)" in the development, mission operations, and data analysis phases of the Wind mission of the Global Geospace Science (GGS) element of the International Solar-Terrestrial Physics Program (ISTP)	10/26/1990	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
7	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	WIND Mission/Origins of Plasma in the Earth's Neighborhood (OPEN)	Cooperative Agreement	Participation by ESTEC's R. Reinhard, T. Sanderson, and K. Wenzel as Co-Investigators in the development, mission operations, and data analysis phases of the investigation "An Experiment to Measure 3-D Plasma and Energetic Particle Distributions in the OPEN Geomagnetic Tail and the Interplanetary Physics Laboratories" under the WIND mission of the Global Geospace Science (GGS) element of the International Solar Terrestrial Physics program. There is no expiration date for the cooperation. Uncertain if activity is ongoing. OER is investigating.	12/6/1990	12/31/2018
8	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Geotail Mission: Energetic Particles and Ion Composition EPIC Experiment	Cooperative Agreement	Participation by Dr. F. Gliem of the University of Braunschweig as a Co-Investigator in the EPIC experiment of the Geotail Mission as part of the Solar Terrestrial Science Programme	4/8/1991	12/31/2018
9	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Solar and Heliospheric Observatory (SOHO) Extreme Ultraviolet Imaging Telescope (EIT)	Cooperative Agreement	Participation in SOHO by Dr. J. Delaboudiniere from the Laboratoire de Physique Stellaire et Planetaire as a Principal Investigator with his EIT, whose objective is to study coronal heating and solar wind acceleration using remote sensing techniques to evaluate quantitatively the contribution of different coronal mechanisms to global balances	5/1/1991	12/31/2018
10	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Solar and Heliospheric Observatory (SOHO) Solar Wind Anisotropies (SWAN)	Cooperative Agreement	Participation in SOHO by Dr. J. Bertaux from the Service d'Aeronomie as a Principal Investigator with his SWAN, whose objective is to map the sky interplanetary hydrogen emission almost entirely every other day	5/1/1991	12/31/2018
11	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Solar and Heliospheric Observatory (SOHO) Global Oscillations at Low Frequencies (GOLF)	Cooperative Agreement	Participation in SOHO by Dr. A. Gabriel from the Institute d'Astrophysique Spatiale as a Principal Investigator with his GOLF experiment, whose objective is to study the internal structure of the sun by measuring the spectrum of free global oscillations	5/1/1991	12/31/2018
12	Goddard Space Flight Center (GSFC)	Federal Office for Education and Science	Switzerland (SZ)	Solar and Heliospheric Observatory (SOHO)	Cooperative Agreement	Participation of Dr. J. Geiss of the University of Bern and Dr. M. Huber of the Swiss Federal Institute of Technology as Co-Investigators in SOHO on an investigation involving the use of an Ultraviolet Coronagraph Spectrometer(UVCS) to investigate mechanisms for accelerating the solar wind mechanisms for heating the coronal plasma and to locate and characterize the coronal sources of solar wind and coronal phenomena that establish the plasma properties of the solarwind	5/1/1991	12/31/2018
13	Goddard Space Flight Center (GSFC)	General Secretariat of Research and Technology (GSRT)	Greece (GR)	Energetic Particles and Ion Composition (EPIC) Experiment of Geotail Mission	Cooperative Agreement	Participation by Dr. E. T. Sarris, Director of the Institute of Ionosphere and Space Science of the National Observatory of Athens, as a Co-Investigator on the Energetic Particles Experiment (EPIC) of the Geotail mission element of the Collaborative Solar-Terrestrial Research (COSTR) program	5/3/1991	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
14	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	SOHO: Ultraviolet Coronagraph Spectrometer (UVCS)	Cooperative Agreement	Participation in the Solar and Heliospheric Observatory (SOHO) project by Dr. S. Livi of MPI as a Co-Investigator for the UVCS, whose objectives are to investigate mechanisms for accelerating the solar wind mechanisms for heating the coronal plasma and to locate and characterize the coronal sources of solar wind and coronal phenomena that establish the plasma properties of the solar wind	7/4/1991	12/31/2018
15	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Solar and Heliospheric Observatory (SOHO): Charge, Element, and Isotope Analysis (CELIAS)	Cooperative Agreement	Participation in SOHO by Dr. D. Hovestadt of the Max Planck Institut fuer Extraterrestrische Physik with his investigation "Charge, Element, and Isotope Analysis (CELIAS)," whose objectives were to measure the mass, ionic charge, and energy of the low- and high-speed solar wind, of suprathermal ions, and of low-energy flare particles	7/4/1991	12/31/2018
16	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	SOHO: Comprehensive Suprathermal and Energetic Particle Analyser (COSTEP)	Cooperative Agreement	Participation in the Solar and Heliospheric Observatory (SOHO) project by Dr. H. Kunow of the Institut fuer Kernphysik at Kiel University as a Principal Investigator with his COSTEP investigation, which will use particle emissions from the sun over a wide range of species and energies as tools to provide for quantum leaps in knowledge of a number of key physical processes and problems of interest to solar and space plasma physics	7/4/1991	12/31/2018
17	Kennedy Space Center (KSC)	Government of Spain	Spain (SP)	Agreement on Space Cooperation between the United States of America and the Kingdom of Spain	Cooperative Agreement	Authorization for, in case of emergency, manned space vehicles of the United States to overfly, enter, and depart Spanish air space and use the runways, taxiways, and other installations at the Moron de la Frontera, Rota, and Zaragoza bases; also, agreement to negotiate agreements in promising areas for joint efforts to strengthen cooperation in space science and technology. Dip notes entering the agreement into force were exchange on Sept 3, 1991, and May 12, 1994. The science and technology portion of this agreement was implemented by agreement SP0027 of 12/02/1991 with INTA and agreement SP0028 of 07/03/1992 with CDTI.	7/11/1991	12/31/2100
18	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Solar and Heliospheric Observatory (SOHO) Wide-Field White Light and Spectrometric Coronagraph (LASCO)	Cooperative Agreement	Participation in SOHO by nine French scientists as Co-Investigators on LASCO, whose objective is to collect information on how the corona is heated, where and how the solar wind accelerates, and the causes of coronal transients and what role they play in the evolutionary development of large-scale coronal patterns	10/14/1991	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
19	NASA Center Not Specified	National Institute for Aerospace Technology (INTA)	Spain (SP)	Agreement on Cooperative Activities Between the National Aeronautics and Space Administration of the United States and the National Institute For Aerospace Technology of Spain	Cooperative Agreement	Broad agreement between NASA and the National Institute for Aerospace Technology of Spain (INTA) to consider cooperation in a variety of fields in Space Science, Earth Science, Aeronautics Research, and Exploration Systems. The agreement also establishes a group to discuss potential cooperative projects in the identified areas. The agreement is automatically extended each year. The expiration date of 2100 was picked because it was far in the future.	12/2/1991	12/31/2100
20	NASA Center Not Specified	Center for Technological Industrial Development (CDTI)	Spain (SP)	Agreement on Cooperative Activities Between the National Aeronautics and Space Administration of the United States and the Center for Technological Industrial Development of Spain	Cooperative Agreement	NASA Center: Mentioned different NASA Installations. Broad agreement between NASA and the Center for Technological Industrial Development of Spain (CDTI) that anticipates the negotiation of future agreements between NASA and Spanish agencies in a variety of fields in Space Operations, Space Science, Earth Science, Aeronautics Research, and Exploration Systems. The agreement specifically mentions space vehicle landing facilities and science and technology development programs. It also calls to the establishment of a group to discuss potential cooperative projects. The agreement is automatically extended each year. The expiration date of 2100 was picked because it was far in the future. The CDTI is known presently (August 2008) as the Centre for the Development of Industrial Technology (CDTI).	7/3/1992	12/31/2100
21	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Terra/Earth Observing System (EOS AM-1): Multi-Angle Imaging Spectro-Radiometer (MISR)	Cooperative Agreement	Participation by Dr. Jan-Peter Muller on the MISR Instrument Team, which is to design, develop, and verify the MISR instrument and MISR data exploitation missing UK letter	9/11/1992	12/31/2020
22	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Aqua/Terra/Earth Observing System (EOS AM-1 and PM-1): Moderate Resolution Imaging Spectrometer (MODIS)	Cooperative Agreement	Participation by Dr. Jan-Peter Muller of University College-London in the Instrument Team for MODIS, a facility instrument designed to measure both biological and physical processes on a global basis Missing the UK letter	9/11/1992	12/31/2020
23	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Aqua/Earth Observing System (EOS PM-1): AIRS/AMSU/MHS	Cooperative Agreement	Participation by Dr. Rolando Rizzi of the European Centre for Medium Range Weather Forecasting on the Instrument Team for the Atmospheric Infrared Sounder/Advanced Microwave Sounding Unit-A/Microwave Humidity Sounder(AIRS/AMSU/MHS), a facility instrument of NASA's EOS No UK letter	9/11/1992	12/31/2020
24	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Instrument Team for AIRS/AMSU/MHS Instruments of Earth Observing System (EOS PM-1)/Aqua	Cooperative Agreement	Service by Dr. Alain Chedin of Ecole Polytechnique on the Instrument Team for the Atmospheric Infrared Sounder (AIRS), Advanced Microwave Sounding Unit-A (AMSU), and Microwave Humidity Sounder (MHS) instruments of theEOS.	2/16/1993	12/31/2020
25	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Instrument Team for CERES Instrument of Earth Observing System (EOS AM-1 and PM-1)/Aqua/Terra	Cooperative Agreement	Service by Dr. Robert S. Kandel of Ecole Polytechnique on the Instrument Team for the Clouds and Earth's Radiant Energy System (CERES) instrument of the EOS	2/16/1993	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
26	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Instrument Team for MODIS Instrument of Earth Observing System (EOS AM-1 and PM-1)/Aqua/Terra	Cooperative Agreement	Service by Dr. Didier Tanre of the Laboratoire d'Optique Atmospherique on the Instrument Team for the Moderate-Resolution Imaging Spectrometer (MODIS) instrument of the EOS	2/16/1993	12/31/2020
27	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Cassini's Saturn Orbiter Radio and Plasma Wave System (RPWS)	Cooperative Agreement	Participation by Dr. Arne Pederson of ESTEC as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the Cassini RPWS investigation, whose primary objective is to study plasma waves, radio emissions, and related phenomena in the vicinity of Saturn. Cassini was launched on Oct. 15, 1997, from Cape Canaveral.	4/28/1993	12/31/2017
28	Jet Propulsion Laboratory (JPL)	Austrian Space Agency (ASA)	Austria (AU)	Cassini Saturn Orbiter Radio and Plasma Wave System (RPWS)	Cooperative Agreement	Participation by Dr. Helmut O. Rucker as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the Cassini RPWS investigation Agreement expiration is end of mission, no other date.	4/29/1993	12/31/2017
29	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Cassini: Composite Infrared Spectrometer (CIRS)	Cooperative Agreement	Participation by Dr. Angioletta Coradini of the Istituto di Astrofisica Spaziale of CNR as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the Cassini Composite Infrared Spectrometer(CIRS) investigation	5/5/1993	12/31/2017
30	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Cassini: Radio Science Subsystem (RSS) Facility Instrument	Cooperative Agreement	Participation by three Italian scientists as Science Team Members for the development, launch, post-launch, and data analysis phases of the Cassini Radio Science Subsystem (RSS) facility instrument investigation	5/5/1993	12/31/2017
31	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Cassini: Visual and Infrared Mapping Spectrometer (VIMS) Facility Instrument	Cooperative Agreement	Participation by six Italian scientists as Science Team Members for the development, launch, post-launch, and data analysis phases of the Cassini Visual and Infrared Mapping Spectrometer (VIMS) facility instrument investigation This is different from the VIMS activity covered in the MOU.	5/5/1993	12/31/2017
32	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Cassini: RADAR Facility Instrument	Cooperative Agreement	Participation by four Italian scientists as Science Team Members for the development, launch, post-launch, and data analysis phases of the Cassini Radar (RADAR) facility instrument investigation Some duplication of the Cassini MOU, but also some different responsibilities, thus both need to be maintained.	5/5/1993	12/31/2017
33	Jet Propulsion Laboratory (JPL)	Hungarian Space Office	Hungary (HU)	Cassini Plasma Spectrometer (CAPS) Instrument on Cassini Saturn Orbiter Mission	Cooperative Agreement	Participation by a Hungarian scientist as a Co-Investigator in the development, mission operations, and data analysis phases of the CAPS investigation of the Cassini mission	6/4/1993	12/31/2017
34	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cassini Saturn Orbiter - The Plasma Spectrometer Mission (CAPS)	Cooperative Agreement	The Cassini Orbiter Mission, and Plasma Spectrometer investigation was confirmed as part of the payload on the Cassini Saturn Orbiter. CAPS Investigation including the delivery, testing, integration and post-launch operation of the complete CAPS instrument package.	6/21/1993	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
35	Jet Propulsion Laboratory (JPL)	Norwegian Space Centre (NSC)	Norway (NO)	Cassini Plasma Spectrometer (CAPS)	Cooperative Agreement	Participation by Dr. Knut R. Svenes of NRDE as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the CAPS investigation, which will characterize in detail the composition, distribution, sources and sinks, and dynamics of plasma within Saturn's magnetosphere, including plasma interactions with Titan, and with the icy satellites and rings	7/1/1993	12/31/2017
36	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cassini Saturn Orbiter: RADAR	Cooperative Agreement	Confirmation of Dr. Chris D. Rapley of University College-London as a Science Team member for the development, launch, post-launch, and data analysis phases for the RADAR Facility instrument, which will investigate features of Titan's surface. See also agreement UK0338 of 07/02/1993.	7/2/1993	12/31/2017
37	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cassini Saturn Orbiter: Composite Infrared Spectrometer (CIRS)	Cooperative Agreement	Participation by Dr. Simon Calcutt, Dr. Peter L. Read, and Prof. Fredric W. Taylor of Oxford University and Dr. Peter Ade of the University of London as Co-Investigators in the development, launch, post-launch, and data analysis phases of Cassini's Composite Infrared Spectrometer (CIRS) instrument.	7/2/1993	12/31/2017
38	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Composite Infrared Spectrometer (CIRS)	Cooperative Agreement	Participation by 12 French scientists as Co-Investigators in the development, launch, post-launch, and data analysis phases of the Cassini Saturn Orbiter CIRS investigation	7/15/1993	12/31/2017
39	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Visual and Infrared Mapping Spectrometer (VIMS)	Cooperative Agreement	Participation by six French scientists as Science Team Members in the development, launch, post-launch, and data analysis phases of the Cassini Saturn Orbiter VIMS investigation	7/15/1993	12/31/2017
40	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Ultraviolet Imaging Spectrograph (UVIS)	Cooperative Agreement	Participation by Dr. Michel Festou of the Observatoire Midi-Pyrenees as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the Cassini Saturn Orbiter UVIS investigation	7/15/1993	12/31/2017
41	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Interdisciplinary Scientist (IDS)	Cooperative Agreement	Cooperation in the Cassini Saturn Orbiter IDS investigation.	7/15/1993	12/31/2017
42	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Magnetospheric Imaging Instrument (MIMI)	Cooperative Agreement	Cooperation in the Cassini Saturn Orbiter MIMI investigation.	7/15/1993	12/31/2017
43	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Radio and Plasma Wave System (RPWS)	Cooperative Agreement	Cooperation in the Cassini Saturn Orbiter RPWS investigation.	7/15/1993	12/31/2017
44	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cassini Saturn Orbiter: Dual Technique Magnetometer (MAG)	Cooperative Agreement	Participation in the Cassini Saturn Orbiter program by Dr. David J. Southwood of Imperial College as Principal Investigator for the Dual Technique Magnetometer (MAG). See also agreements UK0339 of 07/20/1993 and UK0340 of 07/20/1993.	7/20/1993	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
45	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cassini Saturn Orbiter: Imaging Science Subsystem (ISS)	Cooperative Agreement	Participation in the Cassini Saturn Orbiter program by Dr. Carl D. Murray of Queen Mary College as an ISS Science Team Member for the development, launch, post-launch, and data analysis phases of the Cassini mission in connection with the ISS. See also agreements UK0292 of 07/20/1993 and UK0341 of 07/20/1993.	7/20/1993	12/31/2017
46	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cassini Saturn Orbiter: Radio and Plasma Wave System (RPWS)	Cooperative Agreement	Participation in the Cassini Saturn Orbiter program by Dr. Leslie J. C. Woolliscroft of University of Sheffield as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the Cassini mission in connection with the RPWS. See also agreements UK0292 of 07/20/1993 and UK0340 of 07/20/1993.	7/20/1993	12/31/2017
47	Jet Propulsion Laboratory (JPL)	Swedish National Space Board (SNSB)	Sweden (SW)	Cassini Saturn Orbiter Radio and Plasma Wave Systems (RPWS)	Cooperative Agreement	Participation by Drs. Bostrom, Gustafsson, and Wahlund of SISP as Co-Investigators for the RPWS investigation	8/20/1993	12/31/2017
48	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Imaging Science Subsystem (ISS)	Cooperative Agreement	Participation by Dr. Andre Brahic of the Observatoire de Paris-Meudon as a Science Team Member in the development, launch, post-launch, and data analysis phases of the Cassini Saturn Orbiter ISS investigation	8/24/1993	12/31/2017
49	Jet Propulsion Laboratory (JPL)	Technical Research Center of Finland (VTT)	Finland (FI)	Cassini Plasma Spectrometer (CAPS) - VTT	Cooperative Agreement	Participation by Dr. Vaino Kelha of VTT as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the CAPS investigation of the Cassini Saturn Orbiter project	10/20/1993	12/31/2017
50	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	SOHO: Solar Ultraviolet Measurements of Emitted Radiation (SUMER)	Cooperative Agreement	Amendment of agreement GM 0047 of 07/04/1991 to change the provision of Multi-Anode Microchannel Array (MAMA) detectors to the provision of Cross Delay Line (XDL) detectors	12/15/1993	12/31/2018
51	Jet Propulsion Laboratory (JPL)	Technical University of Braunschweig (TUB)	Germany (GM)	Cassini: Digital Microcircuits for Descent-Imager/Spectral Radiometer (DISR) - reimbursable	Reimbursable Agreement	Reimbursable provision by NASA to TUB of 45 digital microcircuits from JPL for use on TUB's contribution to the Descent-Imager/Spectral Radiometer (DISR) on ESA's Huygens Probe on the Cassini mission Technical University of Braunschweig (TUB)	1/11/1994	12/31/2017
52	Jet Propulsion Laboratory (JPL)	Max Planck Institute for Aeronomy (MPAE)	Germany (GM)	Cassini: Hardware for the Descent Imager/Spectral Radiometer (DISR) - reimbursable	Reimbursable Agreement	Reimbursable provision by NASA to MPAE of available hardware from JPL for use on MPAE's contribution to the DISR on ESA's Huygens Probe on the Cassini mission	1/29/1994	12/31/2017
53	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Cassini Saturn Orbiter: Cosmic Dust Analyzer (CDA)	Cooperative Agreement	Participation by Dr. Eberhard Gruen of the Max Planck Institut fuer Kernphysik as the Principal Investigator (PI) for CDA and a member of the Cassini Project Science Group. CDA will determine the physical and chemical composition of interplanetary meteoroids, Saturnian dust, and ejecta from rings and satellites.	2/1/1994	12/31/2017
54	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Cassini Saturn Orbiter: Imaging Science Subsystem (ISS)	Cooperative Agreement	Participation by Prof. Gerhard Neukum of DLR as an ISS Science Team Member for the development, launch, post-launch, and data analysis phases of the Cassini mission	2/1/1994	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
55	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Cassini Saturn Orbiter: Visual and Infrared Mapping Spectrometer (VIMS)	Cooperative Agreement	Participation by Dr. Ralf Jaumann of DLR as a VIMS Science Team Member for the development, launch, post-launch, and data analysis phases of the Cassini mission	2/1/1994	12/31/2017
56	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Cassini Saturn Orbiter: Magnetospheric Imaging Instrument (MIMI)	Cooperative Agreement	Participation by four scientists from the Max Planck Institute for Aeronomy as Co-Investigators (Co-I) in the development, launch, post-launch, and data analysis phases of the Cassini MIMI investigation	2/1/1994	12/31/2017
57	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Cassini Saturn Orbiter: Ultraviolet Imaging Spectrograph (UVIS)	Cooperative Agreement	Participation by three scientists from the Max Planck Institute for Aeronomy as Co-Investigators (Co-I) in the development, launch, post-launch, and data analysis phases of the Cassini UVIS investigation	2/1/1994	12/31/2017
58	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Cassini Saturn Orbiter: Composite Infrared Spectrometer (CIRS)	Cooperative Agreement	Participation by Prof. Klaus U. Grossmann of Gesamthochschule Wuppertal as a Co-Investigator (Co-I) in the development, launch, post-launch, and data analysis phases of CIRS	2/1/1994	12/31/2017
59	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Cassini Saturn Orbiter: Ion and Neutral Mass Spectrometer (INMS)	Cooperative Agreement	Participation by Dr. Wing-Huen Ip of the Max Planck Institute for Aeronomy as an INMS Science Team Member for the development, launch, post-launch, and data analysis phases of the Cassini mission	2/1/1994	12/31/2017
60	Jet Propulsion Laboratory (JPL)	University of Oulu	Finland (FI)	Cassini Plasma Spectrometer (CAPS) - Univ. of Oulu	Cooperative Agreement	Participation by Prof. Pekka Tanskanen of the Department of Physics, University of Oulu, as a Co-Investigator in the development, launch, post-launch, and data analysis phases of the CAPS investigation of the Cassini Saturn Orbiter project	2/4/1994	12/31/2017
61	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Radio and Plasma Wave System (RPWS)	Reimbursable Agreement	Reimbursable provision to CNES by NASA of hardware for use by CNES on its contribution to the Cassini Saturn Orbiter RPWS instrument	2/16/1994	12/31/2017
62	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cassini Saturn Orbiter Plasma Spectrometer (CAPS)	Cooperative Agreement	Participation by Dr. Jean-Jacques Berthelier of CNET and Dr. Michel Blanc of the Observatoire Midi-Pyrenees as Co-Investigators in the development, launch, post-launch, and data analysis phases of the Cassini Saturn Orbiter CAPS investigation	2/16/1994	12/31/2017
63	Jet Propulsion Laboratory (JPL)	Technical University of Braunschweig (TUB)	Germany (GM)	Cassini: Magnetometer (MAG) electronic components - reimbursable	Reimbursable Agreement	Amendment of agreement GM0411 of 10/12/1993, which called for reimbursable provision by NASA to TUB of 15 256K radiation hardened static random access memory chips for TUB's use on the Cassini Magnetometer (MAG), to add the reimbursable provision by NASA to TUB of additional electronic components including inverters, digital microcircuits, multiplexors, buffer/line drivers, octal transceivers, octal latches, and logic chips	5/2/1994	12/31/2017
64	Goddard Space Flight Center (GSFC)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	WIND Mission/Cooperation in the Konus-WIND Experiment	Cooperative Agreement	Flight on the U.S. WIND mission of the Russian Konus gamma-ray burst detector to enhance the scientific return to the international science community in the area of gamma-ray astronomy	10/28/1994	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
65	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Flight of the Measurements of Pollution in the Troposphere (MOPITT) Instrument on Earth Observing System (EOS AM)/Terra	Cooperative Agreement	This MOU establishes the scientific and technical cooperation for the flight of the MOPITT instrument on the NASA EOS-AM1 polar orbiting platform of MOPITT to further cooperation in global change research by enabling the multidisciplinary study and long-term systematic monitoring of Earth, including research involving data from all Earth observing platforms in the International Earth Observing System	11/15/1994	12/31/2025
66	Headquarters (HQ)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/16/1994	12/31/2100
67	Headquarters (HQ)	Ministry of Education and the Department of Environmental Protection	Moldova (MD)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/30/1995	12/31/2100
68	Headquarters (HQ)	Government of the Kingdom of the Netherlands	Netherlands, The (NL)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2/28/1995	12/31/2100
69	Headquarters (HQ)	Government of the Republic of Senegal	Senegal (SG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/17/1995	12/31/2100
70	Headquarters (HQ)	Ministry of Education	Egypt (EG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/20/1995	12/31/2100
71	Headquarters (HQ)	National Board of Education	Finland (FI)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/23/1995	12/31/2100
72	Headquarters (HQ)	Ministry of Education	Belgium (BE)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/24/1995	12/31/2100
73	Headquarters (HQ)	Ministry of the Environment	Israel (IS)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/24/1995	12/31/2100
74	Headquarters (HQ)	Ministry of Ecology and Biological Resources	Kazakhstan (KZ)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/27/1995	12/31/2100
75	Headquarters (HQ)	Government of the Kingdom of Norway	Norway (NO)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/5/1995	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
76	Headquarters (HQ)	Ministry of Education and Sport	Croatia (HR)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/12/1995	12/31/2100
77	Headquarters (HQ)	Federal Ministry of Education	Austria (AU)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/20/1995	12/31/2100
78	Headquarters (HQ)	Ministry of Education, Youth, and Sport	Czech Republic (CZ)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/20/1995	12/31/2100
79	Headquarters (HQ)	Ministry of Education	Korea, Republic of (KS)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/21/1995	12/31/2100
80	Headquarters (HQ)	Ministry of Housing, Land Use Planning, and the Environment	Uruguay (UY)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/21/1995	12/31/2100
81	Headquarters (HQ)	Ministry of Sustainable Development and Planning (MDSPP)	Bolivia (BL)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1995	12/31/2100
82	Headquarters (HQ)	Government of Japan	Japan (JA)	Cross-Waiver of Liability for Cooperation in Peaceful Exploration and Use of Outer Space	Cooperative Agreement	Agreement establishing a cross-waiver of liability for cooperation in the exploration and use of space for peaceful purposes to go into force on the date on which the governments of the United States and Japan exchange notes informing each other that their respective legal procedures necessary for entry into force have been completed. That exchange of notes is agreement JA0292 of 07/20/1995. See, also, agreement JA0290 of 10/25/1994. All merged here now, others deleted. Note that this cross waiver does not apply to ISS Cooperation.	4/24/1995	12/31/2100
83	Headquarters (HQ)	Ministry of National Education	Benin (BN)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/28/1995	12/31/2100
84	Headquarters (HQ)	Ministry of National Education	Turkey (TU)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/5/1995	12/31/2100
85	Headquarters (HQ)	Ministry of Education	Romania (RO)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/22/1995	12/31/2100
86	Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Italy (IT)	Ultraviolet Coronal Spectrometer (UVCS) for the Solar and Heliospheric Observatory (SOHO)	Cooperative Agreement	Joint development of a UVCS for SOHO	6/2/1995	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
87	Headquarters (HQ)	Ministry of Education	Kyrgyzstan (KG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/9/1995	12/31/2100
88	Headquarters (HQ)	Department of Education	Ireland (EI)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/12/1995	12/31/2100
89	Headquarters (HQ)	Ministry of Culture and Education	Argentina (AR)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/28/1995	12/31/2100
90	Headquarters (HQ)	Ministry of Environment of Tunisia	Tunisia (TS)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/27/1995	12/31/2100
91	Headquarters (HQ)	National Agency for Education	Sweden (SW)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/23/1995	12/31/2100
92	Headquarters (HQ)	Ministry of Planning and Cooperation	Chad (CD)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/27/1995	12/31/2100
93	Headquarters (HQ)	Ministry of Education	El Salvador (ES)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/11/1995	12/31/2100
94	Headquarters (HQ)	Ministry of National Education and Religious Affairs	Greece (GR)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/12/1995	12/31/2100
95	Headquarters (HQ)	Ministry of National Education	Morocco (MO)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/27/1996	12/31/2100
96	Headquarters (HQ)	Ministry of the Environment and Energy	Costa Rica (CS)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1996	12/31/2100
97	Headquarters (HQ)	Education Ministry	Ecuador (EC)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1996	12/31/2100
98	Headquarters (HQ)	Department of the Environment	United Kingdom (UK)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/1/1996	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
99	Headquarters (HQ)	Ministry of Education	Estonia (EN)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/19/1996	12/31/2100
100	Headquarters (HQ)	National Environmental Agency	Gambia, The (GA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/12/1996	12/31/2100
101	Headquarters (HQ)	Ministry of Education	Trinidad & Tobago (TD)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/16/1996	12/31/2100
102	Headquarters (HQ)	Ministry of National Education and Professional Training	Luxembourg (LU)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/10/1996	12/31/2100
103	Headquarters (HQ)	Republic of Marshall Islands Government	Marshall Islands (RM)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/17/1996	12/31/2100
104	Headquarters (HQ)	Ministry of Environment	Jordan (JO)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/31/1996	12/31/2100
105	Headquarters (HQ)	Ministry of Environment, Natural Resources, and Fisheries	Mexico (MX)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/15/1996	12/31/2100
106	Headquarters (HQ)	Ministry of Education	Italy (IT)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/21/1997	12/31/2100
107	Headquarters (HQ)	Ministry of Education	Fiji (FJ)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/28/1997	12/31/2100
108	Headquarters (HQ)	Ministry of Education	Palau (PS)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/30/1997	12/31/2100
109	Jet Propulsion Laboratory (JPL)	Technical University of Braunschweig (TUB)	Germany (GM)	Cassini: Hardware for the Magnetometer (MAG) - 2nd reimbursable	Reimbursable Agreement	An additional reimbursable agreement for MAG.	2/16/1997	12/31/2017
110	Headquarters (HQ)	Government of South Africa	South Africa (SF)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2/17/1997	12/31/2100
111	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Tanzania (TZ)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/1/1997	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
112	Headquarters (HQ)	Ministry of Education	Poland (PL)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/2/1997	12/31/2100
113	Headquarters (HQ)	Government of Canada	Canada (CA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/7/1997	12/31/2100
114	Headquarters (HQ)	Government of Mongolia	Mongolia (MG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/6/1997	12/31/2100
115	Headquarters (HQ)	Ministry of Education	Denmark (DA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/29/1997	12/31/2100
116	Headquarters (HQ)	Ministry of Science and Culture	Iceland (IC)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/30/1997	12/31/2100
117	Headquarters (HQ)	Ministry of Education	Kenya (KE)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/9/1997	12/31/2100
118	Headquarters (HQ)	Ministry of Secondary and Primary Education	Madagascar (MA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/11/1997	12/31/2100
119	Headquarters (HQ)	Ministry of Education	Dominican Republic (DR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/20/1997	1/1/2100
120	Headquarters (HQ)	National Environmental Council	Peru (PE)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/18/1997	12/31/2100
121	Headquarters (HQ)	Ministry of Education	Portugal (PO)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/15/1997	12/31/2100
122	Headquarters (HQ)	Ministry of Basic Education and Culture	Namibia (WA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/8/1997	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
123	Johnson Space Center (JSC)	Italian Space Agency (ASI)	Italy (IT)	Memorandum of Understanding Between the United States National Aeronautics and Space Administration and the Italian Space Agency for the Design, Development, Operation and Utilization of Three Mini-Pressurized Logistics Modules for the International Space Station (ISS)	Cooperative Agreement	This agreement supersedes agreement IT0120 of 12/06/1991, substituting three Mini Pressurized Logistics Modules (MPLMs) as the components to be furnished by Italy for the two MPLMs and a Mini Laboratory called for in IT-0120. In exchange, NASA will launch the MPLMs on the Shuttle and provide ASI .85 per cent of pressurized user accommodations; .85 per cent of accommodations for external payloads, and .85 per cent of utilization resources, and launch ASI's utilization on the Shuttle. NASA will also provide ASI one ASI-provided ISS crew member for one on-orbit increment every five years, with a minimum of 3 crew opportunities. The effective duration of the agreement is through the end of the ISS Program; i.e., December 31, 2020. Dip Notes required to enter into force. Date of dip notes unknown.	10/9/1997	12/31/2020
124	Headquarters (HQ)	National Department of Education	Micronesia (FM)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/7/1997	12/31/2100
125	Headquarters (HQ)	Ministry of National Education and Professional Training	Honduras (HO)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/13/1997	12/31/2100
126	Headquarters (HQ)	Ministry of Environment, Local Government, and Rural Development	Pakistan (PK)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/18/1997	12/31/2100
127	Headquarters (HQ)	Government of the Republic of Mali	Mali (ML)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/19/1997	12/31/2100
128	Headquarters (HQ)	National Central School of Agriculture	Guatemala (GT)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/5/1997	12/31/2100
129	Headquarters (HQ)	Ministry of Education and Popular Development	Suriname (NS)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/23/1997	12/31/2100
130	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Canadian Space Agency Concerning Cooperation on the Civil International Space Station (ISS)	Cooperative Agreement	Specific objectives of this MOU are: to provide the basis for cooperation between NASA and CSA in the detailed design, development, operation and utilization of the permanently inhabited civil international Space Station for peaceful purposes, in accordance with international law. Exchange of Dip Notes Required for entry into force. Dip Notes not available.	1/29/1998	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
131	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the European Space Agency Concerning Cooperation on the Civil International Space Station (ISS)	Cooperative Agreement	The specific objectives of the MOU are: to provide the basis for cooperation between NASA and ESA in the detailed design, development, operation, and utilization of the permanently inhabited civil International Space Station (ISS) for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient, and effective for both Space Station users and Space Station operators. An exchange of letters from ESA to NASA, dated Nov. 27, 2007, with NASA's response to ESA, dated Nov. 27, 2007, entered the MOU into force (Attached to the pdf.)	1/29/1998	12/31/2020
132	Johnson Space Center (JSC)	Canadian Space Agency (CSA), Japan Aerospace Exploration Agency (JAXA), European Space Agency (ESA), Russian Federal Space Agency (Roskosmos)	Multiple Signatories	Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station	Cooperative Agreement	Superseded the Intergovernmental Agreement, dated September 29, 1988, (MULT-0001-0). Agreement Among the member countries of ESA, Canada, Japan, and Russia. The Space Station elements to be provided by each Partner are detailed in the Annex. Cooperation between NASA and each individual Partner will be specified in MOUs, pursuant to this Agreement, and cooperation between NASA and each individual Partner will be specified in Implementing Arrangements pursuant to the MOUs.	1/29/1998	12/31/2024
133	Johnson Space Center (JSC)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Russian Space Agency Concerning Cooperation on the Civil International Space Station	Cooperative Agreement	The specific objectives of this MOU are: to provide the basis for cooperation between NASA and RSA in the detailed design, development, operation and utilization of the permanently inhabited civil international Space Station for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient and effective for both Space Station users and Space Station operators. Requires Exchange of Diplomatic Notes to enter into force. Implementing Arrangement under the IGA for ISS. Russia sent dip note for this Agreement to enter into force dated March 27, 1998. Russian Dip Note is attached. U.S. Dip Note responding to Russian Dip Note is NOT attached.	1/29/1998	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
134	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA), Ministry for Education, Culture, Sports, Science & Technology (MEXT)	Japan (JA)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Government of Japan Concerning Cooperation on the Civil International Space Station (ISS)	Cooperative Agreement	This MOU is between NASA and Japan but the designated implementing agencies are NASA and the Science and Technology Agency of Japan (STA), pursuant to the IGA for the ISS of Jan. 29, 1998. The specific objectives of this MOU are: to provide the basis for cooperation between NASA and the GOJ in the detailed design, development, operation and utilization of the permanently inhabited civil International Space Station (ISS) for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient and effective for both Space Station users and Space Station operators. Diplomatic Notes, dated June 8, 2001, entered the MOU into effect and are attached to the pdf. Used Sign. Date for Entry into Force date due to time lag between Signature Date and Entry into Force Date.	2/24/1998	12/31/2020
135	Headquarters (HQ)	Ministry of Education	Ghana (GH)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/20/1998	12/31/2100
136	Headquarters (HQ)	Ministry of Education	Chile (CI)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/16/1998	12/31/2100
137	Headquarters (HQ)	Federal Department for Environment, Transport, Energy, and Communication	Switzerland (SZ)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1998	12/31/2100
138	Headquarters (HQ)	Government of Spain	Spain (SP)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/5/1998	12/31/2100
139	Headquarters (HQ)	Ministry of Pre-University Education	Guinea (GV)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/14/1998	12/31/2100
140	Headquarters (HQ)	Ministry of Foreign Affairs	Macedonia (MK)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists, together to study the global environment.	8/24/1998	12/31/2100
141	Headquarters (HQ)	Ministry of Education and Science	Bulgaria (BU)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/8/1998	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
142	Headquarters (HQ)	Ministry of Education and the Environment	Colombia (CO)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/28/1998	12/31/2100
143	Headquarters (HQ)	Ministry of National Education	Cameroon (CM)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/6/1998	12/31/2100
144	Headquarters (HQ)	Ministry of Education and Culture	Cyprus (CY)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/24/1998	12/31/2100
145	Headquarters (HQ)	Government of Uganda	Uganda (UG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/26/1998	12/31/2100
146	Headquarters (HQ)	Ministry of Secondary, Higher Education and Scientific Research	Burkina Faso (UV)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/18/1998	12/31/2100
147	Headquarters (HQ)	Ministry of Environment	Lebanon (LE)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/23/1998	12/31/2100
148	Headquarters (HQ)	Department of Science and Technology	Philippines (RP)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/14/1999	12/31/2100
149	Headquarters (HQ)	Ministry of Education and Science	Latvia (LG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/27/1999	12/31/2100
150	Headquarters (HQ)	Ministry of Education	Hungary (HU)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/10/1999	12/31/2100
151	Headquarters (HQ)	Government of Kuwait	Kuwait (KU)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/12/1999	12/31/2100
152	Headquarters (HQ)	Ministry of Education	Ukraine (UP)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/27/1999	12/31/2100
153	Headquarters (HQ)	Federal Environmental Agency	United Arab Emirates (AE)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/6/1999	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
154	Headquarters (HQ)	Institute for the Promotion of Teaching Science and Technology	Thailand (TH)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/30/1999	12/31/2100
155	Headquarters (HQ)	Central Environmental Authority	Sri Lanka (CE)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/20/1999	12/31/2100
156	Headquarters (HQ)	Ministry of Education	New Zealand (NZ)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2/29/2000	12/31/2100
157	Headquarters (HQ)	Ministry of Education	Panama (PM)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/2/2000	12/31/2100
158	Headquarters (HQ)	Ministry of Education	Nepal (NP)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/3/2000	12/31/2100
159	Ames Research Center (ARC)	National Institute for Aerospace Technology (INTA)	Spain (SP)	Astrobiology	Cooperative Agreement	This agreement makes the Centro de Astrobiology an Associated Institute of the NASA Astrobiology Institute (NUI). NUI's goal is to conduct interdisciplinary research in astrobiology. There is no expiration of this cooperation.	5/5/2000	12/31/2100
160	Goddard Space Flight Center (GSFC)	National Commission on Space Activities (CONAE)	Argentina (AR)	Scientific Applications Satellite (SAC-C), Amendment	Cooperative Agreement	Amendment of AR0035, dated Oct. 28, 1996, to data analysis of "AM Constellation Data," comprised of SAC-C, Landsat 7, EO-1, and Terra.	6/14/2000	12/31/2020
161	Headquarters (HQ)	Government of Monaco	Monaco (MN)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/29/2000	12/31/2100
162	Headquarters (HQ)	The Ministry of Education and Youth	Bahamas, The (BF)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/12/2000	12/31/2100
163	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Arrangement between the National Aeronautics and Space Administration of the United States of America and the European Space Agency Concerning ESA's Provision of a Cupola in Exchange for NASA's Provision of Shuttle Launch and Return Services for Five External European Payloads	Cooperative Agreement	Pursuant to Articles 1.1 and 16.4 of the NASA/ESA ISS MOU, this Arrangement provides for the provision by ESA of a Cupola and additional goods and services to NASA for the ISS Program in exchange for NASA's provision of Space Shuttle launch and return transportation services for five ESA external ISS payloads.	8/7/2000	12/31/2020
164	Headquarters (HQ)	Ministry of Foreign Affairs	Cape Verde (CV)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/9/2000	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
165	Headquarters (HQ)	Ministry of Environment and Forests	India (IN)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/25/2000	12/31/2100
166	Headquarters (HQ)	Ministry of Education and Higher Education	Qatar (QA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/27/2000	12/31/2100
167	Headquarters (HQ)	Ministry of Science and Technology	Bangladesh (BG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/4/2000	12/31/2100
168	Headquarters (HQ)	Ministry of Education and Culture and the Secretariat of the Environment	Paraguay (PA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/27/2000	12/31/2100
169	Headquarters (HQ)	Ministry of Education	Bahrain (BA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/16/2001	12/31/2100
170	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	Arrangement Between NASA and The Canadian Space Agency Regarding a Barter of International Space Station Supporting Services and Utilization	Cooperative Agreement	This Arrangement is entered into pursuant to the Agreement among the Government of USA, Governments of Member States of the European Space Agency, the Government of Japan, Govt. of Canada Concerning Cooperation on the Civil ISS (the IGA) and the MOU between NASA/CSA Concerning Cooperation on the Civil International Space Station. This Arrangement details the understanding between NASA/CSA regarding a barter of ISS supporting services and utilization and regarding a Special Purpose Dexterous Manipulator (SPDM) and other Goods and Services Towards Fulfillment of Its Common System Operations Responsibilities Within the Context of the ISS Program and more specifically the Optional Additional Offset detailed therein, this Arrangement provides for the exercise of the Optional/Additional Offset by Canada.	8/16/2001	12/31/2020
171	Headquarters (HQ)	Ministry of Education	Nigeria (NI)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/15/2002	12/31/2100
172	Headquarters (HQ)	Government of the Kingdom of Saudi Arabia	Saudi Arabia (SA)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/30/2002	12/31/2100
173	Headquarters (HQ)	Ministry of Education and Science	Lithuania (LH)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/3/2002	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
174	Headquarters (HQ)	Government of Yugoslavia (first)	Serbia (RI)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/17/2002	12/31/2100
175	Headquarters (HQ)	Ministry of Education	Liechtenstein (LS)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/26/2003	12/31/2100
176	Headquarters (HQ)	The Ministry of National Education	Gabon (GB)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/11/2003	12/31/2100
177	Headquarters (HQ)	Ministry of Education, Science, Technology and Scientific Research	Rwanda (RW)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/21/2003	12/31/2100
178	Headquarters (HQ)	The Environment Research Centre, Ministry of Home Affairs and Environment of the Republic of Maldives	Maldives (MV)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/8/2003	12/31/2100
179	Headquarters (HQ)	Ministry of Education of the Islamic Republic of Mauritania	Mauritania (MR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/6/2004	1/1/2100
180	Headquarters (HQ)	Ministry of Primary and Secondary Education of the Republic of Congo	Congo, Republic of (CF)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/28/2005	12/31/2100
181	Headquarters (HQ)	For the Ministry of Basic Education and Alphabetization	Niger (NG)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/11/2005	12/31/2100
182	Headquarters (HQ)	Ministry of Education	Ethiopia (ET)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/24/2005	12/31/2100
183	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	2001 Mars Odyssey	Cooperative Agreement	This mission extends our cooperation with CNES on the NASA Mars Odyssey mission until the end of Mission Operations and data Analysis.	4/12/2006	4/30/2018
184	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Cooperation on Mars Exploration Rover (MER 2003)	Cooperative Agreement	science cooperation on the rovers	4/18/2006	12/31/2017
185	Headquarters (HQ)	Indian Space Research Organization (ISRO)	India (IN)	Chandrayaan-1 - Miniature Synthetic Aperture Radar (Mini-SAR)	Cooperative Agreement	NASA will provide the Mini-SAR instrument for flight on India's Chandrayaan-1 lunar mission. APL is building the instrument, jointly funded by ESMD and SOMD. Agreement will remain in effect until 10 years after launch. As of 8/13/08, the spacecraft has not launched	5/9/2006	10/1/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
186	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	Chandrayaan-1 - Moon Mineralogy Mapper (M3)	Cooperative Agreement	ISRO will integrate the NASA provided M3 instrument and the conduct the Chandrayaan-1 mission.	5/9/2006	10/1/2018
187	Jet Propulsion Laboratory (JPL)	Niels Bohr Institute for Astronomy, Physics and Geophysics at the University of Copenhagen (NBI)	Denmark (DA)	Mars Exploration Rover (MER) 2003	Cooperative Agreement	NBI will provide Permanent Magnet Array engineering and flight models for use on the rovers' Athena payloads. They will also support a Co-I.	5/16/2006	12/31/2018
188	Johnson Space Center (JSC)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Second Addendum to the Implementing Arrangement entitled "Protocol Including Terms, Conditions and Assumptions, Summary Balance of Contribution and Obligations to International Space Station (ISS) and Resulting Rights of NASA and RSA to ISS Utilization Accommodations and Resources, and Flight Opportunities" (Balance Agreement) between the National Aeronautics and Space Administration of the United States of America and the Federal Space Agency of the Russian Federation	Cooperative Agreement	Also referred to as the "Second Addendum to the Balance Agreement," this Addendum adjusts the balance of the contributions of the Parties previously established in the original Balance Agreement and Addendum, due to changes in the timeline, programmatic changes, et. al. It effects a partial rebalance of the NASA and Roscosmos efforts regarding crew size and composition, science power platform and its arrays, upmass, habitation, electrical power, stowage, communication services, propellant, waste removal services, water, and liaison office and travel support through December 31, 2011. The Agreement will remain in force until such time as the MOU ceases to be in force.	7/1/2006	12/31/2020
189	Jet Propulsion Laboratory (JPL)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Implementing Agreement Between the United States National Aeronautics and Space Administration and the Russian Aviation and Space Agency on the Flight of the Russian High Energy Neutron Detector (HEND) on the United States 2001 Mars Odyssey Orbiter Mission	Cooperative Agreement	Russia will build a High Energy Neutron Detector (HEND) for inclusion on the gamma-ray spectrometer instrument on Mars Odyssey. This is an Implementing Agreement to the 1992 Agreement between the U.S. and Russia for Cooperation ... This activity was initiated by interim agreement UR0084. The mission was launched on April 7, 2001. Agreement does not expire until end of mission or we turn the instrument off.	9/18/2006	4/30/2018
190	All NASA Centers	National Centre for Space Studies (CNES)	France (FR)	Framework Agreement between U.S. Govt. and the French Govt. for cooperative activities in the Exploration and Use of Outer Space for Peaceful Purposes.	Cooperative Agreement	Framework Agreement between U.S. Govt. and the French Govt. for cooperative activities in the Exploration and Use of Outer Space for Peaceful Purposes. NASA/CNES/NOAA are identified as implementing agencies. Agreement Signatories: Administrator Michael Griffin of the National Aeronautics and Space Administration (NASA) signed for the United States and Minister Francois Goulard of the Ministry for Higher Education and Research signed for France. Dipnote signed by the Department of State on 4/2/08, referring to the Embassy of France's note No. 505 dated 3/14/2008. Framework Signature Date: 1/23/2007; Entry into Force Date: 4/2/2008; Expiration Date: 4/2/2018.	1/23/2007	4/2/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
191	Goddard Space Flight Center (GSFC)	Regional Centre for Mapping of Resources for Development (RCMRD)	Kenya (KE)	NASA Regional Centre for Mapping of Resources for Development for Cooperation in Space Geodetic Research	Cooperative Agreement	Agmt to Support the Installation of GPS Stations in Kenya	2/6/2007	2/6/2017
192	Goddard Space Flight Center (GSFC)	National Agency for Hydrometeorology and Environmental Monitoring	Mongolia (MG)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	To extend the term of the existing AERONET agreement to establish sun photometer station in Mongolia.	2/22/2007	3/7/2017
193	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Agreement between the European Space Agency and the National Aeronautics and Space Administration Concerning Network and Operations Cross Support	Cooperative Agreement	this agreement provides for a legal framework and the conditions for a mutually beneficial long-term cooperation between NASA and ESA in the areas of network and operations cross support. This includes telemetry data acquisition, tracking, and command. This agreement provides for implementing arrangements to be completed for mission specific activities. This Agreement supersedes and terminates ESA-0239-0, -1, and -2.	3/21/2007	3/21/2017
194	Goddard Space Flight Center (GSFC)	Geophysical Institute of Peru (IGP)	Peru (PE)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and IGP will establish one or more sun photometer stations at mutually agreed sites in Peru	4/25/2007	4/25/2017
195	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Dawn Mission	Cooperative Agreement	This MOU covers the NASA-ASI cooperation on the NASA Dawn mission. ASI is contributing the Visual Infrared Mapping Spectrometer (VIR-MS)	5/16/2007	12/31/2016
196	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	MOU Between NASA and ESA Concerning the James Webb Space Telescope (JWST)	Cooperative Agreement	provides for the NASA-ESA cooperation on the JWST Mission. Please note that the expiration date is Dec. 31, 2019, or 6 (six) years after launch, whichever comes first. Previously known as the Next Generation Space Telescope (NGST). Replaces all earlier agreements.	6/18/2007	12/31/2019
197	Goddard Space Flight Center (GSFC)	The American Institute in Taiwan	Taiwan (TW)	Micro-Pulse Lidar Network (MPLNET) and the Aerosol Robotic Network (AERONET)	Cooperative Agreement	to establish lidar and/or sun photometer stations in Taiwan	7/13/2007	7/13/2017
198	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Agreement between NASA and CSA for Cooperation on the James Webb Space Telescope (JWST) Program	Cooperative Agreement	This agreement provides for the cooperation between NASA and CSA on the JWST mission. CSA will provide the Fine Guidance Sensor while NASA will build the spacecraft. The ESA is also a mission partner and will launch the mission Formerly the Next Generation Space Telescope (NGST)	7/16/2007	12/31/2018
199	Goddard Space Flight Center (GSFC)	Geoscience Australia	Australia (AS)	Geodetic Cooperation/Satellite Laser Ranging	Cooperative Agreement	Loan by NASA to Auslig of space geodetic equipment in exchange for data acquired by GA (formerly AUSLIG) stations.	7/26/2007	7/26/2017
200	Jet Propulsion Laboratory (JPL)	National Institute for Geology and Mineralogy (INGEOMINAS)	Colombia (CO)	Geodynamics - Global Positioning System (GPS)	Cooperative Agreement	Agmt to support the continued operations of established GPS sites, and establishment of new sites in Colombia	9/18/2007	9/18/2017
201	Headquarters (HQ)	Ministry of Education	Malta (MT)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/29/2007	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
202	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Agreement Between the National Aeronautics and Space Administration (NASA) and the European Space Agency (ESA) On Use of NASA's Common Spares Pool (CSP)	Reimbursable Agreement	Reimbursable provides for ESA's use of NASA's Common Spares Pool for the ISS Program to support the Columbus Module. The duration of the Agreement is ten years after the launch of Columbus, which launched on STS-122 on February 7, 2008.	1/18/2008	2/7/2018
203	All NASA Centers	Indian Space Research Organization (ISRO)	India (IN)	NASA-ISRO Framework Agrmt for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Cooperative Agreement	Cooperative programs may be undertaken in the following areas: Earth science, observation, and monitoring; Space Science: Exploration systems; Space operations; and other relevant areas of mutual interest....(review agreement for more details re what cooperation may be used when implementing....)	2/1/2008	1/31/2018
204	Headquarters (HQ)	Government of Ukraine, National Space Agency of Ukraine (NSAU)	Ukraine (UP)	Framework Agreement between the Government of the United States of America and the Government of Ukraine for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Cooperative Agreement	Framework Agreement for the Parties to explore cooperation in the areas of Earth science, observation, and monitoring; Space science; Exploration systems; space operations; aeronautics, and other relevant areas of mutual interest. Specific cooperation will be implemented under Implementing Arrangements. The designated cooperating agency for Ukraine is the National Space Agency of Ukraine (NSAU). Dip notes are required for entry into force. The U.S. Dip Note 559, dated Aug. 6, 2008, initiated entry into force and is attached. The Ukrainian Dip Not, dated January 20, 2009, entered the Agreement into force, effective January 20, 2009. The Agreement is effective for ten years from the date the Agreement entered into force.	3/31/2008	1/26/2019
205	Goddard Space Flight Center (GSFC)	Crimean Astrophysical Observatory (CRAO), Ministry of Ukraine for Science and Technology	Ukraine (UP)	Space Geodetic Research	Cooperative Agreement	Space geodetic Cooperation in the Crimean.	4/2/2008	6/2/2018
206	Kennedy Space Center (KSC)	European Space Agency (ESA)	European Space Agency (ESA)	Loan Agreement for Follow-On Procurement (FOP) Spacelab Module	Cooperative Agreement	Long-term loan of Follow-On Procurement (FOP) Spacelab Module that flew on the German managed D1 mission in October 1985, and selected associated hardware, including two Spacelab Pallets, Orthogrid, Igloo, and Pallet Segment Support Integration Trolleys (PSSITs). In addition, NASA will work with ESA to develop and implement the international Spacelab education program. This equipment is used for education and public display purposes only and is displayed at the Spacelab Academy Bremen, in Bremen, Germany. Approval by NASA KSC's Supply and Equipment Management Office is required before relocating the equipment. This Agreement supersedes the Spacelab Module Agreement, which was in force, Dec 1, 1998-Nov 30, 2003.	4/7/2008	4/7/2018
207	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Cooperation in the Herschel Mission	Cooperative Agreement	NASA to provide software and documentation to ESA, an astronomer and technical personnel. ESA to give NASA access to Herschel science and data	4/9/2008	12/31/2016

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
208	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES), European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Multiple Signatories	Ocean Surface Topography Mission (OSTM)	Cooperative Agreement	The objective of the Ocean Surface Topography (OSTM) mission is to bring high-precision altimetry to a full operational status through the continuation of the TOPEX/Poseidon and Jason missions. OSTM will be launched aboard the Jason-2 satellite and will be a follow-on to the Jason mission. CNES will provide the PROTEUS platform for the Jason-2 satellite, which is scheduled to launch in June 2008 aboard a NASA-provided Boeing Delta II from Vandenberg Air Force Base, CA. OSTM will provide data for operational and research use for marine meteorology and sea state forecasting, operational oceanography, seasonal forecasting, climate monitoring, and ocean, Earth system, and climate research.	4/16/2008	6/30/2017
209	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Tropical Rainfall Measuring Mission (TRMM) MOU	Cooperative Agreement	To measure the distribution and variability of tropical rainfall and latent heat releases on a monthly basis for three years to advance the scientific understanding of the global energy and water cycles. DIP NOTES exchanged and entered into force on May 30, 1997. AMENDED: June 2, 1997 pursuant to Article XXI of the original MOU. Dip notes were extended on May 28, 2002. Dip notes were extended again on May 22, 2008 for a period of ten years. MOU itself does not expire.	5/22/2008	5/22/2018
210	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Advanced Microwave Scanning Radiometer-E (AMSR-E) Program on the Earth Observing System (EOS)/Aqua Mission	Cooperative Agreement	To establish the terms and conditions under which the Parties will cooperate in the flight of AMSR-E aboard NASA's EOS PM1 and under which the Parties shall make data available from AMSR-E and the other instruments on EOS PM1. The EOS PM1 is planned for launch in 2000. MOU automatically renews if dip notes are in force. Dip notes renewed on May 22, 2008 for 10 years from Nov 30, 2008.	5/22/2008	11/30/2018
211	Jet Propulsion Laboratory (JPL)	Belgian Science Policy Office	Belgium (BE)	Juno Ultra-Violet Spectrometer (UVS)	Cooperative Agreement	Belgian entities will provide portions of the Ultra-Violet Spectrometer (UVS) on the NASA-led Juno mission that will go to Jupiter. The cooperation is with CSL and thus the CSL Letter constitutes the agreement, but the Belgian Science Policy Office (BELSPO) is funding the project, thus the reason there are two letters.	7/22/2008	7/22/2018
212	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	Hartebeesthoek Radio Astronomy Observatory (HartRAO)	South Africa (SF)	Space Geodetic Research with Hartebeesthoek Radio Astronomy Observatory (RAO)	Cooperative Agreement	This agreement establishes one or more permanent GPS ground stations, with the first agreed-upon station to be located at Hartebeesthoek.	10/2/2008	1/27/2017
213	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	NASA-JAXA Joint Understanding	Cooperative Agreement	this document is similar to a framework agreement wherein NASA and JAXA have agreed upon standard legal text when concluding lower-level cooperative letters of agreement. There is no contribution from either party	10/16/2008	12/31/2100

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
214	Goddard Space Flight Center (GSFC)	University of the Witwatersrand	South Africa (SF)	Agreement Between NASA and the University of Witwatersrand, Johannesburg, for Cooperation in the Aerosol Robotic Network (AERONET)	Cooperative Agreement	AERONET agreement with the University of Witwatersrand to provide a long term loan basis, one or more sun photometer systems and/or associated equipment for continuous operation at mutually-agreed sites; provide utilities, security, and housing for the station(s) at mutually-agreed location(s) - etc.. See database sheet....	10/20/2008	10/20/2018
215	Ames Research Center (ARC)	Canadian Space Agency (CSA)	Canada (CA)	Analogue and Astrobiology Agreement	Cooperative Agreement	NASA and the Canadian Space Agency (CSA) are cooperating on astrobiology and analogue field research, including rover field demonstrations.	10/30/2008	10/30/2018
216	Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	In-situ Resource Utilization (ISRU) and Robotics	Cooperative Agreement	NASA/DLR in cooperation in the development and demonstration of planetary science and exploration concepts and technologies of mutual interest related to scientific instrumentation, surface mobility, in-situ resource utilization (ISRU), and robotics, including the use of analogue sites in U.S.	11/11/2008	11/11/2018
217	Goddard Space Flight Center (GSFC)	Manila Observatory of the Philippines	Philippines (RP)	Agmt btw NASA and the Manila Observatory of the Philippines for Cooperation on the Aerosol Robotic Network (AERONET)	Cooperative Agreement	Cooperation not he Aerosol Robotic Network (AERONET)	1/14/2009	1/30/2018
218	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	MOU btw JAXA and NASA for Cooperation btw the Greenhouse Gases Observing Satellite (GOSAT) and the Orbiting Carbon Observatory (OCO)	Cooperative Agreement	The parties contributions will include cross-calibration of radiometric calibration standards as aeell as a common validation approach to relate OCO and GOSAT CO2 retrievals to each other and the WMO in situ CO2 standard. Specific responsibilities for the parties are: Radiometric Calibration The Parties shall cross-calibrate radiometric calibration standards. 1. Prior to launch of either the OCO or GOSAT missions, the Parties shall exchange the radiometric calibration standards used for pre-launch instrument calibration and hold a workshop to exchange and jointly evaluate radiometric calibration data. 2. In order to verify the long-term stability of the on-orbit radiometric calibration of the OCO and GOSAT instruments, the Parties shall hold semi-annual calibration workshops during the overlapping operational phases of these missions to exchange and compare: a. Ground-based and space-based spectra of CO2 and O2 collected over common vicarious calibration sites; and b. Spectrally-dependent solar fluxes at the top of the atmosphere and instrument line shape functions used in the radiometric calibration of CO2 and O2 spectra over vicarious calibration sites. Common Validation Approach The Parties shall implement a common validation approach to relate OCO and GOSAT atmospheric column CO2 retrievals to each other and to the World Meteorological Organization (WMO) in situ CO2 standard. 1. During the overlapping operational phases of the OCO and GOSAT missions, the Partie	2/23/2009	2/23/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
219	Goddard Space Flight Center (GSFC)	Hartebeesthoek Radio Astronomy Observatory (HartRAO), National Research Foundation (NRF)	South Africa (SF)	Satellite Laser Ranging (SLR) Ext	Cooperative Agreement	To strengthen the Hartebeesthoek Radio Astronomy Observatory (HartRAO) station measurement systems by adding a satellite laser ranging (SLR) system to the station complement.	4/30/2009	9/30/2019
220	Goddard Space Flight Center (GSFC)	Council for Scientific and Industrial Research (CSIR)	Singapore (SN)	Cooperation in the Aerosol Robotic Network (AERONET) and the Micro Pulse Lidar Network (MPLNET)	Cooperative Agreement	For the proposed arrangement, the NASA and CRISP, NUS will establish one or more sun photometer and/or lidar stations at mutually agreed sites.	6/1/2009	10/15/2018
221	Goddard Space Flight Center (GSFC)	Institute of Oceanology, Polish Academy of Sciences (PAS)	Poland (PL)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	To establish a sun photometer station to improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on global and regional scales.	9/2/2009	3/1/2019
222	Ames Research Center (ARC), Dryden Flight Research Center (DFRC), George C. Marshall Space Flight Center	Canadian Space Agency (CSA)	Canada (CA)	Framework Agreement between the Government of the USA and the Government of Canada for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Cooperative Agreement	Joint activities in space exploration; space operations, including space flight; Earth and space science; civil aeronautics research, as it applies to space; and other relevant areas of mutual interest.	9/9/2009	5/10/2020
223	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Memorandum of Understanding Between NASA/ESA Concerning Cooperation in the Field of Space Transportation	Cooperative Agreement	NASA/ESA will cooperate under this MOU to exchange available information and technical data on topics of common interest in the field of space transportation. They will develop, test, use technology insertion approaches, demonstrate, and analyze: re-ignitable cryogenic launch vehicle and spacecraft stages and engines, including relevant ground and flight demonstrators for propulsion and propellant management applications; approaches and engineering methods for establishing and maintaining qualification of launch systems including associated ground infrastructure; establish and maintain qualification of launch systems and ground infrastructure; for structures and materials of launch vehicle stages, boosters, and engine nozzles; payload shroud development approach; approaches for improvement of engineering methods and correlations with test for pressure oscillations of solid boosters, launch vehicle environments, and induced loads; human rating approaches for launch systems and crew transportation systems, including their associated ground infrastructure; approaches for vehicle assembly, integration, test, and operations at launch complexes; architectures, development, test, technology insertion, and deployment approaches for lunar landers and surface systems; and cargo and crew transportation systems, including docking interface, requirements definition, design, verification, and implementation.	9/11/2009	9/11/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
224	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Magnetospheric Multiscale Mission (MMS)	Cooperative Agreement	n/a	9/17/2009	9/17/2019
225	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement betw NASA and CNES on the Mars Atmosphere and Volatile Evolution (MAVEN) Mission	Cooperative Agreement	CNES will provide the Solar Wind Electron Analyzer (SWEA) analyzer, a component of the SWEA instrument, for flight on the NASA MAVEN mission,	9/17/2009	9/17/2019
226	Goddard Space Flight Center (GSFC)	Birla Institute of Technology, Extension Center Jaipur in Rajasthan	India (IN)	Aerosol Robotic Network (AERONET) with Birla Institute of Technology, Extension Center Jaipur in Rajasthan	Cooperative Agreement	NASA provides AERONET instrument and support. Partner agrees to provide maintenance.	11/9/2009	10/15/2019
227	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Cassini MOU	Cooperative Agreement	To continue the NASA-ASI cooperation on the Cassini mission to Saturn. Cooperation in the design and development of four Cassini Saturn Orbiter components: High Gain/Low Gain Antenna-1 Assembly, Radio Frequency Instrument Subsystem, Cassini Radar, and Visible and Infrared Mapping Spectrometer(VIMS)	11/11/2009	9/30/2017
228	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Magnetospheric Multiscale Mission (MMS)	Cooperative Agreement	N/A	11/26/2009	12/31/2017
229	Headquarters (HQ)	Ministry of Education of the Sultanate of Oman	Oman (MU)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle, and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	12/8/2009	1/1/2100
230	Goddard Space Flight Center (GSFC)	Middle East Technical University (METU), Institute of Marine Sciences (IMS)	Turkey (TU)	Agmt for Cooperation betw NASA and Middle East Technical Univ, Institute of Marine Sciences, Turkey on the Aerosol Robotic Network (AERONET)	Cooperative Agreement	Agmt for Cooperation btw NASA and METU, IMS on the Aerosol Robotic Network	1/29/2010	3/30/2020
231	George C. Marshall Space Flight Center (MSFC)	University of Bern	Switzerland (SZ)	Agreement for the Strofio Instrument on the BepiColombo Mission	Cooperative Agreement	The Univ. of bern in Switzerland will provide the ion source system for the Strofio instrument that will be a part of the Serena payload on the ESA-led BepiColombo mission to Mercury.	3/10/2010	9/30/2022
232	Goddard Space Flight Center (GSFC)	Swedish National Space Board (SNSB)	Sweden (SW)	Implementing Arrangement betw NASA and the Swedish National Space Board of the Kingdom of Sweden on the Magnetospheric Multiscale (MMS) Mission	Cooperative Agreement	Cooperation is between NASA and SNSB under the U.S. - Kingdom of Sweden Civil Space Framework Agreement.	3/23/2010	3/23/2020
233	Goddard Space Flight Center (GSFC)	Brazilian Space Agency (AEB)	Brazil (BR)	Space Geodetic Research and Global Positioning System (GPS)	Cooperative Agreement	To establish one or more permanent GPS ground stations in Brazil, with the first agreed upon station to be located at the INPE, Cachoeira Paulista, SP (Brazil). Implementing Arrangement under the Framework.	4/8/2010	4/30/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
234	Goddard Space Flight Center (GSFC)	Agentur für Luft- und Raumfahrt (ALR, Aeronautics and Space Agency)	Austria (AU)	NASA-Austria Agreement on the Magnetospheric MultiScale (MMS) Mission	Cooperative Agreement	Agreement between the Agentur für Luft- und Raumfahrt (ALR, Aeronautics and Space Agency) of the Österreichische Forschungsförderungsgesellschaft mbH (FFG, Austrian Research Promotion Agency), have a mutual interest in cooperating on the Magnetospheric Multiscale (MMS) mission.	4/30/2010	12/31/2018
235	Headquarters (HQ), Jet Propulsion Laboratory (JPL), Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Gravity Recovery and Climate Experiment (GRACE) mission MOU	Cooperative Agreement	To provide a new model of the Earth's gravity field at monthly intervals for a period of five years.	6/10/2010	12/31/2018
236	Goddard Space Flight Center (GSFC)	National Commission on Space Activities (CONAE)	Argentina (AR)	The Aquarius/SAC-D Mission MOU	Cooperative Agreement	This MOU between NASA and CONAE will contribute to the understanding of the total Earth system and the effects of natural and human-induced changes on the global environment. The measurements performed by the Aquarius/SAC-D Mission will contribute to a better understanding of ocean circulation, the prediction of changes in circulation, and its impact on Earth's climate and water cycle.	6/21/2010	6/30/2020
237	Headquarters (HQ)	National Centre for Space Studies (CNES), European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Multiple Signatories	MOU among NOAA, NASA, EUMETSAT and CNES for Cooperation in the Jason-3 Programme	Cooperative Agreement	The Jason-3 Program will design to provide continuity to the accuracy and coverage of the Topex/Poseidon, Jason-1 and OSTM/Jason-2 missions. These three missions collected data for scientific research and support operational applications related to extreme weather events, operational oceanography, climate applications and forecasting. NOAA and The European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) are the lead agencies. NASA and CNES are providing hardware to NOAA and EUMETSAT under separate domestic agreements. NASA's involvement in collaborative activities is very limited -- NASA is supporting NOAA in science selection and, in return, obtaining science data.	7/13/2010	12/31/2030
238	Headquarters (HQ)	National Centre for Space Studies (CNES)	France (FR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle, and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	9/16/2010	9/16/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
239	Goddard Space Flight Center (GSFC)	Institute of Applied Physics, Academy of Sciences of Moldova (ASM)	Moldova (MD)	AERONET Agmt with Institute of Applied Physics of the Academy of Sciences of Moldova	Cooperative Agreement	The purpose of this letter agreement is to formalize cooperation between the National Aeronautics and Space Administration (NASA) of the United States of America and the Institute of Applied Physics of the Academy of Sciences (IAP-ASM) of Moldova (hereinafter referred to as "the Parties"), in the global AEROSOL ROBOTIC NETWORK (AERONET) program. NASA's scientific goals include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality. To these ends, NASA has established a global network of sun photometers (AERONET) in cooperation with a wide range of international partner agencies and institutions. These devices are used to measure water vapor and aerosol optical properties, which are necessary measurements as well as being essential for ground-based validation for aerosol measurements taken by satellites. For the proposed arrangement, NASA and IAP-ASM will establish one or more sun photometer stations at mutually agreed sites. The inclusion of these stations within the global AERONET will significantly improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on both global and regional scales. Another objective of this cooperation is to encourage scientists from both the United States and Moldova to develop research programs using data collected in Moldova along with aerosol data available from the global AERONET data	9/22/2010	9/22/2020
240	Goddard Space Flight Center (GSFC)	The King Abdulaziz City for Science and Technology (KACST)	Saudi Arabia (SA)	AERONET agreement with King Abdulaziz City for SCIENCE and Technology in Saudi Arabia (KACST)	Cooperative Agreement	To establish sun photometer system(s) to improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on global and regional scales.	10/2/2010	10/2/2020
241	Goddard Space Flight Center (GSFC)	The King Abdulaziz City for Science and Technology (KACST)	Saudi Arabia (SA)	Space Geodesy Agreement with King Abdulaziz City for Science and Technology in Saudi Arabia (KACST)	Cooperative Agreement	Space Geodesy and geodynamics research	10/2/2010	10/2/2020
242	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Agreement between NASA and DLR for Associate Membership in the NASA Lunar Science Institute (NLSI)	Cooperative Agreement	Agreement provides for associate membership of DLR and its related organizations in the NASA Lunar Science Institute (NLSI)	12/8/2010	12/8/2020
243	Ames Research Center (ARC)	University of New South Wales	Australia (AS)	Astrobiology Associate Partnership Agreement	Cooperative Agreement	The agreement provides for cooperation between NASA and the Univ. of New South Wales (UNSW) in the field of astrobiology and analogue research by making UNSW an Associate Member of the NASA Astrobiology Institute.	12/9/2010	6/30/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
244	Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	Framework Agreement between the National Aeronautics and Space Administration and the German Aerospace Center On Cooperation in Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes	Cooperative Agreement	Framework Agreement between NASA and DLR on Cooperation in Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes.	12/13/2010	12/12/2020
245	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Reimbursable Agreement between NASA and the European Space Agency (ESA) Ongoing NASA Tracking and Data Relay Satellite System (TDRSS) Support of the Automated Transfer Vehicle (ATV)	Reimbursable Agreement	NASA will provide to ESA, on a reimbursable basis, TDRSS services in support of the launch, free flight, docking, undock, and re-entry of each ATV Mission.	12/16/2010	12/31/2020
246	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	NASA's Double Precision Orbit Determination Program (DPODP) for Cassini Radio Science Investigations	Cooperative Agreement	This 2011 extension continues the cooperation on the NASA-ASI Double Precision Orbit Determination Program (DPODP) for Cassini Radio Science Investigations.	3/3/2011	9/30/2017
247	Goddard Space Flight Center (GSFC)	Gorongosa Restoration Project	Mozambique (MZ)	Agmt betw NASA and the Gorongosa Restoration Project of Mozambique for Cooperation in the Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA has established a global network of sun photometers (AERONET) in cooperation with a wide range of international partner agencies and institutions. These devices are used to measure water vapor and aerosol optical properties, which are necessary measurements as well as being essential for ground-based validation for aerosol measurements taken by satellites. For the proposed arrangement, NASA and GRP will establish one or more sun photometer stations at mutually agreed sites. The inclusion of these stations within the global AERONET will significantly improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on both global and regional scales. Another objective of this cooperation is to encourage scientists from both the United States and Mozambique to develop research programs using data collected in Mozambique along with aerosol data available from the global AERONET database located at NASA's Goddard Space Flight Center (GSFC) in Greenbelt, Maryland.	3/25/2011	2/20/2021
248	Goddard Space Flight Center (GSFC)	Moscow State University (MSU)	Russia (UR)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Moscow State University will continue to cooperate on the operation of an AERONET sunphotometer station located at Moscow State University. NASA provides the equipment, and Moscow State University provides the site.	3/31/2011	3/31/2021
249	Goddard Space Flight Center (GSFC)	University of Lille 1	France (FR)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and University of Lille 1 will cooperate in the creation of an AERONET sunphotometer station located at University of Lille 1. NASA provides the equipment, and University of Lille 1 provides the site.	4/4/2011	2/15/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
250	Ames Research Center (ARC)	Institute of Space and Astronautical Science (ISAS)	Japan (JA)	The MU Space Engineering Spacecraft-C (MUSES-C) Program/Hayabusa	Cooperative Agreement	MUSES-C or Hayabusa is an Institute of Space and Astronautical Science (ISAS), or Japan Aerospace Exploration Agency (JAXA) technology demonstration mission designed to rendezvous with a near-Earth asteroid and to return samples of that asteroid to Earth. NASA responsibilities include providing for heat shield testing, technical review, backup DSN tracking, telemetry, and command support activities, radiometric navigation support, U.S. scientist participation, and ground-based observation support while JAXA responsibilities include providing for the MUSES-C spacecraft, launch, overall mission operations and design, access to NASA of asteroid samples obtained, and Japanese researchers. MUSES-C, a near-Earth asteroid mission. It applies to: mission development; launch; in-flight and asteroid encounter mission operations; sample return and recovery; and sample and other data analysis. The Parties shall cooperate according to the Exchange of Notes and this MOU. MUSES-C is an ISAS technology demonstration mission with scientific purposes designed to rendezvous with a near-Earth asteroid and to return samples of that asteroid to Earth. Missing Japanese Diplomatic note from the record. Will try to obtain.	4/22/2011	4/25/2021
251	Goddard Space Flight Center (GSFC)	Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev	Israel (IS)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Ben Gurion University will continue to cooperate on the operation of an AERONET sunphotometer station located at Ben Gurion University's Jacob Blaustein Institutes for Desert Research. NASA provides the equipment, and Ben Gurion University provides the site.	4/26/2011	4/30/2021
252	Goddard Space Flight Center (GSFC)	Norwegian Mapping Authority (NMA)	Norway (NO)	Agmt between NASA and Norwegian Mapping Authority for Cooperation in Space Geodesy	Cooperative Agreement	An agreement for cooperation in the field of space geodesy, including Satellite Laser Ranging (SLR), Very Long Baseline Interferometry (VLBI), and Global Navigation Satellite Systems (GNSS).	4/27/2011	12/31/2020
253	Goddard Space Flight Center (GSFC)	Indian Institute of Technology (IIT), Kanpur	India (IN)	Aerosol Robotic Network (AERONET) with IIT Kanpur	Cooperative Agreement	NASA and IIT Kanpur will extend cooperation dating from 2001 on an AERONET sunphotometer station located at IIT Kanpur. NASA provides the equipment, and IIT Kanpur provides the site.	5/9/2011	4/30/2021
254	Headquarters (HQ)	Norwegian Space Centre (NSC)	Norway (NO)	Implementing Arrangement btw NASA and the Norwegian Space Centre (NSC) on the use of Analogue Sites within the US and Norway	Cooperative Agreement	Implementing Arrangement under the Agreement between the United States of America and the Kingdom of Norway for Cooperation in the Civil Uses of Outer Space. This IA covers cooperation in the use of analogue sites in each others? countries.	5/10/2011	5/10/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
255	Ames Research Center (ARC)	Swedish National Space Board (SNSB)	Sweden (SW)	Implementing Arrangement between the National Aeronautics and Space Administration and the Swedish National Space Board for Cooperation in Aeronautic and Space Research Using Nanosatellite Technologies	Cooperative Agreement	Implementing Arrangement under the Framework Agreement between the Government of the United States and the Government of the Kingdom of Sweden for Cooperative Activities in the Exploration and Use of Outer Space of Peaceful Purposes, for cooperation on NanoSat technologies.	5/19/2011	5/19/2021
256	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement btw NASA and CNES on the Juno Mission	Cooperative Agreement	CNES is providing researchers and a portion of the Jovian Auroral Distribution Experiment (JADE) on the NASA Juno mission. This IA is under the U.S.-French Umbrella.	6/17/2011	12/31/2019
257	Headquarters (HQ)	Institute of Atmospheric Physics (IAP), as part of the Academy of Sciences of the Czech Republic (ASCR)	Czech Republic (CZ)	Heliophysics LOA for Data Sharing with Czech Republic on the Radiation Belt Storm Probe (RBSP) Mission	Cooperative Agreement	Agreement between NASA and the Institute of Atmospheric Physics (IAP), as part of the Academy of Sciences of the Czech Republic (ASCR) for collaboration in heliophysics and space weather to share data for new NASA missions, in particular the Radiation Belt Storm Probe (RBSP).	6/20/2011	6/30/2017
258	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	MOU between NASA and ASI concerning the Juno Mission	Cooperative Agreement	This Memorandum of Understanding (MOU) covers cooperation between NASA and the Italian Space Agency (ASI) on the Juno mission to Jupiter. ASI is providing the Jovian Infrared Auroral Mapper (JIRAM) and Ka-Band Transponder (Ka-T) instruments.	6/22/2011	12/31/2019
259	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	MOU between NASA and ESA concerning the Laser Interferometer Space Antenna (LISA) Pathfinder Mission (ST-7)	Cooperative Agreement	provides for NASA cooperation on the ESA-led LISA Pathfinder Mission, a technology demonstration mission for a potential future LISA mission. On the NASA side, this is also know as ST-7.	6/23/2011	12/31/2016
260	Goddard Space Flight Center (GSFC)	Yonsei University	Korea, Republic of (KS)	Agmt between NASA and Yonsei Univ of Korea for Cooperation in the Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA loans one or more sun photometers and related equipment for use and participation in the AERONET program	6/23/2011	4/30/2021
261	Goddard Space Flight Center (GSFC)	Kinki University	Japan (JA)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	To establish sun photometer stations in Japan, Shirahama (Wakayama Prefecture).	6/24/2011	3/31/2021
262	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Calorimetric Electron Telescope (CALET)	Cooperative Agreement	The cooperation involves NASA science participation, mission support, and ISS utilization support for the JAXA Calorimetric Electron Telescope (CALET) payload for the ISS, to be launched on an HTV. The activity crosses mission directorates and includes significant Science Mission Directorate, Space Science, Astrophysics activities as well.	7/11/2011	12/31/2020
263	Goddard Space Flight Center (GSFC)	Universidad Nacional de Colombia	Colombia (CO)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Universidad Nacional de Colombia will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Colombia. NASA provides the equipment, and Universidad Nacional de Colombia provides the sites.	7/12/2011	4/30/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
264	Goddard Space Flight Center (GSFC)	Silpakorn University	Thailand (TH)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Silpakorn University will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Thailand. NASA provides the equipment, and Silpakorn University provides the sites.	7/14/2011	4/30/2021
265	Goddard Space Flight Center (GSFC)	Centre Royal de Teledetection Spatiale	Morocco (MO)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Centre Royal de Teledetection Spatiale will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Morocco. NASA provides the equipment, and Centre Royal de Teledetection Spatiale provides the sites.	7/15/2011	4/30/2021
266	Goddard Space Flight Center (GSFC)	Deutsches Museum	Germany (GM)	Loan of items from WMAP Satellite to Deutsches Museum	Cooperative Agreement	LOAN OF ARTIFACTS FROM WILKINSON MICROWAVE ANISOTROPY PROBE (WMAP) TO GERMANY'S DEUTSCHE MUSEUM	7/20/2011	12/31/2020
267	Headquarters (HQ)	LEGO System A/S	Denmark (DA)	Agreement between NASA and the LEGO System A/S of Denmark Concerning the Juno Mission	Cooperative Agreement	The agreement is for the purpose of affixing three LEGO minifigures (the hardware) on NASA's Juno mission to Jupiter and provides for the development and performance of Juno mission-related educational and public outreach activities. NASA and LEGO responsibilities include developing and implementing educational and outreach activities, providing design, fabrication, and integration specifications for the LEGO hardware, and incorporating LEGO hardware onto the exterior of the Juno spacecraft.	8/2/2011	8/2/2019
268	Goddard Space Flight Center (GSFC)	University of New South Wales	Australia (AS)	Research Cooperation on the Physical, Chemical, and Biological Components of the Climate System	Cooperative Agreement	NASA and the University of New South Wales Australian Research Council Center of Excellence for Climate System Science plan to pursue increased communications and cooperation over the next six years, including research collaborations and the development of joint papers	8/9/2011	8/9/2018
269	Goddard Space Flight Center (GSFC)	Brazilian Space Agency (AEB)	Brazil (BR)	Space Geodesy with an emphasis in Very Long Baseline Interferometry (VLBI)	Cooperative Agreement	NASA and AEB will continue to cooperate on space geodesy with emphasis in VLBI. NASA loans equipment to AEB, and AEB operates a station. _____ Cooperative space geodesy program with emphasis on the techniques and science derived from Very Long Baseline Interferometry (VLBI) IA under the Framework.	8/15/2011	8/31/2021
270	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and CNES for Cooperation on Global Precipitation Measurement (GPM) and Megha-Tropiques	Cooperative Agreement	Provides for data and calibration/validation cooperation between NASA and CNES on the U.S./Japan Global Precipitation Measurement (GPM) mission and French/Indian Megha-Tropiques mission.	9/8/2011	12/31/2016
271	Langley Research Center (LaRC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and CNES for the Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) Mission	Cooperative Agreement	Continue the operations of the joint NASA-CNES CALIPSO mission. Replaces the original Memorandum of Understanding (MOU) for this cooperation.	9/8/2011	3/31/2022

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
272	Goddard Space Flight Center (GSFC)	University Sains Malaysia	Malaysia (MY)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and University Sains Malaysia (USM) will cooperate on the operation of an AERONET sunphotometer station located at USM. NASA provides the equipment, and USM provides the site.	9/13/2011	5/31/2021
273	Goddard Space Flight Center (GSFC)	University of Liege	Belgium (BE)	Belgium (CSL/BELSPO) Solar Probe Plus (SPP) Letter of Agreement	Cooperative Agreement	NASA will develop the SPP, a spacecraft equipped to perform scientific studies of the Sun. The primary scientific objectives to be carried out during the mission include: to determine the structure and dynamics of the magnetic fields at the sources of both fast and slow solar wind; to trace the flow of energy that heats the corona and accelerates the solar wind; and to determine what mechanisms accelerate and transport energetic particles. Instruments include a wide-field imager, fast ion analyzer, fast electron analyzer, energetic particle instrument, magnetometer, and plasma wave instrument. This Agreement will cover the Belgian contributions to the SPP mission, specifically the contributions to the modeling, testing, and evaluation of the WISPR Investigation on the SPP.	10/10/2011	9/30/2026
274	Goddard Space Flight Center (GSFC)	Institute of Atmospheric Optics, Siberian Branch, Russian Academy of Sciences	Russia (UR)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the Institute of Atmospheric Optics, Siberian Branch, Russian Academy of Sciences (IAO SB RAS) will cooperate on the operation of an AERONET sunphotometer station. NASA provides the equipment, and IAO SB RAS provides the site.	10/14/2011	5/23/2022
275	All NASA Centers	Government of Argentina	Argentina (AR)	Framework Agreement between the Government of the United States of America and the Government of the Argentine Republic on Cooperation in the Peaceful Uses of Outer Space	Cooperative Agreement	This Agreement provides the parties with the foundation to needed to identify areas of mutual interest and seek to develop cooperative programs or projects, hereinafter referred to as Programs, in the exploration and peaceful uses of outer space and shall work closely together to this end. The agreement was signed on October 25, 2011 and entered into force on July 30, 2013 when the second of two dip notes was exchanged. The agreement will be in force for 10 years from July 30, 2013.	10/25/2011	7/30/2023
276	Goddard Space Flight Center (GSFC)	Central Geophysical Observatory (CGO), Institute of Geophysics, Polish Academy of Sciences (PAS)	Poland (PL)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the Polish Academy of Sciences will cooperate on the operation of an AERONET sunphotometer station located at the Institute of Geophysics. NASA provides the equipment, and the Polish Academy of Sciences provides the site.	10/25/2011	6/30/2021
277	Jet Propulsion Laboratory (JPL)	National Commission on Space Activities (CONAE)	Argentina (AR)	Memorandum of Understanding between NASA and CONAE for Cooperation in Space Geodetic Research	Cooperative Agreement	NASA and CONAE will establish one or more permanent geodetic ground stations, with the first agreed-upon station to be located at the Teofilo Tabanera Space Center of CONAE in Cordoba, Argentina. These stations will contribute data to the GGOS to improve the accuracy of global and regional geodetic measurements.	10/26/2011	10/26/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
278	Wallops Flight Facility (WFF)	Brazilian Space Agency (AEB)	Brazil (BR)	NASA AEB Implementing Arrangement for participation in the Ozone Cooperation Mission	Cooperative Agreement	The objective of this mission is to study the concentrations of various atmospheric constituents in order to contribute to the understanding of the Earth's ozone layer, its generation, and its depletion, and to help to calibrate and verify satellite remote sensors.	10/27/2011	10/27/2021
279	Goddard Space Flight Center (GSFC)	Brazilian Space Agency (AEB)	Brazil (BR)	NASA AEB Implementing Arrangement for participation in the Global Precipitation Measurement (GPM) Mission	Cooperative Agreement	The GPM mission is a NASA-led, international space initiative to understand global precipitation. The data acquired by the GPM mission will be beneficial for monitoring and predicting climatological and meteorological changes and for improving the accuracy of weather and precipitation forecasts.	10/27/2011	10/27/2021
280	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Soil Moisture Active Passive (SMAP) mission	Cooperative Agreement	SMAP is one of the first four tier one Earth science missions recommended by the U.S. National Research Council's Earth Science Decadal Survey. SMAP is designed to enable scientists to study Earth's water, energy and carbon cycles across the entire planet. SMAP expects to employ a dedicated spacecraft with an instrument suite that is planned for launch into a near-polar, sun-synchronous orbit on an expendable launch vehicle no earlier than 2014.	11/21/2011	11/21/2021
281	Goddard Space Flight Center (GSFC)	Bermuda Biological Station for Research, Inc.	Bermuda (BD)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Bermuda Institute of Ocean Sciences (BIOS) will continue to cooperate on the operation of an AERONET sunphotometer station located at BIOS. NASA provides the equipment, and BIOS provides the site.	11/28/2011	7/19/2022
282	Goddard Space Flight Center (GSFC)	Tartu Observatory	Estonia (EN)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Tartu Observatory will continue to cooperate on the operation of an AERONET sunphotometer station located at Tartu Observatory. NASA provides the equipment, and Tartu Observatory provides the site.	12/14/2011	3/31/2022
283	George C. Marshall Space Flight Center (MSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Implementation Plan for Joint Study of Human Rating Requirements for Transportation and Exploration Systems	Cooperative Agreement	This is an Implementation Plan under the MOU between NASA and ESA Concerning Cooperation in the Field of Space Transportation, dtd September 11, 2009. The Implementation Plan provides for the exchange of data and information in the conduct of a Joint Study of human rating requirements and means for transportation and exploration systems.	12/19/2011	1/18/2017
284	Headquarters (HQ)	Government of the Federative Republic of Brazil	Brazil (BR)	Framework Agreement Between the Government of the United States of America and the Government of the Federative Republic of Brazil on Cooperation in the Peaceful Uses of Outer Space	Cooperative Agreement	This extends the Framework Agreement between the Govt of the USA and the Govt of the Federative Republic of Brazil on Cooperation in the Peaceful Uses of Outer Space, signed at Brasilia on March 1, 1966, as extended.	1/31/2012	1/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
285	George C. Marshall Space Flight Center (MSFC)	Japan Broadcasting Corporation (NHK)	Japan (JA)	Agreement between the Japan Broadcasting Corporation (NHK) and the National Aeronautics and Space Administration (NASA) for NASA's Use of NHK's 8K Imagery from Space Shuttle Missions STS-134 and STS-135	Cooperative Agreement	NHK will provide digital copies (on a USB hard drive) of NHK's 8K imagery of the STS-134 and STS-135 launches using NHK's latest super hi-vision technology (which is a follow-on better than NHK's HDTV technology). NASA will use the imagery for NASA's internal research purposes and NASA's consideration of adoption of super hi-vision technology.	2/1/2012	2/1/2017
286	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Amendment 1 to Agreement between the National Aeronautics and Space Administration (NASA) and the Japan Aerospace Exploration Agency (JAXA) On JAXA's Use of NASA's Common Spares Pool (CSP) to Support the Japanese Experiment Module (JEM)	Reimbursable Agreement	Amendment 1 to replace Articles II-VII in their entirety, which updated language to reflect the retirement of the Shuttle and to provide for the Spares Analysis and JAXA payment for estimated CSP requirements through 2020. The Basic Agreement between NASA and JAXA, which enabled JAXA to use the Common Spares Pool, on a reimbursable basis to NASA, for spares/repair parts to maintain the ISS-JEM. The Basics Agreement also supersedes and terminates the previous CSP-JEM Agreement between NASA and JAXA.	2/3/2012	12/31/2020
287	Goddard Space Flight Center (GSFC)	Russian Academy of Sciences	Russia (UR)	agreement for cooperation in the Field of Space Geodesy	Cooperative Agreement	NASA and the Russian Academy of Sciences (RAS) cooperate in the operation of a space geodetic station in Russia. NASA loans space geodetic equipment to RAS on a long-term basis, and RAS operates and maintains the station.	2/8/2012	8/31/2021
288	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Memorandum of Understanding Between the European Space Agency and the National Aeronautics and Space Administration of the United States of America Concerning the Solar Orbiter Mission	Cooperative Agreement	The Solar Orbiter (SO) mission will be specifically devoted to solar and heliospheric physics, providing close-up and high-latitude observations of the Sun. The goal of the mission will be to explore the near-Sun environment to improve the understanding of how the Sun determines the environment of the inner solar system and, more broadly, generates the heliosphere itself, and how fundamental plasma physical processes operate near the Sun. SO is an international collaboration comprising many science instruments and suites, including one instrument and one sensor provided by NASA. ESA will provide the spacecraft, while NASA will provide the launch. The SO orbiter collaboration is taking place within ESA's Cosmic Vision line of missions within the Science Programme. The SO mission is currently planned for a 2017 launch date, with the end of the nominal mission set for 2024.	3/6/2012	12/31/2025

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
289	Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement Between the National Aeronautics and Space Administration and the German Aerospace Center For Cooperation on the Solar Probe Plus (SPP) Mission	Cooperative Agreement	NASA will develop the SPP, a spacecraft equipped to perform scientific studies of the Sun. NASA plans to launch the SPP in 2018 from Cape Canaveral, Florida, aboard an Atlas V class launch vehicle. The primary scientific objectives, to be carried out during the mission, will be to determine the structure and dynamics of the magnetic fields at the sources of both fast and slow solar wind, to trace the flow of energy that heats the corona and accelerates the solar wind, and to determine what mechanisms accelerate and transport energetic particles. Instruments include a wide-field imager, fast ion analyzer, fast electron analyzer, energetic particle instrument, magnetometer, and plasma wave instrument. DLR and NASA will be cooperating on the Wide Field Imager for Solar Probe (WISPR) Investigation on the SPP mission. WISPR will track density fluctuations in the solar corona by imaging visible sunlight scattered by electrons in the corona as the spacecraft traverses through its perihelion passes. International participation on this mission also includes France and Belgium.	3/20/2012	9/30/2026
290	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	Oceansat-2 Implementing Arrangement with ISRO	Cooperative Agreement	Cooperation btw NASA and the Indian Space Research Organisation (ISRO) on the Oceansat-2 mission. This is an IA under the NASA-ISRO Framework Agreement.	3/26/2012	12/31/2016
291	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	GPM-Megha Tropiques Implementing Arrangement with ISRO	Cooperative Agreement	Cooperation between NASA and the Indian Space Research Organisation (ISRO) on the Global Precipitation Measurement and Megha-Tropiques missions. This is an IA under the NASA-ISRO Framework Agreement	3/26/2012	12/31/2016
292	Headquarters (HQ)	LEGO System A/S	Denmark (DA)	Non-Reimbursable Space Act Umbrella Agreement between NASA and LEGO System A/S of Denmark for Cooperation in Ground-Based and Aeronautics Activities	Cooperative Agreement	Office of Communications: All activities are to be described in Annexes to the Umbrella Agreement. The first Annex provides for cooperation in the development of a Mindstorms classroom starter kit.	4/10/2012	4/9/2017
293	Glenn Research Center at Lewis Field (GRC)	Mitsubishi Heavy Industries, LTD	Japan (JA)	Reimbursable Space Act Umbrella Agreement between NASA and Mitsubishi Heavy Industries, LTD for Wind Tunnel Testing of Aircraft Ice Protection Systems	Reimbursable Agreement	The Umbrella Agreement shall be for the purpose of performing wind tunnel tests of MHI aircraft ice protection systems to obtain performance data. One (1) Annex is executed with the agreement.	4/19/2012	4/30/2017
294	Headquarters (HQ)	Commonwealth Scientific and Industrial Research Organization (CSIRO), Government of Australia	Australia (AS)	NASA Balloon Launches from Australia - Extension	Cooperative Agreement	Diplomatic-level exchange of notes combining the terms of two prior agreements for the launching of balloons in Australia on July 16 and October 18, 1984, and the launching of long-duration balloon flights beyond Australia on January 24 and July 24, 1985	4/24/2012	6/12/2022

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
295	Goddard Space Flight Center (GSFC)	Science and Technology Facilities Council (STFC)	United Kingdom (UK)	Reimbursable Agreement between the National Aeronautics and Space Administration (NASA) and the Science and Technology Facilities Council (STFC) for Development, Fabrication and Testing of the Intensified Active Pixel Sensor Detector for the Spectral Imaging of the Coronal Environment (SPICE) Instrument onboard the European Space Agency Solar Orbiter Mission	Reimbursable Agreement	NASA will design, fabricate, test, and deliver a pixel sensor to STFC for an intensified active pixel sensor for the Spectral Imaging of the Coronal Environment (SPICE), onboard the European Space Agency (ESA) Solar Orbiter (SO) mission. In the context of this overall project, NASA's Goddard Space Flight Center (GSFC) will design, build, and perform qualification testing of the SPICE Detector Assembly. By the end of this effort, an Engineering Model Detector, a qualified Flight Detector Assembly, and an additional flight qualified Detector Assembly will be delivered to Rutherford Appleton Laboratory for integration into the SPICE Optical Assembly.	5/9/2012	12/31/2018
296	Goddard Space Flight Center (GSFC)	Leopold-Franzens-Universitat Innsbruck	Austria (AU)	Southeast Asia Composition, Cloud, Climate Coupling Regional Study (SEAC4RS)	Cooperative Agreement	NASA will operate the SEAC4RS aircraft campaign, and the Leopold-Franzens-Universitate Innsbruck of Austria will contribute a High Sensitivity Proton-Transfer-Reaction Mass Spectrometer.	5/10/2012	5/10/2017
297	Johnson Space Center (JSC)	Centre de Recherches Petrographiques et Geochimiques	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Bernard Marty of the Centre de Recherches Petrographiques et Geochimiques of France proposes to use samples to undertake scientific investigations in the area of Nitrogen and Argon Abundances/Isotopic Compositions Analyses.	5/14/2012	5/14/2017
298	Ames Research Center (ARC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	NASA-NERC CAST/ATTREX Agreement	Cooperative Agreement	The objective of the Airborne Tropical Tropopause Experiment (ATTREX) mission will be to study the changes in the stratospheric humidity levels in order to gain a better understanding of the physical processes occurring in the region of the atmosphere that controls the composition of the stratosphere, the Tropical Tropopause Layer (TTL). In parallel to the ATTREX mission, the objective of CAST will be to address scientific topics concerning: (a) halogen sources, transport and chemistry, (b) cirrus formation, occurrence and impact, and (c) the tropical tropopause layer.	5/18/2012	5/18/2017
299	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	X-ray Astronomy Satellite (Astro-E2/EII) Project/Suzaku	Cooperative Agreement	This extends the NASA-JAXA cooperation. ASTRO-EII satellite will carry five medium-energy x-ray telescope to study high-resolution spectroscopy of celestial x-ray sources	6/7/2012	6/9/2017
300	Headquarters (HQ)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Agreement between the United States of America and the Russian Federation Concerning Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Cooperative Agreement	Amendment 4: Extended by an exchange of diplomatic notes. Government to Government Agreement between the U.S. and the Russian Federation for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes. Crosscutting. Dip Notes extended the Agreement from June 17, 2007, through June 16, 2012. Russia Dip Note No. 10778 dtd 3 Dec 2007, U.S. Dip Note MFA No. 153-07, dtd 26 Dec 2007, and State Cable 169755 delivered U.S. Dip Note on 27 Dec 2007.	6/18/2012	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
301	Goddard Space Flight Center (GSFC)	National Institute of Aeronautics and Space of the Republic of Indonesia (LAPAN)	Indonesia (ID)	Southeast Asia Composition, Cloud, Climate Coupling Regional Study (SEAC4RS)	Cooperative Agreement	NASA will operate SEAC4RS and involve LAPAN scientists, and LAPAN will facilitate over-flight clearance for the campaign.	6/19/2012	9/30/2017
302	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Birger Rasmussen of Curtin University of Technology in Western Australia proposes to use samples to undertake scientific investigations in the area of Lunar Samples for In Situ Isotopic Analysis of Individual Mineral Crystals.	7/3/2012	7/3/2017
303	Johnson Space Center (JSC)	Hiroshima University	Japan (JA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Hiroshi Hidaka of Hiroshima University in Japan proposes to use samples to undertake scientific instructions in the area of Lunar Science, i.e., Systematic Noble Gas Isotopic & TEM Observation of Space Weathering in Lunar Regolith.	7/3/2012	7/3/2017
304	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Mahesh Anand of the The Open University in U.K. proposes to use samples to undertake scientific investigations in the area of Understanding the Petrogenetic Relationship Between Low Ti and High Ti Basalts.	7/3/2012	7/3/2017
305	Johnson Space Center (JSC)	Museum National d'Histoire Naturelle	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Francois Robert of the Museum National d'Histoire Naturelle of France proposes to use samples to undertake scientific investigations in the area of Lunar Soil Samples for Hydrogen NanoSims Analyses.	7/4/2012	7/4/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
306	Ames Research Center (ARC)	Swedish National Space Board (SNSB)	Sweden (SW)	NASA and SNSB Cooperation on the TechEdSat Flight Demonstration Mission	Cooperative Agreement	Office of Chief Technologist. NASA and the Swedish National Space Board (SNSB) are in cooperation on nanosatellite technologies pursuant to a May 19, 2011, Implementing Arrangement under the Framework Agreement between the Government of the U.S. and the Government of Sweden for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes concluded on October 14, 2005. Under the IA NASA and SNSB conducted testing and evaluation of an SNSB miniature Remote Terminal Unit (RTU) platform and an SNSB 3-dimensional wafer-level packaging (WLP) technology. As a result of this joint evaluation, NASA and SNSB have elected to integrate the SNSB RTU and WLP into the NASA TechEdSat satellite for a space flight demonstration mission. NASA has identified a flight opportunity for TechEdSat the satellite to be launched to the ISS by the JAXA H-II Transfer Vehicle. Upon reaching ISS, NASA will arrange TechEdSat to be transferred to the Japanese Experiment Module Small Satellite Orbital Deployer, where it will subsequently be deployed, operate in Low Earth Orbit, and eventually be destroyed through re-entry into Earth's atmosphere. Since the Framework Agreement does not apply to activities undertaken related to the ISS, this letter establishes a separate agreement between NASA and SNSB to address our cooperation on the TechEdSat flight demonstration mission.	7/4/2012	1/1/2018
307	Goddard Space Flight Center (GSFC)	Istituto di Scienze dell'Atmosfera e del Clima (ISAC)	Italy (IT)	Hydrological Cycle in Mediterranean Experiment (HyMeX)	Cooperative Agreement	NASA will contribute ground-based precipitation measuring instruments; ISAC will provide sites and data.	7/10/2012	11/30/2017
308	Goddard Space Flight Center (GSFC)	University of Dhaka	Bangladesh (BG)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the University of Dhaka will cooperate on the operation of an AERONET sunphotometer station located at the University of Dhaka. NASA provides the equipment, and the University of Dhaka provides the site.	7/11/2012	6/30/2022
309	Goddard Space Flight Center (GSFC)	Universite Joseph Fourier a Grenoble	France (FR)	Hydrological Cycle in Mediterranean Experiment (HyMeX)	Cooperative Agreement	NASA will contribute ground-based precipitation measuring instruments; UJF will provide sites and data.	7/11/2012	11/30/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
310	Langley Research Center (LaRC)	Project Whitecard Studios Inc (PWS)	Canada (CA)	Nonreimbursable Space Act Agreement between Project Whitecard Studios Inc. (PWS) of Canada and NASA for Cooperation to Engage Students and Educators in NASA-related Science, Technology, Engineering, and Mathematics Activities Through Starlite Digital Badges	Cooperative Agreement	NASA will fulfill its role as a collaborator in the McArthur Foundation's and Mozilla, Inc.'s project called "Digital Badges for Lifelong Learning." NASA was selected as a collaborator and paired, by the sponsors, to work with PWS, a gaming company based in Canada, and the Center for Educational Technologies (CET), a university-based, educational technology research and development organization based in West Virginia. The Robotics and STEM Badges Using NASA Content (RSBUNC) proposal won a grant of \$150,000 to be provided directly to the developers during the pilot year (April 2012 - March 2013). The purpose of this agreement is to formalize the relationship among the developers and NASA in order to further develop and implement the badging system during the Pilot Year and beyond.	7/26/2012	7/26/2017
311	Johnson Space Center (JSC)	Birkbeck College of London	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Ian A. Crawford of the Birkbeck College of London in UK proposes to use samples to undertake scientific investigations in the area of EDS/WDS Electron Microprobe, LA-ICP-MS, and 40Ar/39Ar Radiometric Analysis of Lunar Samples.	8/3/2012	8/3/2017
312	Goddard Space Flight Center (GSFC)	Centre National De La Recherche Scientifique, National Centre for Space Studies (CNES), Universite Joseph Fourier a Grenoble	France (FR)	Implementing Arrangement between the National Aeronautics And Space Administration of the United States Of America and the Centre National D'etudes Spatiales of France on the Space Environment Testbed (Set) Mission	Cooperative Agreement	NASA's Science Mission Directorate (SMD) is directing the development of the SET mission, part of the LWS Program. NASA will develop the SET carrier that provides a single interface between SET experiments and a non-NASA host spacecraft. The carrier holds four experiments as follows: the Cosmic Radiation Environment Dosimetry and Charging Experiment (CREDANCE) space weather monitor; the Dosimetry Intercomparison and Miniaturization Experiment (DIME); the Characterization of Proton Effects and Enhanced Low Dose Rate Sensitivity (ELDRS) in Bipolar Junction Transistors; and the Commercial Off-the-Shelf (COTS-2) digital technologies. The primary scientific objectives will be to define space environment effects and degradation mechanisms, reduce uncertainties in the environment and its effects on spacecraft and spacecraft payloads, and improve design and operations guidelines and test protocols to reduce spacecraft anomalies and failures during operations due to environmental effects. The COTS-2 experiment will be used to measure the effects of the space ionizing radiation environment on COTS digital microelectronics devices in order to improve performance prediction in space for future digital devices. CNES will provide for the design and the breadboard fabrication of the COTS-2 digital microelectronics experiment, in collaboration with the French laboratories.	8/4/2012	12/31/2016

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
313	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	Nigerian National Space Research and Development Agency (NASDRA)	Nigeria (NI)	Ext of LOA between NASA and the Nigerian National Space Research and Development Agency (NASDRA) for Cooperation on Geo-Hazards Research	Cooperative Agreement	NASA responsibilities include long term loan of 1 or more GPS receivers, antennas, computers, and associated equipment, training for use of NASA provide equipment and software, data analysis support. NASDRA responsibilities include - logistical support, personnel, support data analysis	8/7/2012	10/10/2018
314	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Alendronate - Zoledronate Experiment	Cooperative Agreement	Amendment and Extension of original LOA. NASA/JAXA Agreement on a joint study of ?Bisphosphonates as a Countermeasure to Space Flight Induced Bone Loss? (NASA objective) and ?Pre-flight Zoledronate Infusion as an Effective Countermeasure for Spaceflight-Induced Bone Loss and Renal Stone Formation? (JAXA experiment). Joint study referred to as ?(the Alendronate - Zoledronate experiment?). The objective of this experiment is to determine whether bisphosphonates, in conjunction with the routine in-flight exercise program, will protect International Space Station (ISS) crewmembers from the regional decreases in bone mineral density documented on previous ISS flights. The pre-flight, in-flight, and post-flight activities regarding the Alendronate - Zoledronate experiment will be covered by an arrangement among the Canadian Space Agency, the European Space Agency, NASA of the United States, and Japan Aerospace Exploration Agency concerning International Space Life Sciences flight experiments on the International Space Station (ISS) (hereinafter referred to as ?the Arrangement?) which went into effect on September 30, 2002, (SIERA # MULT-0008-0).	8/10/2012	12/31/2016
315	George C. Marshall Space Flight Center (MSFC)	University of Surrey	United Kingdom (UK)	Non-Reimbursable Space Act Agreement Between NASA and The University of Surrey of the UK for Cooperation in the Advancement of Space Deployable Solar Sail Technology	Cooperative Agreement	This agreement is for joint research only and allows NASA MSFC to join a European science team studying space deployable solar sails technology.	8/22/2012	8/21/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
316	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and the German Aerospace Center (DLR) for Cooperation on Air Traffic Management (ATM) Research on Efficient Airspace Operations under Constrained Conditions	Cooperative Agreement	The Airspace Systems Program (ASP) within the NASA Aeronautics Research Mission Directorate (ARMD) focuses on mastery, intellectual stewardship, and technical excellence in fundamental air traffic management research. The ASP directly addresses the air traffic management research needs of the NextGen, and the Institutes of Flight Guidance and Atmospheric Physics within DLR Aeronautics Research conduct research to address the needs of the SESAR-JU. Both NASA and DLR conduct research to enable the formation, development, integration, and demonstration of revolutionary concepts, capabilities, and technologies allowing significant increases in capacity, efficiency, and flexibility of the air transportation system. Increasing the capacity and efficiency of the air transportation system in a manner that does not negatively impact the environment or safety is critically important for both U.S. and European economic well-being. The associated environmental impact and economic inefficiencies have been predicted by some to cost the nation tens of billions of dollars annually. The challenge for sustainable aviation is to develop technology and policy that meets the demand for air traffic at safe and affordable prices while minimizing aviation's impact on the environment. The aim of this collaboration is to develop capabilities to quantify the air traffic management uncertainties and their impacts.....(not enough space).	9/11/2012	9/30/2017
317	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and the German Aerospace Center (DLR) for Cooperation on the Coordinated Arrival/Departure/Surface Operations Research	Cooperative Agreement	The Airspace Systems Program (ASP) within the NASA Aeronautics Research Mission Directorate (ARMD) focuses on mastery, intellectual stewardship, and technical excellence in fundamental air traffic management research. The ASP directly addresses the air traffic management research needs of NextGen, and the Institute of Flight Guidance within DLR Aeronautics Research conducts research to address the needs of the SESAR-JU. Both NASA and DLR conduct research to enable the formation, development, integration, and demonstration of revolutionary concepts, capabilities, and technologies allowing significant increases in capacity, efficiency, and flexibility of the air transportation system.	9/11/2012	9/30/2017
318	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Implementing Arrangement between NASA and CSA for Cooperation on the Icebridge Mission and Sounding Rocket Research	Cooperative Agreement	An exchange of research aircraft time on the Icebridge mission for sounding rocket motors. The cooperation is an implementing arrangement under the U.S.-Canada Civil Space Agreement.	9/13/2012	3/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
319	Langley Research Center (LaRC)	National Aerospace Laboratory (NLR)	Netherlands, The (NL)	Agreement between NASA and the National Aerospace Laboratory of the Netherlands on Collaborative Research in Flight Deck Interval Management	Cooperative Agreement	NASA and NLR seek to engage in mutually beneficial collaboration in research in the areas of FIM and ASAS for congested air traffic operations in the terminal area. Both NASA and NLR have independently developed controller managed spacing along with FIM and ASAS tools for efficient terminal operations, and are seeking user validation of these tools and concepts through simulations and operational trials with airlines, airports, and air navigation service providers. Currently, NLR is collaborating with KDC at Schiphol airport for user validation of AMAN, FIM, and ASAS tools and concepts. KDC is a foundation, which supports Mainport Schiphol Airport in Amsterdam, the Netherlands. Within KDC, the sector partners Royal Dutch Airlines (KLM), Amsterdam Airport Schiphol (AAS) and Air Traffic Control of the Netherlands (LVNL) co-operate to coordinate their development activities and cooperate with knowledge institutes such as NLR. The work performed through this activity is highly synergistic with the work being performed in the super density operations discipline of NASA's Concepts and Technology Development (CTD) and Systems Analysis, Integration, and Evaluation (SAIE) projects. Likewise, work performed through this activity is highly synergistic with work being performed at the NLR. The results could lead to improvements in dense terminal traffic, and in concepts and technologies to reduce terminal arrival aircraft fuel consumption, noise, emissions, and congestion.	9/13/2012	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
320	Ames Research Center (ARC)	National Aerospace Laboratory (NLR)	Netherlands, The (NL)	Agreement between NASA and the National Aerospace Laboratory of the Netherlands on Collaborative Research in Airport Surface Traffic Optimization	Cooperative Agreement	The ability of airports to accommodate high levels of surface traffic has been recognized as one of the major constraints on the capacity and throughput of the air traffic management (ATM) system, and is the cause of delays resulting in excess fuel consumption, noise, and emissions. This cooperation will be carried out in two phases. During the first phase, the Parties will jointly evaluate the Separation Bubble algorithm developed by NLR on a simulation platform at NASA facilities using airport topology and traffic data for a complex airport with multiple runways, large number of taxi ways, and heavy traffic, such as Dallas/Fort Worth International Airport (KDFW). The Parties intend to install the Separation Bubble Tools (SBT) simulation platform at NASA Ames Research Center (ARC) for evaluation with KDFW data. Upon completion of the evaluation, and subject to mutual agreement, NASA and NLR will install and evaluate a simulation at make a determination of installation and simulation at NASA's North Texas Research (NTX) facility. During the second phase, the Parties will explore joint integrated simulations of selected NASA and NLR surface traffic management route planning tools, and concepts. The work performed through this activity is highly synergistic with the work being performed in the surface traffic management discipline of NASA's Concepts and Technology Development (CTD) project.	9/13/2012	12/31/2017
321	Johnson Space Center (JSC)	Czech Geological Survey	Czech Republic (CZ)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Tomas Magna of the Czech Geological Survey of Czech Republic proposes to use samples to undertake scientific investigations in the area of characterizing the Li Isotope Composition of the Lunar Rocks.	9/26/2012	9/26/2017
322	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Katherine Joy of University of Manchester in England proposes to use samples to undertake scientific investigations in the area of History of Lunar Bombardment from Lunar Sample Analysis.	9/26/2012	9/26/2017
323	Goddard Space Flight Center (GSFC)	University of Liege	Belgium (BE)	Solar Orbiter Collaboration	Cooperative Agreement	The Centre Spatial de Liège (Université de Liège) will provide engineering support to the NASA-provided SoloHi instrument on the ESA-led Solar Orbiter mission. The Belgian Federal Science Policy Office (BELSPO) is providing the funding.	10/2/2012	12/31/2025
324	Johnson Space Center (JSC)	Australian National University (ANU)	Australia (AS)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Marc Norman of the Australian National University in Canberra, Australia proposes to use the said Lunar samples to undertake scientific investigations.	10/4/2012	10/31/2017
325	Johnson Space Center (JSC)	The University of Dublin	Ireland (EI)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Ian Sanders of The University of Dublin in Dublin, Ireland proposes to use the said Lunar samples to undertake scientific investigations.	10/4/2012	10/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
326	Johnson Space Center (JSC)	Centre National De La Recherche Scientifique	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Franck Poitras proposes to use samples to undertake scientific investigations to provide opportunities for discovery and dissemination of information to the scientific community and to the general public.	10/4/2012	10/31/2017
327	Johnson Space Center (JSC)	Geographical Survey Institute (GSI)	Japan (JA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Shigeko Togashi at the Geological Survey of Tsukuba, Japan proposes to use the said Lunar samples to undertake scientific investigations.	10/4/2012	10/31/2017
328	Goddard Space Flight Center (GSFC)	University of Bern	Switzerland (SZ)	Solar Orbiter Collaboration	Cooperative Agreement	University of Bern will calibrate the NASA-provided Heavy Ion Spectrometer (HIS) instrument for the ESA-led Solar Orbiter mission.	10/15/2012	12/31/2025
329	Goddard Space Flight Center (GSFC)	Ministry of International Trade and Industry (MITI)	Japan (JA)	Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) on Earth Observing System (EOS)/Terra	Cooperative Agreement	The purpose of this Implementing Arrangement is to establish that the Parties will undertake scientific and technical cooperation for flight of the ASTER instrument on the NASA EOS-AM1 platform. The Parties jointly undertake this program with the purpose of furthering cooperation in global change research by enabling the multidisciplinary study and long-term systematic monitoring of the Earth, including research involving data from all Earth observing platforms contained in the IEOS and related activities of the IGBP, such as sensor calibration and data validation. Amendment to the IA - IA does not expire until end of mission.	10/19/2012	10/24/2019
330	Goddard Space Flight Center (GSFC)	University Pierre and Marie Curie (UPMC)	France (FR)	Sea-Viewing Wide Field-of-View Sensor (SeaWiFS) and Moderate Resolution Imaging Spectrometer (MODIS) Projects	Cooperative Agreement	Cooperation in ocean color research using SeaWiFS and MODIS. NASA provides instruments and platforms for UPM-led field campaigns.	11/21/2012	11/21/2017
331	Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and DLR for Cooperation - Program/Project Management Training	Cooperative Agreement	Office of Chief Engineer. APPEL program will lead this cooperation. The parties will exchange best practices, knowledge sharing opportunities, and related experiences about program/project management.	11/29/2012	11/29/2022
332	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Solar Terrestrial Relations Observatory (STEREO)	Cooperative Agreement	CNES will provide SWAVES instrument suite. Co-Is were selected to provide portions of instruments for SECCHI and IMPACT suites.	12/7/2012	12/31/2016
333	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Offset of ESA's Responsibility for Common Systems Operating Costs (CSOC) & Cargo Transportation to the ISS	Cooperative Agreement	Offset of ESA's responsibility for Common System Operations Costs (CSOC), and Compensation for the transportation of ESA cargo to and from the ISS, through the provision of cargo delivery capability aboard the ESA Automated Transfer Vehicles (ATVs) or of other agreed items, or payment of funds.	12/13/2012	12/31/2021
334	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Barter of goods and services in support of International Space Station operations	Cooperative Agreement	Barter of goods and services in support of International Space Station operations	12/13/2012	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
335	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	ESA Planck Mission - A Cooperation on the High Frequency Instrument (HFI) Project	Cooperative Agreement	Extension of the NASA-CNES Planck LOA. Planck was selected as the Medium Mission M3 of the Horizon 2000 Plan of ESA. Planck is dedicated to obtaining definitive images of the CMB fluctuations and to separating the primordial signal to high accuracy from contaminating astrophysical sources of confusion. Planck will make precise determinations of the fundamental cosmological parameters which define our Universe, including the densities of baryonic, cold and hot dark matter, the value of the cosmological constant and the Hubble constant, and the neutrino content of the Universe. Planck will use two detector arrays; a Low-Frequency Instrument (LFI) using High Electron Mobility Transistors (HEMTs) and a High Frequency Instrument (HFI). Ariane 5 launch in 2007.	12/17/2012	7/1/2017
336	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	TWINS	Cooperative Agreement	The Two Wide-angle Imaging Neutral-atom Spectrometers mission will allow stereo imaging of different regions of the magnetosphere. This agreement provides for a Co-I from the University of Bonn who will provide the Lyman-alpha detector devices. Amendment and extension of the original agmt that entered into force on April 4, 2001.	12/17/2012	12/31/2016
337	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Solar Terrestrial Relations Observatory (STEREO) Mission	Cooperative Agreement	STEREO will address the origin, evolution & interplanetary consequences of CMEs. First program to look at Sun in 3 dimensions.	12/17/2012	12/31/2016
338	Goddard Space Flight Center (GSFC)	Swiss Space Office (SSO)	Switzerland (SZ)	Solar Terrestrial Relations Observatory (STEREO)	Cooperative Agreement	NASA and the Swiss Space Office will collaborate on the Solar Terrestrial Relations Observatory (STEREO), which launched on October 25, 2006. NASA is providing overall project management and the twin spacecraft, and the University of Bern, Switzerland, supported by the Swiss National Science Foundation, is providing the Plasma and Suprathermal Ion and Composition (PLASTIC) instrument suite for each of the two identically-instrumented spacecraft.	12/17/2012	12/31/2016

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
339	Glenn Research Center at Lewis Field (GRC),Headquarters (HQ),Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Implementing Arrangement Between the National Aeronautics and Space Administration of the United States of America and the European Space Agency Concerning the Provision by ESA of Elements for NASA's Multi-Purpose Crew Vehicle as a Contribution to the Offset of ESA's Responsibility for International Space Station Common System Operations Costs and to Compensate NASA for Transportation Costs and Other Supporting Services	Cooperative Agreement	Barter arrangement. ESA will provide the Service Module (SM) for the Exploration Mission - 1 Multi-Purpose Crew Vehicle (MPCV) as contribution to the offset of ESA's Responsibility for International Space Station common system operations costs and to compensate NASA for transportation costs and other supporting services including TDRSS support and an astronaut ISS increment flight opportunity. Also includes an Annex which lays the groundwork for ESA to also provide the Exploration Mission-2 Service Module and assistance for the Exploration Mission-3 activities.	12/18/2012	12/31/2021
340	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Cooperation Under Solar Terrestrial Science Programme (STSP) - extension 3 (SOHO)	Cooperative Agreement	Amendment - 2012 -2016 The STSP composed of 2 missions: Cluster and SOHO. The combination will enhance the scientific return beyond the objectives of the individual missions. Cluster mission is to investigate small-scale structure in the Earth's plasma environment. Spacecraft SOHO - Solar and Heliospheric Observatory mission is develop by ESA to develop the launch of Ariane V. Expiration date was one year past nominal mission (Dec 2, 1998), but due to mission problems and loss of Cluster, agreement was in limbo until formally extended on Jan 16, 2003.	12/21/2012	12/31/2016
341	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Cluster-II - Space Plasma Physics Research - extension 4	Cooperative Agreement	Cluster-II is a Space Plasma Physics Research mission consisting of four identically instrumented, spacecraft. Amended by ESA0242, dtd Nov. 6, 2002, extending the agreement to Dec. 31, 2005. Amendments are out of order. ESA-0277-5 is most recent.	12/21/2012	12/31/2016

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
342	Glenn Research Center at Lewis Field (GRC)	National Institute for Aerospace Technology (INTA)	Spain (SP)	Ice-Accretion Physics and Water-Film Thickness Research	Cooperative Agreement	Amendment 2: NASA is increasing its understanding of ice-accretion physics and improving icing scaling methods. INTA is actively pursuing the development of experimental capabilities to measure water-film thickness. For this agreement NASA and INTA are cooperating to combine NASA's understanding of ice-accretion physics with INTA's experimental capability to contribute to the development of improved scaling methods that support new icing wind tunnel test techniques and algorithm development for next-generation ice accretion codes. Amendment 1: National Institute for Aerospace Technology (INTA) and NASA have identified a mutual interest in conducting cooperative activities related to ice-accretion physics and water-film thickness. A cooperative program to combine NASA's understanding of ice-accretion physics with INTA's experimental capability will contribute to the development of improved scaling methods that support new icing wind tunnel test techniques and algorithm development for next-generation ice-accretion codes.	12/31/2012	12/31/2016
343	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	MOU Between NASA and ESA Concerning the Euclid Mission	Cooperative Agreement	MOU covering NASA-ESA cooperation on the ESA-led Euclid astrophysics mission. Covers NASA provision of the Near Infrared Spectrograph and Photometer (NISF) instrument sensor chip system.	1/10/2013	7/1/2025
344	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Alexander Nemchin of Curtin University of Technology in Bentley, Australia proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
345	Johnson Space Center (JSC)	University of Winnipeg	Canada (CA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Edward Cloutis of the University of Winnipeg in Winnipeg, Canada proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
346	Johnson Space Center (JSC)	Czech Geological Survey	Czech Republic (CZ)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Tomas Magna of the Czech Geological Survey in Prague, Czech Republic proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
347	Johnson Space Center (JSC)	Aix-Marseille University	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Jerome Gattacceca of Aix-Marseille University in Aix-en-Provence, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
348	Johnson Space Center (JSC)	Ecole Normale Supérieure de Lyon	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Francis Albaredo of the Ecole Normale Supérieure in Lyon, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
349	Johnson Space Center (JSC)	the Laboratoire de Geochimie et Cosmochimie	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Jean-Louis Birk of the Laboratoire de Geochimie et Cosmochimie in Paris, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
350	Johnson Space Center (JSC)	Le Centre de Recherches Petrographiques et Geochimiques	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Marc Chaussidon of Le Centre de Recherches Petrographiques et Geochimiques in Vandoeuvre-les-Nancy, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
351	Johnson Space Center (JSC)	the Freie Universitat Berlin	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Harry Becker of the Freie Universitat Berlin in Berlin, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
352	Johnson Space Center (JSC)	Wilhelms-Universitat	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Addi Bischoff of Wilhelms-Universitat in Munster, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
353	Johnson Space Center (JSC)	Physical Research Laboratory (PRL)	India (IN)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Jitendra Goswami of The Physical Research Laboratory in Ahmedabad, India proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
354	Johnson Space Center (JSC)	Waseda University	Japan (JA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Timothy Fagan of Waseda University in Tokoyo, Japan proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
355	Johnson Space Center (JSC)	Osaka University	Japan (JA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Kentaro Terada of Osaka University in Osaka, Japan proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
356	Johnson Space Center (JSC)	The Chiba Institute of Technology	Japan (JA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Tomoko Arai of the Chiba Institute of Technology in Chiba, Japan proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
357	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Patricia Clay of the University of Manchester in Manchester, U.K. proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017
358	Johnson Space Center (JSC)	The University of Hertfordshire	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. James Hough of The University of Hertfordshire in Hatfield, U.K. proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/11/2013	10/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
359	Goddard Space Flight Center (GSFC)	Mexico Carbon Program	Mexico (MX)	Airbourne Lidar, Hyperspectral, and Thermal Measurements in Mexico	Cooperative Agreement	Parties will conduct the project using instrumented NASA DC-8 and NASA-funded University of North Dakota Citation aircraft for flights over ground sites located in and around the Environment Canada Centre for Atmospheric Research Experiments site in Egbert, Ontario. Ground-based equipment to measure precipitation will also be used.	1/24/2013	8/31/2017
360	Johnson Space Center (JSC)	University of Durham	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Kevin Burton of the University of Durham in Durham, U.K. proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	1/31/2013	10/31/2017
361	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Solar Orbiter Agreement - Heavy Ion Sensor (HIS)	Cooperative Agreement	Agreement for the fabrication, delivery, integration, and data for the NASA-provided Heavy Ion Sensor (HIS) to Mullard Space Science Laboratory (MSSL) for integration with the UK Space Agency-provided Solar Wind Analyzer (SWA) instrument suite. The SWA will be integrated onto the ESA-provided Solar Orbiter spacecraft. This Agreement includes provisions for interface coordination, delivery of the payload and its components to the Parties for testing, integration, and science data and data products sharing and archiving.	2/19/2013	12/31/2025
362	Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Italy (IT)	MOU betw NASA and ASI concerning the Gamma-ray Large Area Space Telescope (GLAST) Mission/Fermi	Cooperative Agreement	This is an extension of the MOU. MOU covers the cooperation between NASA and ASI on the GLAST mission. It replaces all previous LOA's between ASI and NASA for the GLAST mission	3/4/2013	12/31/2017
363	Ames Research Center (ARC)	French National Aerospace Research Center (ONERA)	France (FR)	Air Traffic Management and the Environment	Cooperative Agreement	This collaboration aims at studying and assessing the interdependencies of air traffic management and the environment through the simulation capabilities at NASA and ONERA. It seeks to study through simulation: The impact of air traffic on environment (noise, fuel consumption and emissions) including future aircraft concepts; The optimization of air traffic to lessen this impact: environmental impact of surface movement planning & operation, terminal management phase (minimizing emissions, fuel consumption and noise impact and impacts to local air quality); and The adaptation of air traffic in respect to meteorological conditions, including volcanic ashes. The results of this collaboration will lead to improvements in the simulations of fuel consumption, noise, and emissions of future air traffic management concepts and vehicle types, as well as improvements to the future air traffic management concepts and technologies. It is expected to benefit both NASA and ONERA.	3/14/2013	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
364	Headquarters (HQ)	Government of the Italian Republic	Italy (IT)	Framework Agreement between the Government of the United States of America and the Government of the Italian Republic for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Cooperative Agreement	Government to Government Agreement between the U.S. and the Italian Republic for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes signed on March 19, 2013. Crosscutting. This Agreement enters into force on the date of the last note of an exchange of diplomatic notes in which the Parties notify each other of the completion of their internal procedures necessary for the entry into force of this Agreement. (Italy Note Verbale signed January 19, 2016. Dept. of State Dip Note 195 stamped February 18, 2016.)	3/19/2013	3/19/2023
365	Ames Research Center (ARC)	French National Aerospace Research Center (ONERA)	France (FR)	Air Traffic Management and Functional Allocation	Cooperative Agreement	NASA and ONERA desire to collaborate on ATM functional allocation research. The work performed through this activity is highly synergistic with the work being performed in the functional allocation technical challenge of NASA's Airspace Systems Program within NASA's Aeronautics Research Missions Directorate. The results of this collaboration will lead to improvements in the simulations of air/ground and human/machine functional allocation, and in concepts and technologies to establish the basis for air/ground functional allocation for separation assurance including safe, graceful degradation of performance in response to off-nominal conditions. It is expected to benefit both NASA and ONERA.	3/26/2013	12/31/2017
366	Goddard Space Flight Center (GSFC)	Southeast Asia Start Regional Center (SEA START RC), Chulalongkorn University	Thailand (TH)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	Cooperation on Aerosol Robotic Network (AERONET). NASA provides AERONET instruments on loan; Southeast Asia START Regional Center provides location and local operations.	4/1/2013	2/28/2023
367	George C. Marshall Space Flight Center (MSFC)	Space Research Institute (IKI), Russian Academy of Sciences (RAS)	Russia (UR)	Space Research Institute of the Russian Academy of Sciences (IKI) re Cooperation on the ART-XC Instrument Onboard the Russian Spectrum Roentgen Mission (SPG)	Cooperative Agreement	NASA will provide four mirror modules for portions of science data from the Russian Instrument.	4/6/2013	12/31/2025

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
368	Ames Research Center (ARC)	French National Aerospace Research Center (ONERA)	France (FR)	Human Factors Research - In Support of NASA Aviation Safety Program (Better Understanding of Human Factors in Aeronautical Operations and Incidents)	Cooperative Agreement	Amendment 1: Reliable insight into the latent and proximate contributing factors in an incident or accident cannot be obtained from analysis of the numerical (flight-recorded) data alone. ONERA will also have access to data in textual format that contain additional information related to both the consequences and causes of flight crew fatigue. NASA will use these data to further develop and validate algorithms for extracting pertinent information from large sets of such textual data. ONERA's manual analyses of subsets of the same textual datasets will help to guide and validate NASA's automated analysis of those datasets. A goal of this collaboration is to understand (or, at least, set up procedures with which to understand) the levels and characteristics of those latent and proximate factors of flight crew fatigue whose confluence will very probably result in unacceptable flight-crew performance. The results of all of these studies are expected to lead to the development of a validated capability to gain understanding of flight crew fatigue, its metrics, its contributing factors, and its effect on performance in a jointly prepared report. Collaborative studies to better understand human factors in aeronautical operations and incidents. This agreement/cooperation is in partnership w/UK's easyJet.	4/8/2013	12/31/2017
369	Goddard Space Flight Center (GSFC)	Universite de la Reunion	France (FR)	Network for the Detection of Atmospheric Chemical Change	Cooperative Agreement	NASA will use its mobile validation instrumentation at the Mado facility on Reunion Island to participate in an NDACC validation campaign with the Universite de la Reunion ozone profiling instruments.	4/15/2013	1/31/2018
370	Goddard Space Flight Center (GSFC)	National Survey for Seismic Protection	Armenia (AM)	Space Geodetic Research	Cooperative Agreement	Cooperation on space geodetic research through the establishment of one or more Global Positioning System (GPS) ground stations in Armenia, with the first GPS ground station to be located at Yerevan.	4/18/2013	3/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
371	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and CNES for the Jason-1 Mission	Cooperative Agreement	Jason-1 provides a continuation of the TOPEX/Poseidon mission's high-accuracy radar altimetry measurements for global ocean circulation and sea surface studies for research and operational requirements. It uses radar altimetry, microwave radiometry, precision satellite tracking, and precision orbit determination. From 2002 to 2006, Jason-1 and TOPEX/Poseidon operated in tandem on an interleaved orbit allowing them to essentially double the space ? time sampling. From June 2008 to April 2012, Jason-1 again provided these valuable ocean measurements in tandem with OSTM/Jason-2. A secondary objective is to provide near-real-time data (and product) services for operational activities such as marine now casting and numerical prediction of sea state, ocean circulation, and weather. The Jason-1 consists of a satellite-bus provided by CNES and carries a payload module jointly provided by the Implementing Agencies. The payload module consists of a radar altimeter and its antenna (Poseidon-2), and a Doppler Orbitography and Radio positioning Integrated by Satellite (DORIS) receiver package provided by CNES. A microwave radiometer and its antenna (the Jason-1 Microwave Radiometer (JMR), a laser retroreflector array (LRA), and a Turbo Rogue Space Receiver (TRSR) Global Positioning System (GPS) receiver package were provided by NASA. On December 7, 2001, Jason-1 was launched from Vandenberg Air Force Base, California on a NASA-provided Delta-II launch vehicle.	4/19/2013	7/31/2018
372	Ames Research Center (ARC)	The King Abdulaziz City for Science and Technology (KACST)	Saudi Arabia (SA)	Memorandum of Understanding Between The King Abdulaziz City for Science and Technology (KACST) of The Kingdom of Saudi Arabia and NASA Concerning the Ultra-Violet Light Emitting Diodes (UV-LED) Mission	Cooperative Agreement	Memorandum of Understanding Between The King Abdulaziz City for Science and Technology (KACST) of The Kingdom of Saudi Arabia and NASA Concerning the Ultra-Violet Light Emitting Diodes (UV-LED) Mission. NASA and KACST have an interest in demonstrating new spacecraft charge management technologies through the development and operation of a small satellite (SmallSat) mission referred to as the Ultra Violet Light Emitting Diodes (UV-LED) mission.	4/23/2013	4/23/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
373	Langley Research Center (LaRC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Sonic Boom Research: To Formalize Conducting Research into Methods for Modeling the Response of Residential and Commercial Building Structures to Sonic Boom Disturbances and the Resulting Human Response to the Noise Heard Inside the Structures	Cooperative Agreement	Amendment 2: The purpose of the cooperation is to address the following aspects of sonic boom modeling: advancement of equalization methods for boom simulators; trading data and/or modeling of NASA risk reduction tests and the JAXA Vibro Acoustic Device; modeling and numerical simulation of the vibro-acoustic response of buildings and building components due to simulated and actual sonic boom exposure (for both laboratory and field test articles); and exchanging recordings of and methods for recording rattle for playback in simulators. In the longer term, NASA and JAXA will investigate the possibility of using each organization's sonic boom simulators to conduct joint studies. The Parties will also consider pursuing future collaboration including investigating the use of boom simulators for evaluation of human response to sonic booms experienced indoors. Amendment 1: The purpose of the cooperation is to address the following aspects of sonic boom modeling: advancement of equalization methods for boom simulators; trading data and/or modeling of NASA risk reduction tests and the JAXA Vibro Acoustic Device; modeling and numerical simulation of the vibro-acoustic response of buildings and building components due to simulated and actual sonic boom exposure (for both laboratory and field test articles); and exchanging recordings of and methods for recording rattle for playback in simulators. In the longer term, NASA and JAXA will investigate the possibility of using each	5/1/2013	5/1/2017
374	Johnson Space Center (JSC)	Technik Museum Speyer	Germany (GM)	International Lunar Sample Loan Agreement: Reimbursable Space Act Agreement between NASA and Technik Museum Speyer for a Lunar Sample Display Case	Reimbursable Agreement	NASA and Technik Museum Speyer in Speyer, Germany designs an agreement for the construction and reimbursement of a specially-assembled lunar sample display case that will house Apollo lunar sample number 15499,67 which was brought to Earth by the Apollo 15 astronauts.	5/8/2013	5/8/2018
375	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	MOU btw NASA and JAXA for Cooperation on the Global Precipitation Measurement (GPM) Program	Cooperative Agreement	The purpose of this Memorandum of Understanding (hereinafter referred to as the ?MOU?) is to establish the terms and conditions under which NASA and JAXA will cooperate in the joint development, launch, operations and use of the Program for peaceful purposes. The Program consists of NASA and JAXA assets operating in partnership with other earth-observing satellites and instruments to produce global precipitation science data.	5/8/2013	12/31/2023

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
376	Goddard Space Flight Center (GSFC)	Faculty of Tropical Medicine, Mahidol University (FTM MU)	Thailand (TH)	Cooperation in Disease Control Research	Cooperative Agreement	The scientific objectives of this collaboration are: (1) to map the breeding sites for the major vector species, (2) to identify the potential sites for larvicide and insecticide applications, (3) to explore the linkage of vector population and transmission intensity to environmental variables, (4) to monitor the impact of climate change and human activities on vector population and transmission, and (5) to develop a predictive model for disease distribution.	5/10/2013	4/5/2018
377	Johnson Space Center (JSC)	The Natural History Museum Vienna	Austria (AU)	International Lunar Sample Loan Agreement: Reimbursable Space Act Agreement between NASA and the Natural History Museum Vienna for a Lunar Sample Display Case	Reimbursable Agreement	NASA and the Natural History Museum Vienna designs an agreement for the construction and reimbursement of a specially-assembled lunar sample display case that will house Apollo lunar sample number 15555,1032, which was brought to Earth by the Apollo 15 astronauts.	6/6/2013	6/6/2018
378	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement btw NASA and the CNES of France on the Scientific Instruments of the Solar Probe Plus (SPP) Payload	Cooperative Agreement	NASA's Science Mission Directorate is sponsoring the development of the SPP mission, which is a project in the Living with a Star Program, a series of missions designed to gather critical information about the Sun and its effects on Earth, human activities, and other planetary systems. NASA will develop the SPP, a spacecraft equipped to perform scientific studies of the Sun. NASA plans to launch the SPP in 2018 from Cape Canaveral, Florida. CNES is sponsoring French collaboration on the FIELDS investigation, which consists of a Plasma Wave Instrument and a Magnetometer, and the SWEAP investigation, consisting of a Solar Probe Cup (SPC), and a Solar Probe Analyzer (SPAN)	6/10/2013	9/30/2026
379	Glenn Research Center at Lewis Field (GRC)	Ontario Drive and Gear (ODG)	Canada (CA)	Non-Reimbursable Space Act Agreement between NASA and Ontario Drive and Gear (ODG) for Cooperation Involving Lunar Wheel Design	Cooperative Agreement	NASA and ODG will establish cooperation to performance testing of various roving vehicle wheel designs. ODG has developed a roving vehicle for CSA to support a potential NASA experiment payload on the surface of the Moon. ODG will determine the appropriate wheels for the vehicle and would like to test their wheel designs in the NASA SLOPE (Simulated Lunar OPERations) Lab at GRC. This testing would involve approximately one week of traction tests in which a vehicle or vehicles are driven in lunar strength simulant material to compare the performance of various wheel designs. Testing will include the potential of ODG providing their own test articles (roving vehicle, wheels and necessary support equipment), or alternatively, GRC provided test articles, or both.	6/11/2013	6/11/2018
380	Glenn Research Center at Lewis Field (GRC)	Canadian Space Agency (CSA)	Canada (CA)	Agreement Between NASA and Ontario Drive and Gear for Cooperation Involving Lunar Wheel Design	Cooperative Agreement	ODG is in the process of determining appropriate wheels for a lunar rover being designed for the Canadian Space Agency and will test the wheels in GRC's SLOPE laboratory.	6/11/2013	6/11/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
381	Marshall Space Flight Center (MSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Solar Physics Satellite (SOLAR-B) Project/Hinode	Cooperative Agreement	SOLAR-B satellite is a JAXA-led mission in sun-synchronous orbit to study the solar photosphere corona, and transition region. JAXA is responsible for the overall spacecraft and launch, and NASA provided the Focal Plane Package, the stand-alone X-Ray Telescope, and major optical components for the EUV Imaging Spectrometer.	6/19/2013	6/9/2018
382	George C. Marshall Space Flight Center (MSFC)	Italian Space Agency (ASI)	Italy (IT)	MOU between NASA and ASI concerning Cooperation the BepiColombo Mission	Cooperative Agreement	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Italian Space Agency Concerning Cooperation the BepiColombo Mission	6/20/2013	12/31/2023
383	Johnson Space Center (JSC)	Centre de Recherches Petrographiques et Geochimiques	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	NASA and Centre de Recherches Petrographiques et Geochimiques, France, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	6/26/2013	10/31/2018
384	Johnson Space Center (JSC)	Westfalische Wilhelms-Universitate Munster	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	NASA and Westfalische Wilhelms-Universitat Munster, Germany, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	6/26/2013	6/26/2018
385	Johnson Space Center (JSC)	Georg-August-Universitat Gottinge	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	NASA and Georg-August-Universitat Gottinge, Germany, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	6/26/2013	10/31/2018
386	Goddard Space Flight Center (GSFC)	Hiroshima University, Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Agreement among NASA, JAXA, and Hiroshima Univ for the NASA-LED GLAST Mission	Cooperative Agreement	Extension for NASA-JAXA Cooperation GLAST	6/28/2013	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
387	Goddard Space Flight Center (GSFC)	European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	European Org. for the Exploitation of Satellites (EUMETSAT)	MOU btw NASA and the EUMETSAT for Cooperation on the Global Precipitation Measurement (GPM) Mission	Cooperative Agreement	NASA will, for GPM, GCOM-W1, and all other GPM Partners? microwave sensor data, provide access to all Instrument Level 1 data and GPM data in both near real-time and as research products in accordance with GPM Partner data policies; provide access to NASA data products in both near real-time and as research products; and provide access to an algorithm theoretical basis document for the GPM data (including brightness temperature products and precipitation products) that discusses the calibration approach, geolocation, and key aspects of the conversion from instrument counts to brightness temperature. NASA will, for Ground Validation (GV) data provide access to GV data collected by NASA and GPM Partners, subject to GPM Partners' data policies; and for data processing of GPM data, provide read/write tools that can be used to read or write GPM data and NASA data products; provide data browser tools for GPM data and NASA data products; and provide assistance in understanding, interpreting, and using GPM data and NASA data products. EUMETSAT will provide access to EUMETSAT Meteosat Second Generation satellite Spinning Enhanced Visible and Infrared Imager (SEVIRI) and for first generation Metop satellite Microwave Humidity Sounder (MHS) data as quickly as possible from the time of observation, preferably within 24 hours and with as small transmission latency as possible, for the production of standard research quality merged global radiometer products; and provide an algorithm t	7/26/2013	7/26/2020
388	Goddard Space Flight Center (GSFC)	Forschungszentrum Julich (FZJ)	Germany (GM)	Airborne Carbon Cycle Dynamics Research	Cooperative Agreement	NASA and FZJ will conduct joint airborne research of carbon cycle dynamics and ecosystem health in the US and Germany in 2013 and 2014, respectively.	8/15/2013	10/31/2018
389	Goddard Space Flight Center (GSFC)	Finnish Meteorological Institute (FMI)	Finland (FI)	Global Precipitation Measurement Long-Term Experiment at the Lapland Unified Measurement Site	Cooperative Agreement	NASA and the Finnish Meteorological Institute will conduct a long-term measurement experiment at the FMI Arctic Research Center.	8/19/2013	8/31/2018
390	Headquarters (HQ)	American Institute in Taiwan (AIT)	Taiwan (TW)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	Agreement between the American Institute in Taiwan and the Taipei Economic and Cultural Representative Office in the U.S. for Cooperation in the Global Learning and Observations to Benefit the Environment Program. Intending to increase the awareness of students throughout the world about the global environment; seeking to contribute to increased scientific understanding of the Earth; and Desiring to support improved student achievement in science and mathematics.	9/6/2013	9/6/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
391	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Collaborative Research on the Quasi-Zenith Satellite System (QZSS)	Cooperative Agreement	NASA Provides ground station support from Hawaii for Japan's Quasi-Zenith Satellite System. The Parties collaborate on the use of a monitoring station for the Japanese Quasi-Zenith Satellite System (QZSS). The National Institute of Information and Communications Technology (NICT) of Japan is providing the Two Way Satellite Time and Frequency Transfer (TWSTFT) station (hereinafter QZSS Monitoring Station and TWSTFT station are jointly referred to as "QZSS MS"). The Parties will implement their cooperation regarding the QZSS MS in order to estimate satellite orbit and its clock offset in QZSS precisely using better geometry. This Agreement provides terms and conditions for installation of the QZSS MS managed by JAXA in NASA's premises at Kokee Park Geophysical Observatory (KPGO). Additionally, this Agreement addresses the provision of support services for the installation, maintenance, and operation of the QZSS MS by NASA and support for improved determination of GPS and QZSS orbits and clocks via improved monitoring of the Global Navigation Satellite System (GNSS) orbits, Earth Orientation, and time transfer. Additionally, the Parties will work closely on a U.S. ? Japan Global Positioning Systems (GPS)/QZSS Technical Working Group, which has been established for close cooperation during development of QZSS.	9/11/2013	9/30/2018
392	Goddard Space Flight Center (GSFC)	University of Valladolid (UVA)	Spain (SP)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the Universidad de Valladolid of Spain will cooperate on the AERONET program. NASA will provide equipment on loan which the Universidad de Valladolid will host at a mutually agreed location.	9/12/2013	9/30/2023

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
393	Goddard Space Flight Center (GSFC)	Agentur für Luft- und Raumfahrt (ALR, Aeronautics and Space Agency), Austrian Space Agency (ASA)	Austria (AU)	Temporal History of Events and Macroscale Interactions during Substorms (THEMIS)	Cooperative Agreement	NASA and the Aeronautics and Space Agency (FFG/ALR) of the Österreichische Forschungsförderungsgesellschaft mbH, or Austrian Research Promotion Agency, formerly the Austrian Space Agency (ASA), have been cooperating on the THEMIS mission, which launched on February 17, 2007. This unique constellation of satellites has provided scientists with data to help resolve how Earth's magnetosphere stores and releases energy from the Sun by triggering geomagnetic substorms. THEMIS aims to determine what physical process in near-Earth space initiates the violent eruptions of the aurora that occur during substorms in the Earth's magnetosphere. FFG/ALR is responsible for the development and testing of the Fluxgate Magnetometer Electronics (FGE). THEMIS is a 2-year mission consisting of 5 identical probes that will study the violent colorful eruptions of Auroras. Three of the remaining THEMIS satellites continue to study substorms that are visible in the northern hemisphere as aurora borealis.	9/17/2013	12/31/2016
394	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Modification to the Implementing Arrangement between the National Aeronautics and Space Administration of the United States of America and the Canadian Space Agency on the Origins, Spectral Interpretation, Resources Identification, and Security-Regolith Explorer (OSIRIS-REx) Mission	Cooperative Agreement	This is an amendment to the original IA to add NASA delivery of electronic components to CSA. OSIRIS-REx is a NASA-led asteroid sample return mission currently planned for launch in 2016. It is scheduled to rendezvous with RQ36 in 2019 and the sample return capsule should land on Earth in 2023. CSA is expected to provide the OSIRIS-REx Laser Altimeter (OLA) and members of the science team, with the University of Calgary leading the OLA science team. NASA will transfer to CSA 4% by mass of the returned bulk sample and 4% by surface area of the returned contact pad sample. This is an IA under the Canada Framework Agreement.	9/25/2013	12/31/2025
395	Johnson Space Center (JSC)	University of Newcastle	Australia (AS)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. John O'Connor of the University of Newcastle, Australia proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
396	Johnson Space Center (JSC)	Western University	Canada (CA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Gordon Osinski of Western University, Canada proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
397	Johnson Space Center (JSC)	Western University	Canada (CA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Audrey Bouvier of Western University, Canada proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
398	Johnson Space Center (JSC)	Centre de Recherches Petrographiques et Geochimiques	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Bernard Marty of The Centre de Recherches Petrographiques et Geochimiques, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
399	Johnson Space Center (JSC)	Hiroshima University	Japan (JA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Hiroshi Hidaka of Hiroshima University, Japan proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
400	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Katherine Joy of the University of Manchester, UK proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
401	Johnson Space Center (JSC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Mr. Christopher Woolford of the Science and Technology Facilities Council, UK proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
402	Johnson Space Center (JSC)	The University of Oxford	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Alex Halliday, UK proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
403	Johnson Space Center (JSC)	Birkbeck College of London	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Ian Crawford of Birkbeck College London, UK proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10/28/2013	10/31/2018
404	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Memorandum of Understanding between NASA and JAXA for Cooperation on the Astro-H Project	Cooperative Agreement	Cooperation on the Astro-H mission	11/11/2013	10/8/2020
405	Headquarters (HQ)	John Nurminen Events	Netherlands, The (NL)	Collaboration on Outreach and Community Endeavors	Cooperative Agreement	Amendment: This cooperation specifically facilitates cooperation in J.N. Events' traveling exhibition, "NASA: A Human Adventure." J.N. Events pays all costs of developing, transporting and running the exhibit; NASA loans artifacts, advises on use of logo and destinations, and reviews and advises on all content re NASA history. Other = Office of Communications. Nonreimbursable Space Act Agreement between John Nurminen Events and NASA for collaboration on outreach and community endeavors. NASA and John Nurminen Events will collaborate on a traveling exhibition entitled NASA: A Human Adventure. The exhibition will focus on NASA contributions along with illuminating human stories behind the hardware. The exhibition will premier in Europe with the ultimate goal of touring throughout the U.S.	11/26/2013	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
406	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and CNES on OSIRIS-REX Mission	Cooperative Agreement	OSIRIS-REX is a NASA-led asteroid sample return mission currently planned for launch in 2016. It is scheduled to rendezvous with asteroid RQ36 in 2019 and the sample return capsule should land on Earth in 2023. CNES is expected to support Co-Investigators from France to provide important modeling work and lead key astronomical observations of RQ36. This is an IA under the U.S.-France Framework Agreement.	12/9/2013	12/31/2025
407	Goddard Space Flight Center (GSFC)	Universidad de Concepcion	Chile (CI)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the Universidad de Concepcion of Chile will cooperate on the AERONET program. NASA will provide equipment on loan which the Universidad de Concepcion will host at a mutually agreed location.	12/20/2013	10/31/2023
408	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Mars Express Mission	Cooperative Agreement	The terms and conditions by which relevant aspects of the cooperation between NASA and ESA shall be conducted within the framework of the Mars Express mission. Primary activities address telecommunications necessary for MarsExpress mission operations, navigation and data acquisition. The mission will study Martian atmosphere and the surface of the planet.	12/20/2013	12/31/2018
409	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Letter of Agreement for Planetary Protection Cooperation	Cooperative Agreement	An LOA between NASA and ESA to cooperate in all areas of planetary protection	12/23/2013	12/31/2019
410	Jet Propulsion Laboratory (JPL)	Canadian Space Agency (CSA)	Canada (CA)	Mars Exploration Program	Cooperative Agreement	Amendment and Extension of existing Mars cooperation agreement.	12/24/2013	12/31/2016
411	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Gretchen Benedix of Curtin University in Perth, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
412	Johnson Space Center (JSC)	University of Western Ontario	Canada (CA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Audrey Bouvier of the University of Western Ontario in London, ON, Canada proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
413	Johnson Space Center (JSC)	Dept. of Earth & Atm. Sciences, University of Alberta	Canada (CA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Christopher Herd of Dept. of Earth & Atm. Sciences, University of Alberta in Edmonton, Canada proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
414	Johnson Space Center (JSC)	University of Helsinki	Finland (FI)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Tomas Kohout of the Department of Physics, University of Helsinki in Helsinki, Finland proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
415	Johnson Space Center (JSC)	the Institut Universitaire Europeen de la Mer (IUEM)	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. J.A. Barrat of the Institut Universitaire Europeen de la Mer (IUEM) proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator)	1/17/2014	1/17/2019
416	Johnson Space Center (JSC)	IPAG	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Pierre Beck of IPAG in Grenoble, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
417	Johnson Space Center (JSC)	Institut de Planetologie et d'Astrophysique de Grenoble	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Eric Quirico of Institut de Planetologie et d'Astrophysique de Grenoble in IPAG University of Grenoble, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
418	Johnson Space Center (JSC)	IPAG	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Lydie Bonal IPAG in IPAG University of Grenoble, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
419	Johnson Space Center (JSC)	Laboratoire d'Astrophysique de Marseille	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Pierre Vernazza of Laboratoire d'Astrophysique de Marseille in Marseille, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
420	Johnson Space Center (JSC)	Institut fur Planetologie	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Addi Bischoff of the Institut fur Planetologie in Munster, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
421	Johnson Space Center (JSC)	Institut fur Planetologie	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Thorsten Kleine of the Institut fur Planetologie in Munster, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
422	Johnson Space Center (JSC)	Goethe University Frankfurt	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Frank E. Brenker of Goethe University Frankfurt in Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
423	Johnson Space Center (JSC)	Max Planck Institute for Chemistry	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Peter Hoppe of Max Planck Institute for Chemistry in Mainz, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
424	Johnson Space Center (JSC)	Osaka University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Ko Hashizume of Osaka University in Toyonaka, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
425	Johnson Space Center (JSC)	University of Tokyo	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Takashi Mikouchi of the University of Tokyo in Tokyo, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
426	Johnson Space Center (JSC)	Birkbeck College of London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Ian Crawford proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
427	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Katherine Joy of the University of Manchester in Manchester, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
428	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Patricia Clay of The University of Manchester, SEAES proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
429	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Henner Busemann of The University of Manchester, SEAES in Manchester, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
430	Johnson Space Center (JSC)	School of Geog. and Earth Sciences, University of Glasgow	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Paula Lindgren of the School of Geog. and Earth Sciences, University of Glasgow in Glasgow, Scotland, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
431	Johnson Space Center (JSC)	School of Geog. and Earth Sciences, University of Glasgow	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Martin Lee of the School of Geog. and Earth Sciences, University of Glasgow in Glasgow, Schotland, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
432	Johnson Space Center (JSC)	University of Leicester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. John Bridges of the University of Leicester, UK in Leicester, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
433	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Susanne P. Schwenger of DPS, The Open University in Milton Keynes, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
434	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Natalie Starkey of The Open University in Milton Keynes, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
435	Johnson Space Center (JSC)	Imperial College London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Zita Martins of the Imperial College London in UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
436	Johnson Space Center (JSC)	the Natural History Museum	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Ashley King of the Natural History Museum in London, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	1/17/2014	1/17/2019
437	Johnson Space Center (JSC)	Hokkaido University (HokuDai)	Japan (JA)	International Genesis Sample Loan Agreement	Cooperative Agreement	Hisayoshi Yurimoto of Hokkaido University (HokuDai) in Japan proposes to use the Genesis samples to undertake scientific investigations (described in one or more sample requests submitted by the PI to the Genesis Sample Curator at JSC and approved by the Genesis Sample Curator).	1/23/2014	1/23/2019
438	Goddard Space Flight Center (GSFC)	Karunya University	India (IN)	Aerosol Robotic Network (AERONET) and the Micro Pulse Lidar Network (MPLNET) with Karunya University	Cooperative Agreement	NASA and Karunya Univ. (KU) will cooperate on the operation of an AERONET subphotometer station and/or Lidar stations located at KU. NASA provide the equipment, and USM provides the site.	1/30/2014	6/30/2024

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
439	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement btw NASA and CNES on the Seismic Experiment for Interior Structure (SEIS) Instrument for the Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSight) Mission	Cooperative Agreement	CNES will lead the international consortium providing the SEIS instrument to the InSight mission.	2/10/2014	6/30/2019
440	Jet Propulsion Laboratory (JPL)	German Research Centre for Geosciences (GFZ)	Germany (GM)	Gravity Recovery and Climate Experiment Follow-on (GRACE-Follow On) Mission	Cooperative Agreement	GRACE-FO is a continuation of the science initiated by the United States-German GRACE mission that was launched in 2002. The primary objective of GRACE-FO is to acquire critical data for tracking water movement on and beneath the earth's surface and understanding changes in ice sheets and global sea levels. Its data will enhance studies of ocean currents and changes in the structure of solid Earth. GRACE-FO will do this by continuing the extremely high-resolution global data record of the earth's gravity field and how it changes over time. These gravity fields assist in the study of global climatic issues by improving our understanding, among other things, of surface and deep ocean currents, lithospheric and mantle density variations, aquifer depletion, and polar ice sheet mass variations. As with the GRACE mission, GRACE-FO will acquire the gravity field data using two Earth polar-orbiting spacecraft identically equipped and flying in a loosely controlled tandem formation. As the satellites orbit the Earth, variations in the earth's gravity field will cause the distance between the two GRACE-FO spacecraft to change. The microwave link between the two GRACE-FO spacecraft will measure these changes at the micron level. These measurements will then be used to determine the earth's gravity field every month. Launch is planned for August 2017 on a GFZ-provided Launch Vehicle.	2/10/2014	3/31/2022

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
441	Glenn Research Center at Lewis Field (GRC),Headquarters (HQ)	Politecnico di Milano	Italy (IT)	NASA-SCaN and POLIMI agreement to collect propagation data from the TDP#5 Ka-/Q-bands beacon payload aboard the Alphasat satellite	Cooperative Agreement	NASA's Space Communications and Navigation (SCaN) Office and POLIMI desire to collect propagation data from the TDP#5 Ka-/Q-bands beacon payload aboard the Alphasat satellite, which is in a geostationary location over Europe. To accomplish this task, POLIMI has agreed to host the NASA-developed Ka/Q-band (20/40GHz) ground propagation terminal and provide operational support. NASA will give POLIMI access to the collected propagation data, which will be used by POLIMI to elaborate joint propagation results. Data collected by the ground propagation terminal will also be used by NASA to validate and derive open source models for advanced fade mitigation techniques and performance predictions of future frequencies of interest. The models validated and developed by NASA through the use of the acquired propagation data will improve the performance of current Ka-band communications systems for the Deep Space Network, Near Earth Network, and Space Network. Conclusions derived from these results will be instrumental in the understanding and mitigation of atmospheric limitations of communication systems for future NASA architectures which are expected to involve higher frequency bands (Q,V, and), for which NASA presently has no experimental data.	2/17/2014	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
442	Glenn Research Center at Lewis Field (GRC),Headquarters (HQ)	Politecnico di Milano	Italy (IT)	NASA-SCaN Agreement with POLIMI to exchange propagation data collected by NASA during the Advanced Communications Technology Satellite (ACTS) program and collected by POLIMI during the Italsat F1 propagation program	Cooperative Agreement	SCaN and POLIMI will share scientific data acquired from mutually exclusive propagation experiments conducted by each party to validate and derive open source models for advanced fade mitigation techniques and performance predictions of future frequencies of interest. This agreement is for the mutual exchange of propagation data collected by NASA during the Advanced Communications Technology Satellite (ACTS) program and collected by POLIMI during the Italsat F1 propagation program. One of the primary products from the ACTS program was the collection of data characterizing propagation effects due to the atmosphere in the Ka-band (20/27 GHz) throughout multiple Continental US (CONUS)-based rain regions. These data represent some of the most significant scientific research conducted from the ACTS program and the models developed from these data are still used today in Ka-band Earth-space ground system design. NASA's Glenn Research Center was responsible for the development, management, and operation of ACTS, and was the lead center for propagation research. ITALSAT F1 was an experimental communications satellite built by Alenia Spazio for the Italian Space Agency (ASI) and launched in 1991. It provided 30 GHz (uplink) and 20 GHz (downlink) Italian domestic coverage using six spot beams and a ?global? national beam. The spot beams carried domestic telephone traffic with a total capacity of about 12,000 voice channels. Each beam operated in the SS-TDMA mode with QPSK modu	2/17/2014	12/31/2018
443	Ames Research Center (ARC),Johnson Space Center (JSC)	The University of Oxford	United Kingdom (UK)	Non-Reimbursable Space Act Agreement between NASA and The University of Oxford for Access to a Reduced Gravity Testbed Under the NASA Flight Opportunities Program	Cooperative Agreement	Mission: Space Technology - Flight Opportunities Program. To collaborate in the space environment testing of the Monitoring Tissue Oxygen Saturation in Microgravity ("Payload # 94-P") for the purpose of advancing the TRL, to facilitate commercial + gov't./public use of space-related technologies.	2/17/2014	2/16/2017
444	Jet Propulsion Laboratory (JPL)	Max Planck Institute for Solar System Research (MPS)	Germany (GM)	Microwave Instrument for the Rosetta Orbiter (MIRO)	Cooperative Agreement	Rosetta mission is to study a comet and its relationship to the development of the solar system. The Microwave Instrument for the Rosetta Orbiter (MIRO) investigation is to study the nature of a comet's nucleus, outgassing, and the development of the coma as strongly interrelated aspects of cometary physics.	2/24/2014	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
445	Langley Research Center (LaRC)	GKN Aerospace Sweden AB	Sweden (SW)	Non-Reimbursable Space Act Agreement Between NASA and GKN Aerospace Sweden AB for Cooperation Involving Additive Manufacturing	Cooperative Agreement	Agreement relates to additive manufacturing. NASA is currently developing additive manufacturing techniques such as the Electron Beam Freeform Fabrication (EBF3) process for the manufacture of large aerospace structures. GKN is concurrently developing similar additive manufacturing processes using a laser heat source and wire feedstock. These processes both create three dimensional shapes directly from a computer model using a feedstock material which is incrementally melted and deposited using a high energy density heat source. The inherent processing characteristics of both of these techniques create structures with a high degree of internal residual stress. Both parties are trying to understand residual stresses in large-scale additively manufactured structures.	2/24/2014	2/24/2019
446	Ames Research Center (ARC)	Solar Impulse SA	Switzerland (SZ)	Non-Reimbursable Space Act Agreement Between NASA and Solar Impulse SA for Cooperation on Pilot Fatigue and Alertness	Cooperative Agreement	The proposed activity of this Agreement will investigate sleep schedule effects on pilot fatigue and nesses under continuous flight operations of several days aloft, as well as fatigue management strategies. Solar Impulse is scheduled for an around-the-world flight in 2015, one leg of which will keep it aloft for 4-5 days. While the aircraft itself is capable of flying for many days at a time, a key limiting factor for the duration of its flights is the fatigue that may be experienced by the single pilot. As a result, stopovers occur during the flights for rest or for changing pilots. NASA and Solar Impulse are interested in examining effects pertaining to the sleep and nesses of the pilot for this around-the-world flight. NASA Ames researchers and Solar Impulse will collaborate on several scheduled missions: a Solar Impulse 72-hr. simulation and an around-the-world flight scheduled for 2015. NASA will have the opportunity to propose measures to be included as part of this simulation, in addition to those collected previously by Solar Impulse. Solar Impulse would add them to the measures already planned for collection. Based on the results of these sleep/fatigue/ness measures collected, NASA plans to propose additional research for the around-the-world flight, as well as suggest measures and countermeasures to Solar Impulse to aid the pilot in maintaining alertness during that flight.	2/24/2014	1/31/2017
447	Johnson Space Center (JSC)	University of New Brunswick	Canada (CA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. John Spray of The University of New Brunswick in Fredericton, New Brunswick, Canada proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/25/2014	10/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
448	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Makiko Ohtake of JAXA in Kanagawa, Japan proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/25/2014	10/31/2018
449	Johnson Space Center (JSC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Mr. Neville Hollingworth proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/25/2014	2/25/2019
450	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Mahesh Anand of The Open University in Milton Keynes, UK proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/25/2014	10/31/2018
451	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Colin Pillinger of The Open University in Milton Keynes, UK proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/25/2014	10/31/2018
452	George C. Marshall Space Flight Center (MSFC)	Space Research Institute (IKI), Russian Academy of Sciences (RAS)	Russia (UR)	Reimbursable Agmt betw NASA and IKI for Design, Development, Fabrication, and Testing of X-ray Optics for the ART-XC Instrument onboard the Russian Spectrum Roentgen Gamma (SRG-SXG) Mission	Reimbursable Agreement	NASA will deliver mirror modules 22 months after the first payment.	3/11/2014	12/31/2017
453	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Germany (GM)	NASA-DLR Implementing Arrangement for the use of High Definition Earth Viewing Payload (HDEV)	Cooperative Agreement	NASA and DLR will cooperate on NASA's High Definition Earth Viewing Payload (HDEV). NASA developed the HDEV payload to validate the space-based performance of the cameras in a variety of operating modes to exercise and demonstrate the features and longevity of the commercially available equipment for future ISS Program use. DLR is interested in utilizing the HDEV payload for educational purposes with German schools and universities.	3/14/2014	8/1/2018
454	Goddard Space Flight Center (GSFC)	National Centre of Meteorology Seismology	United Arab Emirates (AE)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the National Centre of Meteorology and Seismology (NCMS) will cooperate on the AERONET program. NASA will provide equipment on loan which NCMS will host at a mutually agreed location.	3/16/2014	3/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
455	Jet Propulsion Laboratory (JPL)	Commonwealth Scientific and Industrial Research Organization (CSIRO), Government of Australia	Australia (AS)	Space Vehicle Tracking and Communications Facilities in Australia	Cooperative Agreement	The 6th Amendment to the Government-to-Government Agreement, signed on March 27, 2014, retroactive to Feb 26, 2012, and extending until Feb 26, 2018. The 5th Amendment to the Government-to-Government Agreement, signed on January 11, 2012, and extending until Feb 26, 2014. The 4th Amendment to the Government-to-Government Agreement, signed on March 17, 2010, retroactive to Feb 26, 2010, and extending until Feb 26, 2012. The 3rd Amendment to the Gvt to Gvt Agreement, dtd Oct 26, 2000, retroactive to Feb 26, 2000, amending the Agreement significantly, establishing CSIRO as the Cooperating Agency, and extending it to Feb 26, 2010. The 2nd Amendment was dated and effective on May 2, 1990. The first amendment was dated and entered into force on Jul 21, 1982. The basic Diplomatic-level agreement provided for cooperation in the establishment, modification, management, operation, maintenance, support, and termination of NASA tracking and communications facilities in Australia. NASA and the Australian Department of Science and the Environment are designated as the cooperating agencies in the Agreement. The diplomatic notes for the basic agreement were exchanged on May 29 1980, but entered into force retroactive to Feb 26, 1980.	3/27/2014	2/26/2018
456	Ames Research Center (ARC)	Victorian Space Science Education Center (VSSEC)	Australia (AS)	Reimbursable Space Act Agreement Between The Victorian Space Science Education Center And The National Aeronautics And Space Administration For Participation In The National Aeronautics And Space Administration International Internship Program	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating VSSEC's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	4/2/2014	9/29/2017
457	Johnson Space Center (JSC)	Kyoto University	Japan (JA)	International Cosmic Dust Samples Loan Agreement	Cooperative Agreement	Junya Matsuno of Kyoto University in Kyoto, Japan proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	4/4/2014	4/4/2019
458	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Mars Sample Return (MSR) Study Phase Agreement	Cooperative Agreement	This is an extension of an agreement with ESA to study planetary sample return missions and their related technology, with a particular focus on Mars	4/10/2014	12/31/2020
459	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Stardust Samples Loan Agreement	Cooperative Agreement	Tomoki Nakamura of Tohoku University in Aoba, Sendai, Miyagi 980-8578, Japan proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	4/22/2014	4/22/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
460	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and the National Centre for Space Studies (CNES) of France on Space Geodesy Activities and Applications	Cooperative Agreement	Parties will share data and host each other's instruments. This IA falls under the US-France Framework.	4/23/2014	12/31/2024
461	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	MOU between NASA and ESA concerning the 2016 ExoMars Mission	Cooperative Agreement	NASA and ESA are cooperating on the 2016 ExoMars mission. NASA is providing the electra UHF proximity link transceivers, related engineering support and deep space network coverage. ESA will in return provide some science data and telecommunications support to NASA's landed Mars assets	4/29/2014	12/31/2023
462	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and the National Centre for Space Studies (CNES) of France for Cooperation on the Surface Water and Ocean Topography Mission	Cooperative Agreement	NASA plans to provide the Payload Module, Ka-band Radar Interferometer (KaRIn), Microwave Radiometer (MR) with its antenna, Laser Retroreflector Array (LRA), Global Positioning System receiver package, launch services, and ground segment elements. The National Centre for Space Studies (CNES) plans to provide the spacecraft bus, KaRIn Radio Frequency Unit (RFU), nadir altimeter, Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) receiver package, and ground segment elements.	5/2/2014	10/30/2030
463	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA-ESA ISLSWG Agreement on ESA's Straight Ahead in Microgravity Experiment	Cooperative Agreement	NASA and ESA will cooperate on ESA's Straight Ahead in Microgravity Experiment. NASA will provide ESA with access to hardware, and ESA and NASA will exchange data from the experiment.	5/12/2014	12/1/2020
464	Ames Research Center (ARC)	University of Bremen	Germany (GM)	Carbon Dioxide and Methane Experiment (COMEX)	Cooperative Agreement	COMEX, as specified in a common proposal (Annex 1), will bring together collaboratively collected data from NASA and European airborne instruments. The NASA Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) will fly in California in 2014 as part of the HyspIRI Preparatory Airborne Activities mission. The University of Bremen's Methane Airborne Mapper (MAMAP) sensor will also fly in California in 2014 aboard the U.S. Navy Center for Interdisciplinary Remotely-Piloted Aircraft Studies (CIRPAS) Twin Otter aircraft. Bubbleology Research International (BRI) is involved in this project and will organize flights with CIRPAS and will provide technical and science support.	5/13/2014	1/31/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
465	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Agreement between NASA and the Japan Aerospace Exploration Agency (JAXA) for Cooperation on Areas of Mutual Interest in Air Traffic Management	Cooperative Agreement	NASA and JAXA have identified research topics of mutual interest in air traffic management (ATM). The primary aim of this activity is to advance air transportation automation for benefit of the aviation industry in both nations under the Next Generation Air Transportation System (NextGen) in the United States and the Collaborative Actions for Renovation of Air Traffic Systems (CARATS) in Japan. Both NextGen and CARATS concepts and technologies seek to optimize air transportation operations to reduce delays, fuel consumption, noise, and emissions under both nominal and off-nominal airspace operating conditions. The work performed through this activity is highly synergistic with the work being performed by Airspace Systems Program within NASA's Aeronautics Research Missions Directorate. It is also highly synergistic with work being performed in the Distributed and Revolutionarily Efficient Air-traffic Management System (DREAMS) Project at JAXA. The results of this collaboration will lead to improvements in advanced air transportation automation concepts and technologies, which will be mutually beneficial to the Parties. It is foreseen that the activities carried out under this Agreement will be coordinated with the global approach to IADS undertaken within IFAR. IFAR consists of twenty-four (24) member nations, and NASA and JAXA are the current Chair and Vice-Chair respectively.	5/21/2014	12/31/2019
466	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Fred Jourdan of Curtin University in Perth, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
467	Johnson Space Center (JSC)	Monash University	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Andrew Tomkins of Monash University in Melbourne, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
468	Johnson Space Center (JSC)	Earth Systems Science, Vrije Universiteit Brussel	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Seann J. Mckibbin of Earth Systems Science, Vrije Universiteit Brussel of Brussels, Belgium proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
469	Johnson Space Center (JSC)	Universite du Quebec a Chicoutimi	Canada (CA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Michael Higgins of the Universite du Quebec a Chicoutimi of Chicoutimi, Canada proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
470	Johnson Space Center (JSC)	Laboratoire de Mineralogie et de Cosmochimie du Museum	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Gounelle Laboratoire de Mineralogie et de Cosmochimie du Museum in Paris, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
471	Johnson Space Center (JSC)	IMPIC-NMHN (Mineralogie)	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Roger H. Hewins of IMPIC-NMHN (Mineralogie) in Paris, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
472	Johnson Space Center (JSC)	Freie Universitat Berlin	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Harry Becker of Freie Universitat Berlin in Berlin, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
473	Johnson Space Center (JSC)	Institut fur Mineralogie, Univ. Munster	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Institut fur Mineralogie, Univ. Munster, in Munster, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
474	Johnson Space Center (JSC)	Max Planck Institute for Chemistry	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Ulrich Ott of Max-Planck-Institute for Chemistry in Mainz, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
475	Johnson Space Center (JSC)	Institut fur Mineralogie Westfalische Wilhelms Universitat	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Institut fur Mineralogie Westfalische Wilhelms Universitat in Munster, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
476	Johnson Space Center (JSC)	Senckenberg Gesellschaft fur Naturforschung	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Jutta Zipfel of Senckenberg Gesellschaft fur Naturforschung in Frankfurt am Main, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations described in requests to the Sample Curator at JSC.	5/22/2014	5/22/2019
477	Johnson Space Center (JSC)	PLANEX, Physical Research Laboratory	India (IN)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dwijesh Ray of Planex, Physical Research Laboratory in Ahmedabad, India proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
478	Johnson Space Center (JSC)	Kyoto University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Aki Takigawa of Kyoto University in Kyoto, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
479	Johnson Space Center (JSC)	Faculty of Science, Ibaraki University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Makoto Kimura of Faculty of Science, Ibaraki University in Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
480	Johnson Space Center (JSC)	Waseda University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Timothy J. Fagan of Waseda University in Tokyo, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
481	Johnson Space Center (JSC)	College of Science, Ibaraki University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Takaaki Noguchi of the College of Science, Ibaraki University of Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
482	Johnson Space Center (JSC)	National Institute of Polar Research (NIPR)	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Akira Yamaguchi of National Institute of Polar Research in Tokyo, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
483	Johnson Space Center (JSC)	Osaka University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Kentaro Terada of Osaka University in Osaka, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
484	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Tomoki Nakamura of Tohoku University in Sendai, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
485	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Tomoki Nakamura of Tohoku University in Sendai, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
486	Johnson Space Center (JSC)	Chiba Institute of Technology	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Tomoko Arai of Chiba Institute of Technology in Chiba, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
487	Johnson Space Center (JSC)	Kobe University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Kazushige Tomeoka of Kobe University in Kobe, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
488	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Fergus Abernethy of the The Open University in Milton Keynes, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
489	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Mahesh Anand of The Open University in Milton Keynes, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
490	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Professor Ian Lyon of The University of Manchester in Manchester, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
491	Johnson Space Center (JSC)	Birkbeck College of London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Hillary Downes of Birkbeck University of London in London, England proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
492	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Ian Franchi of The Open University in Milton Keynes, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
493	Johnson Space Center (JSC)	Imperial College London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Mark A. Sephton of Imperial College London in London, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	5/22/2014	5/22/2019
494	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment to the Reimbursable Agreement between NASA and ESA for the Development of a Generic Robotics Training Program at the European Astronaut Centre	Reimbursable Agreement	Amendment to the Reimbursable Agreement between NASA and ESA for the Development of a Generic Robotics Training Program at the European Astronaut Centre	5/28/2014	12/31/2020
495	Johnson Space Center (JSC)	Institute for Applied Geoscience, TU Darmstadt	Germany (GM)	International Cosmic Dust Samples Loan Agreement	Cooperative Agreement	Martin Ebert of the Institute for Applied Geoscience, TU Darmstadt in Darmstadt, Germany, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	5/29/2014	5/29/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
496	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and the German Aerospace Center for Data Exchange Cooperation Related to the Physical Behavior of Shell Structures	Cooperative Agreement	Cooperation on research related to the development and validation of new analysis-based design methods for buckling critical launch vehicle aerospace structures and exchange data related to the fundamental physical behavior of these structures. NASA will share data results from NASA's Shell Buckling knockdown Factor Project (SBKF) and DLR will share data results from a Consortium funded by the European Union referred to as, "New robust DESign Guideline for Imperfection Sensitive Composite Structures (DESICOS). The Parties will communicate at least quarterly, meet at an annual workshop annually, and produce a final report resulting from the cooperation.	6/20/2014	7/14/2019
497	Goddard Space Flight Center (GSFC)	Gobabeb Research and Technical Centre	Namibia (WA)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the Gobabeb Research and Technical Centre of Namibia will cooperative on the AERONET program. NASA will provide equipment on loan which Gobabeb will host at a mutually agreed location.	6/26/2014	3/31/2024
498	Kennedy Space Center (KSC)	National Commission on Space Activities (CONAE)	Argentina (AR)	Implementing Arrangement between NASA and CONAE for Cooperation on the Mission Integration of CONAE's SAOCOM 1A and 1B Missions	Cooperative Agreement	NASA will provide advice to CONAE on spacecraft-to-launch-vehicle mission integration topics for integrating CONAE's SAOCOM 1A and 1B satellites onto the Falcon 9 v1.1 launch vehicle, through the review of documents and participation in meetings. This cooperation will provide both CONAE and NASA an understanding of commercial practices for integration of complex government spacecraft into the SpaceX Falcon 9 v.1.1 launch vehicle.	7/2/2014	7/1/2019
499	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	JAXA Public Affairs Representative at NASA Johnson Space Center (JSC)	Cooperative Agreement	NASA and JAXA have had a letter agreement in place since 1999 to provide for a JAXA public affairs representative on-site at Johnson Space Center (JSC), which expired on March 31, 2014. This Letter Agreement continues this cooperation.	7/2/2014	7/3/2019
500	Goddard Space Flight Center (GSFC)	University of Blida	Algeria (AG)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	Extension of 2002 AERONET Agreement NASA provides the AERONET equipment, they provide the location and support of the system. RE: Sun photometer station in Algeria.	7/3/2014	6/1/2024
501	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Bermuda (BD)	Global Learning and Observations to benefit the Environment (GLOBE)	Cooperative Agreement	n/a	7/3/2014	7/3/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
502	Jet Propulsion Laboratory (JPL)	Canadian Space Agency (CSA)	Canada (CA)	Implementing Arrangement between NASA and the Canadian Space Agency for Cooperation on the Surface Water and Ocean Topography (SWOT) Mission	Cooperative Agreement	NASA plans to provide the Payload Module, Ka-band Radar Interferometer (KaRIn), Microwave Radiometer (MR) with its antenna, Laser Retroreflector Array (LRA), Global Positioning System receiver package, launch services, and ground segment elements. The French Centre National d'Études Spatiales plans to provide the spacecraft bus, KaRIn Radio Frequency Unit (RFU), nadir altimeter, Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) receiver package, and ground segment elements. CSA plans to provide Extended Interaction Klystrons (EIKs) as part of the NASA KaRIn instrument's High Power Assembly (HPA). This IA is under the US-Canada Framework.	7/7/2014	7/7/2017
503	Glenn Research Center at Lewis Field (GRC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement Between NASA and CNES on Cooperation Related to Benchmarking Activities Regarding Cryogenic Propellant Management Capability	Cooperative Agreement	Implementing Arrangement Between NASA and CNES on Cooperation Related to Benchmarking Activities regarding Cryogenic Propellant Management Capability. The NASA Space Technology Mission Directorate is sponsoring the development of the Cryogenic Propellant Storage and Transfer (CPST) project as a means of demonstrating the capability to safely and efficiently store, transfer and measure cryogenic propellants in space in a manner that minimizes their loss. These technologies are necessary to enable next-generation spacecraft to store the large quantities of fuel required for long duration or deep space missions.	7/10/2014	10/1/2019
504	Ames Research Center (ARC)	The Office of the Crown Prince of the Hashemite Kingdom of Jordan	Jordan (JO)	Reimbursable Space Act Agreement Between The Office of the Crown Prince of the Hashemite Kingdom of Jordan and the National Aeronautics and Space Administration for Participation in the National Aeronautics and Space Administration International Internship Program	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating VSSEC's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	7/20/2014	9/29/2017
505	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cooperation on the NASA-led Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission	Cooperative Agreement	The UK Space Agency is providing the short-period seismometers, part of the Seismic Experiment for Interior Structure (SEIS) instrument on the NASA InSight mission	7/20/2014	6/30/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
506	Jet Propulsion Laboratory (JPL)	D-Wave Systems Inc.	Canada (CA)	Reimbursable Agreement for Adiabatic Quantum Computing Fabrication Process Development (D-Wave)	Reimbursable Agreement	Mission Directorate selected: SMD (Liz mentioned Earth Science being the closest to this mission). High Speed Computing, Performed by SMD. Amendment: Reimbursable cooperation in advanced computer technology; Specifically, in developing Adiabatic Quantum Computing (AQC) which is expected to outperform conventional supercomputers in a few years. Mission Directorate selected: SMD. High Speed Computing, Performed by SMD. NASA/D-Wave Systems Inc. performing research for adiabatic quantum computing fabrication process development.	7/31/2014	9/30/2017
507	Langley Research Center (LaRC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	NASA-JAXA Airframe Noise Prediction Agreement	Cooperative Agreement	Amendment 1: The National Aeronautics and Space Administration (NASA) and the Japan Aerospace Exploration Agency (JAXA) will conduct research for physics-based prediction of airframe noise from civil aircraft. The primary aim of this activity will be to improve the knowledge of airframe noise sources and corresponding physical mechanisms by working on non-sensitive, fundamental high-lift devices (HLD) and/or landing gear (LG) configurations. NASA/JAXA will conduct research for physics-based prediction of airframe noise from civil aircraft. The primary aim of this activity will be to improve the knowledge of airframe noise sources and corresponding physical mechanisms by working on non-sensitive, fundamental high-lift-devices (HLD) and/or landing gear (LG) configurations.	8/4/2014	7/31/2017
508	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Cooperation on the Venus Climate Orbiter (VCO)/Planet-C Mission	Cooperative Agreement	This is an amendment and extension of the October 5, 2009, agreement for cooperation on the JAXA-led Venus Climate Orbiter (VCO)/Planet-C mission. It provides for the Japanese mission management, while NASA will provide participating scientists, data archiving, navigation support, and deep space network (DSN) support. This agreement is associated with the Joint Understanding with JAXA.	8/4/2014	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
509	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement betw NASA and CNES of France on the Scientific Payload of the Solar Orbiter Mission	Cooperative Agreement	Solar Orbiter is an ESA mission carried out in cooperation with NASA that will explore the near-Sun environment to improve the understanding of how the Sun creates the environment of the inner solar system, generates the heliosphere itself, and how fundamental plasma physical processes operate near the sun. ESA is providing the spacecraft bus, integration of the instruments onto the bus, mission operations, and overall science operations. NASA is providing instrumentation and an intermediate class launch vehicle. NASA will lead the provision to ESA of the Solar Orbiter Heliospheric Imager (SoloHI), and the Heavy Ion Sensor (HIS), which will be integrated onto the spacecraft as part of the Solar Wind Analyzer (SWA) instrument suite led by the United Kingdom. Solar Orbiter is expected to launch on an Atlas 5 in July 2017. This is an IA under the U.S.-France Framework Agreement.	8/7/2014	12/31/2025
510	Headquarters (HQ)	National Centre for Space Studies (CNES)	France (FR)	NASA-CNES Rosetta (UVS/MIRO)	Cooperative Agreement	Rosetta launched on March 2, 2004, onboard an Ariane 5-G rocket from Kourou, French Guiana, is a European Space Agency (ESA) sponsored mission scheduled to rendezvous with and orbit the comet 67P/Churyumov-Gerasimenko (C-G) in 2014. Upon its arrival to the comet C-G, the spacecraft will orbit and take scientific measurements, as well as deploy a surface science package lander to the comet's surface to conduct in-situ measurements using two instruments: - the Ultraviolet Imaging Spectrometer (ALICE) and the Microwave Instrument for the Rosetta Orbiter (MIRO). ALICE and MIRO will provide information about the dynamics of comet C-G with regards to the development of its coma and tails, its chemical make-up and reciprocal interactions, its radioactivity and the resulting solar wind.	8/7/2014	12/31/2018
511	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Marc Chaussidon of Institut de Physique du Globe de Paris in Paris, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	8/13/2014	8/13/2019
512	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Fredric Moynier of Institut de Physique du Globe de Paris in Paris, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	8/13/2014	8/13/2019
513	Johnson Space Center (JSC)	Ecole Normale Superieure de Lyon	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Bernard Bourbon of The Ecole Normale Superieure in Lyon, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	8/13/2014	10/31/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
514	Johnson Space Center (JSC)	Institut de Planetologie et d'Astrophysique de Grenoble	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Francois-Regis Orthous-Daunay of the Institut de Planetologie et d'Astrophysique de Grenoble in Grenoble, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	8/13/2014	10/31/2019
515	Jet Propulsion Laboratory (JPL)	Federal Office for Education and Science	Switzerland (SZ)	ESA's Rosetta Orbiter Spectrometer for Ion and Neutral Analysis (ROSINA)	Cooperative Agreement	NASA support ESA for the Rosetta mission. The mission is to study a comet and its relationship to the development of the solar system. ROSINA is the payload for the Rosetta mission.	8/13/2014	12/31/2018
516	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Cooperative Agreement to test the performance of a new miniature digital sun sensor and optical descent and landing camera onboard the NASA Morpheus platform	Cooperative Agreement	Cooperative Agreement to jointly test the performances of a new miniature digital Sun sensor and an optical descent and landing camera with realistic dynamic test scenarios onboard the NASA Morpheus test platform.	8/18/2014	12/31/2017
517	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Coordination of activities to verify wireless sensor network (WSN) standards and to facilitate data sharing on test configurations	Cooperative Agreement	Coordinating the testing and characterization of wireless sensor network protocols and hardware to support development of recommended practices and standards for WSN utilization in space applications	8/18/2014	12/31/2017
518	Headquarters (HQ)	Belgian Centre Spatiale de Liege (CSL), Belgian Federal Science Policy Office (BELSPO)	Belgium (BE)	NASA-Belgium Letter Agreement on the Ionospheric Connection Explorer (ICON) Mission	Cooperative Agreement	NASA's Science Mission Directorate is sponsoring the development of the ICON mission, a project in the Heliophysics Explorers program. The ICON mission will explore the near-Earth space environment to discover the sources of the region's remarkable variability. ICON will make a complete set of measurements needed to describe the fundamental coupling process occurring in the ionosphere, earth's natural plasma laboratory. ICON's observations at the edge of space will provide the key physical insights needed to predict conditions in near-Earth space, and enhance understanding of the connection between earth's weather and space weather. ICON will carry four instruments to achieve its science goals: the dual Michelson Interferometers for Global High-resolution Thermospheric Imaging (MIGHTI), a Far Ultra Violet (FUV) spectrographic imager, an Extreme Ultra Violet (EUV) spectrographic imager, and an Ion Velocity Meter (IVM). This agreement covers the Belgian contributions to ICON, specifically the alignment, testing, calibration, and evaluation of FUV.	8/27/2014	6/30/2022
519	Ames Research Center (ARC)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	Reimbursable Space Act Agreement Between NASA/KARI for Participation In The National Aeronautics And Space Administration International Internship Program	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating KARI's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	9/28/2014	9/29/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
520	Ames Research Center (ARC)	McGill University	Canada (CA)	Invisible Haptics/Design of Multi-modal Interfaces Using Sensory Augmentation	Cooperative Agreement	3rd Amendment: (reflects 2nd Amendment.) 2nd Amendment: (Neal, Office of Chief Technologist, OCT); previous agreement under Aeronautics. Conduct research on the role of acoustics and ambient sound for increasing intelligibility of human-machine interfaces and countering the degradative effects of environmental noise. Amendment: The project will involve the development of experimental equipment, evaluation of human subjects, and collection of data for the investigations to be conducted at NASA's ARC. Human subjects participating in the project will manipulate hand input devices to accomplish telerobotic tasks using experimentally controlled haptic and auditory feedback. The primary scientific objectives of the investigation are to identify combined acoustic haptic sensory feedback parameters that improve performance during dexterous manipulation of hand tools and manual controllers and to determine the relationship between objective performance and perceived quality for haptic-auditory feedback in manual interface operation. The long-term goal of the research is the design of inexpensive human interfaces for efficient interaction with autonomous agents and for the dexterous, safe control of tools to be used in space exploration. The objective is to identify the best means to provide synthetic multi-modal feedback for precise manipulation of manual interfaces.	9/30/2014	9/30/2017
521	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and the National Centre for Space Studies (CNES) of France on the Scientific Payload of the TARANIS (Tool for the Analysis of Radiation from Lightning and Sprites) Mission	Cooperative Agreement	TARANIS is a CNES mission in which a microsatellite will undertake observations of spectacular transient luminous events (TLEs) in Earth's upper atmosphere. The TARANIS mission was designed to detect and study different phenomena associated with atmospheric storms using a microsatellite placed in a quasi-polar orbit. TARANIS includes contributions from the United States, Poland, and the Czech Republic, and has a launch target of 2016-17. NASA will provide a prototype electronics board and design for a Langmuir probe as part of the low frequency electric field experiment, and the flight sensor. CNES will build the flight electronics and incorporate them into their electric field experiment on TARANIS, in addition to accommodating the Langmuir probe sensor on the TARANIS instrument arm.	9/30/2014	12/31/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
522	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	NASA-ISRO Synthetic Aperture Radar (NISAR) Implementing Arrangement	Cooperative Agreement	This Implementing Arrangement for the NASA-ISRO Synthetic Aperture Radar (NISAR) mission is concluded under and subject to the Framework Agreement between the National Aeronautics and Space Administration and the Indian Space Research Organisation for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes, signed on February 1, 2008. In this cooperative activity, NASA will provide: the L-band Synthetic Aperture Radar (SAR) instrument, including a reflector/boom assembly; a high rate telecommunication subsystem for science data; GPS receivers; a solid state recorder; and a payload data subsystem. ISRO will provide: the S-band SAR; the spacecraft bus; and the launch vehicle and associated launch services. NASA will download all science data to U.S. ground stations and ISRO will download selected science data and telemetry data to ISRO's ground station. The NISAR mission will make global measurements of the causes and consequences of land surface changes. Potential areas of research include ecosystem disturbances, ice sheet collapse and natural hazards. The NISAR mission is optimized to measure subtle changes of the earth's surface associated with motions of the crust and ice surfaces. NISAR will improve our understanding of key impacts of climate change and advance our knowledge of natural hazards. NISAR will be the first satellite mission to use two different radar frequencies (L-band and S-band) to measure changes in our planet's surface less	9/30/2014	9/30/2034

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
523	Glenn Research Center at Lewis Field (GRC)	University of Southern Queensland	Australia (AS)	UQ Cavity Optomechanical Magnetometers	Cooperative Agreement	NASA GRC and researchers from the University of Queensland have a shared interest in the field of cavity optomechanical magnetometry. The goal of this activity is to advance the development of ultra-sensitive sensor capability, beyond what is currently available. The overall focus of this work will be on further enhancing the sensitivity primarily using double-disk resonators at two different size-scales. Accordingly, this effort will seek to apply cavity optomechanical magnetometers as magnetic sensors for applications and will perform proof-of-principle demonstrations of those applications. Successful development of cavity optomechanical magnetometers with outstanding sensitivity for measuring low flux fields would be of great benefit/interest for use in space science mission instruments. Applications of cavity optomechanical magnetometers to space research and communications will be performed during this collaboration. While NASA and UQ will interact in the above activities, the optimization of the cavity optomechanical and double-disk resonator architectures will be primarily performed by UQ. The selective testing for verification and optimization of performance will be done at NASA GRC.	10/1/2014	12/31/2017
524	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Phil Bland of Curtin University in Perth, Western Australia, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
525	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Alexander Nemchin of Curtin University in Perth, Western Australia, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
526	Johnson Space Center (JSC)	Australian National University (ANU)	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Oliver Nebel of The Australian National University in Canberra, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
527	Johnson Space Center (JSC)	Natural History Museum of Denmark	Denmark (DA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Martin Bizzarro of the Natural History Museum of Denmark in Denmark proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
528	Johnson Space Center (JSC)	University of Copenhagen	Denmark (DA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Nikolaos Tsapatsaris of University of Copenhagen in Copenhagen, Denmark proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
529	Johnson Space Center (JSC)	CEREGE	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	P. Rochette of CEREGE in Aix en Provence, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
530	Johnson Space Center (JSC)	Centre de Recherches Petrographiques et Geochimiques	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Beatrice Luais of CRPG-CNRS Nancy in Nancy, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
531	Johnson Space Center (JSC)	University Pierre and Marie Curie (UPMC)	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Albert Jambon of UPMC-Univ Paris in Paris, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
532	Johnson Space Center (JSC)	Institute of Earth Sciences, University Heidelberg	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Mario Trieloff of the Institute of Earth Sciences, University of Heidelberg in Heidelberg, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
533	Johnson Space Center (JSC)	Institut fur Geologie und Mineralogie, Universitat zu Koln	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Frank Wombacher of Institut fur Geologie und Mineralogie, Universitat zu Koln in Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
534	Johnson Space Center (JSC)	Institut fur Geologie und Mineralogie	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Carsten Munker of the Institut fur Geologie und Mineralogie in Cologne, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
535	Johnson Space Center (JSC)	PLANEX, Physical Research Laboratory	India (IN)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Vinai K. Rai of Planetary Sciences and Exploration Program (PLANEX), Physical Research Laboratory in Ahmedabad, India proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
536	Johnson Space Center (JSC)	Physical Research Laboratory (PRL)	India (IN)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Jitendra Nath Goswami of the Physical Research Laboratory in Ahmedabad, India proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
537	Johnson Space Center (JSC)	Dipartimento di Fisica e Scienze della Terra	Italy (IT)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Mario Tribaudino of Dipartimento di Fisica e Scienze della Terra in Parma, Italy proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
538	Johnson Space Center (JSC)	Tokyo Institute of Technology (Tokyo Tech)	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Tomohiro Usui of Tokyo Institute of Technology in Tokyo, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
539	Johnson Space Center (JSC)	JAMSTEC Kochi Institute for Core Sample Research	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Motoo Ito of JAMSTEC Kochi Institute for Core Sample Research in Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
540	Johnson Space Center (JSC)	Osaka University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Hikaru Yabuta of Osaka University in Osaka, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
541	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Kaori Jogo of Tohoku University in Sendai, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
542	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Daisuke Nakashima of Tohoku University in Sendai, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
543	Ames Research Center (ARC)	Agency for Science, Innovation and Technology (MITA)	Lithuania (LH)	Reimbursable Space Act Agreement Between the Agency for Science, Innovation and Technology and The National Aeronautics And Space Administration for Participation In The National Aeronautics And Space Administration International Internship Program	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating MITA's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	10/6/2014	9/29/2017
544	Johnson Space Center (JSC)	The University of Auckland	New Zealand (NZ)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Joel Baker of The University of Auckland in Auckland, New Zealand proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
545	Johnson Space Center (JSC)	The University of Cape Town	South Africa (SF)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Patricia Doyle of the University of Cape Town in Cape Town, South Africa proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
546	Johnson Space Center (JSC)	National Research Council (CSIC)	Spain (SP)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Ph.D. Josep M. Trigo-Rodríguez of Institute of Space Sciences (CSIC-IEEC) in Bellaterra, Barcelona, Spain proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
547	Johnson Space Center (JSC)	Institute of Earth Sciences	Taiwan (TW)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Der-Chung Lee of the Institute of Earth Sciences in Taipei, Taiwan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
548	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Ian Wright of Department of Physical Sciences, Open University in the United Kingdom proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
549	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Richard Greenwood of The Open University in Milton Keynes, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
550	Johnson Space Center (JSC)	The University of Oxford	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Alex Halliday of The University of Oxford in Oxford, United Kingdom proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
551	Johnson Space Center (JSC)	University College London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dominic Papineau of the Univ. College London in London, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/6/2014	10/6/2019
552	Glenn Research Center at Lewis Field (GRC)	Embraer S.A.	Brazil (BR)	Reimbursable Space Act Umbrella Agreement between NASA and Embraer for Ice Protection Development Activities	Reimbursable Agreement	The Umbrella agreement covers the first two annexes. The 1st annex will be of the pneumatic hot bleed air deicing system on a 6-foot section model of the main wing of the KC390 tanker. Tests will be conducted for a variety of icing cloud conditions to evaluate performance of the ice protection system performance. The second Annex shall be for the purpose of conducting ice protection development testing in the NASA Glenn Research Center Icing Research Tunnel for the Embraer 190 E2 regional jet. The wing anti-ice system development testing will be conducted over a range of icing cloud conditions.	10/21/2014	9/30/2017
553	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and DLR for Cooperation on the Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSight) Mission	Cooperative Agreement	DLR is providing the Heat Flow and Physical Properties Package (HP3) instrument for the NASA InSight mission, slated for launch in 2016.	11/4/2014	6/30/2019
554	Glenn Research Center at Lewis Field (GRC)	French National Aerospace Research Center (ONERA)	France (FR)	NASA-ONERA Agreement on Swept-Wing Ice Accretion Characterization and Aerodynamics Research	Cooperative Agreement	NASA and ONERA will jointly produce data from experimental and computational tasks that will benefit both organizations in the field of aircraft safety. The research is focused on understanding the effects of Reynolds number modeling on aerodynamic degradation resulting from the accretion of ice on modern aircraft wings. NASA will develop models that will be tested in an ONERA facility and the data from the testing will be available to the Parties. The data will eventually be available to the public through publications, reports, conference presentations, and journal articles. NASA and ONERA will contribute approximately equivalent resources to the research and will jointly receive benefits from the effort that exceed research that could be obtained from operating independently.	11/6/2014	5/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
555	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Implementation Plan on Environmentally Friendly Substances for Stainless Steel Alloy Passivation and Coatings for Launch Facilities and Ground Support Equipment	Cooperative Agreement	Mission Directorate: Mission Support Division. NASA and ESA will cooperate in the areas of 1) validating the use of citric acid as an environmentally-preferable material to nitric acid for passivation of stainless steel alloys and 2) evaluating commercially available environmentally-preferable coatings for maintenance of launch facilities and ground support equipment. In addition, NASA and ESA would like to continue work on studying hexavalent chrome-free coatings for use on ground support equipment and electrical ground support equipment. These collaborative efforts offer a unique opportunity to gain a better understanding of environmental and operational benefits that can lead to improvements in mission readiness.	11/12/2014	5/31/2018
556	Headquarters (HQ)	Rovio Entertainment LTD	Finland (FI)	Agreement for Cooperation in the Development of Civil Space Content for the "Angry Birds" Game	Cooperative Agreement	Amendment 1: NASA images, videos, and guidance to Rovio; Rovio assists NASA with public outreach & informal education. Mission Directorate: Office of Communications. Use of NASA Media Items & Archives - Photos, Film, & More. NASA will assist Rovio in producing a new, revised version of the "Angry Birds" video game in order to ensure reasonable depictions and references to NASA civil space missions in the game and to increase public understanding of NASA's programs and missions.	11/17/2014	1/12/2021
557	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Hayabusa2 and OSIRIS-REx Memorandum of Understanding	Cooperative Agreement	Hayabusa2 is a JAXA mission, on which NASA is collaborating, which builds on lessons learned from JAXA's initial Hayabusa mission that collected samples from a small asteroid named Itokawa and returned them to Earth in June 2010. Hayabusa2's target is a 1 kilometer-wide asteroid named 1999 JU3, a C-type asteroid which is thought to contain more organic material than other asteroids. Scientists hope to better understand how the solar system evolved by studying samples from these asteroids. NASA and JAXA are cooperating on the mission science and NASA will receive a portion of the Hayabusa2 sample in exchange for providing Deep Space Network communications and navigation support for the mission. In addition, JAXA and NASA will collaborate on the science of NASA's Origins, Spectral Interpretation, Resource Identification, Security - Regolith Explorer (OSIRIS-REx) mission to mutually maximize their missions? results. OSIRIS-REx, the first U.S. asteroid sample return mission, is scheduled to launch in 2016. OSIRIS-REx will rendezvous with the 500-meter-long asteroid Bennu in 2019 for detailed reconnaissance and a return of samples to Earth in 2023.	11/17/2014	11/17/2025

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
558	Ames Research Center (ARC)	Korea Agency for Infrastructure Technology Advancement (KAIA)	Korea, Republic of (KS)	Memorandum of Understanding between NASA and the Korea Agency for Infrastructure Technology Advancement Concerning the Cooperation in Areas of Mutual Interest in Air Traffic Management	Cooperative Agreement	The purpose of this activity is to advance air transportation automation for the benefit of the aviation industry in both nations under the Next Generation Air Transportation System (NextGen) in the United States and the National ATM Reformation and Enhancement (NARAE) in the Republic of Korea. Both NextGen and NARAE concepts and technologies seek to optimize air transportation operations to reduce delays, fuel consumption, noise, and emissions under both nominal and off-nominal airspace operating conditions. The work performed through this activity is highly synergistic with the work being performed by the Airspace Systems Program within NASA's Aeronautics Research Mission Directorate. It is also highly synergistic with work being performed by KAIA and its partners, which include but are not limited to officials from the Korea Aerospace Research Institute, Incheon International Airport, Gimpo Airport, Korean Airlines, Asiana Airlines, and Ministry of Land Infrastructure, and Transport.	11/17/2014	12/31/2019
559	Ames Research Center (ARC)	Swedish National Space Board (SNSB)	Sweden (SW)	Reimbursable Space Act Agreement Between the Swedish National Space Board and The National Aeronautics And Space Administration for Participation In The National Aeronautics And Space Administration International Internship Program	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating SNSB's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	11/18/2014	9/29/2017
560	Goddard Space Flight Center (GSFC)	Hokkaido University (HokuDai)	Japan (JA)	Ocean Color Research and Lidar Field Work	Cooperative Agreement	NASA and Hokkaido University will collaborate on field campaigns and incorporate data into the SeaWiFS Bio-Optical Archive and Storage System (SeaBASS) archive. NASA will provide equipment (radiometers, for example) to make in situ measurements on Japanese campaigns. Hokkaido University will allow for visiting researchers and provide necessary support on Japanese campaigns.	11/28/2014	11/28/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
561	Johnson Space Center (JSC)	Technical University of Munich (TUM)	Germany (GM)	SPACECRAFT LIFE SUPPORT SYSTEMS ANALYSIS RESEARCH	Cooperative Agreement	ALSO: Space Technology Mission Directorate. Extension 1: Microstructural analysis of sample alloy materials using additive manufacturing. NASA and the Institute of Astronautics of the Technical University of Munich (TUM) wish to collaborate in spacecraft and spacesuit life support systems analysis research efforts through the exchange of life support system data and analysis results gathered from NASA's next generation life support technology development project and TUM's Virtual Habitat (V-HAB) Research Program. NASA's next generation life support project and the TUM V-HAB Research Program represent two of only a very few research efforts worldwide that investigate the system level design and simulations of future life support systems for space.	12/4/2014	11/30/2017
562	Johnson Space Center (JSC)	The University of Oxford	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Kerri Donaldson-Hanna of the Oxford University, UK, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	12/11/2014	10/31/2019
563	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Cassini Mission	Cooperative Agreement	Development and use of the NASA Saturn Orbiter and the ESA Huygens Probe, which compose Cassini and will explore the Saturnian system and make observations of at least one asteroid en route. Amendment of agreement ESA0112 of 12/17/1990 to ensure that components on the Cassini Orbiter and the Cassini Probe function in a complementary manner Agreement ESA0175 had been amendment - now deleted.	12/18/2014	12/31/2018
564	George C. Marshall Space Flight Center (MSFC)	German Aerospace Center (DLR)	Germany (GM)	Advanced X-Ray Astrophysics Facility (AXAF): Electron Proton Helium Instrument (EPHIN)/later Chandra	Cooperative Agreement	Participation by Horst Kunow of the University of Kiel as a participating scientist in the flight of an energetic charged particle instrument, EPHIN, developed by the University of Kiel, on NASA's AXAF mission to monitor the charged particle radiation environment of the AXAF-I spacecraft and gather scientific data on the ambient fluxes of electrons, protons, and helium nuclei	12/18/2014	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
565	Langley Research Center (LaRC)	University Hospital Southampton NHS Foundation Trust (was The Hospital Trust - Southampton University Hospitals NHS Trust)	United Kingdom (UK)	Agreement between NASA and the University Hospital Southampton NHS Foundation Trust (as of October 1, 2011), (the original was called The Hospital Trust - Southampton University Hospitals NHS Trust) for The Clinical Testing and Comparison of the Cerebral Cochlear Fluid Pressure (CCFP) and the Ultrasonic Pulsed Phase-Locked Loop (PPLL) for Noninvasive Measurement of Intracranial Pressure	Cooperative Agreement	Amendment 1: NASA desires to continue this collaboration on a no cost basis with the same terms as the original agreement. NASA proposes the deletion of Article 4-Schedule and Milestones, since the milestones have been met. New Name is: University Hospital Southampton NHS Foundation Trust as of October 1, 2011. NASA/SUHT will undertake the clinical comparison of the Cerebral Cochlear Fluid Pressure (CCFP) and the ultrasonic Pulsed Phase-Locked Loop (PPLL) approaches of noninvasively measuring Intracranial Pressure (ICP), specifically comparing and correlating CCFP and PPLL device responses to changes in ICP. NASA will provide one digital PPLL device and two transducer maintenance and repair. SUHT will perform a human research study using a computer controlled tilt table with both CCFP and PPLL devices to produce the oscillatory changes in ICP in human subjects and patients and will make all study data available through peer reviewed journal articles.	12/19/2014	10/31/2017
566	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	NASA-DLR LOA for Cooperation on Radiation Assessment Detector (RAD) on the NASA Mars Science Laboratory (MSL) Mission	Cooperative Agreement	NASA -DLR LOA for Cooperation on the Radiation Assessment Detector (RAD) on the NASA Mars Science Laboratory (MSL) Mission	12/22/2014	12/31/2018
567	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Hubble Space Telescope (HST)/2.4-Meter Space Telescope (ST)	Cooperative Agreement	Continues the cooperation between NASA and ESA on the Hubble Space Telescope (HST) Provision of a space observatory for use by the international astronomy community to extend the sensitivity, resolving power, and spectral range of astronomical observations decisively beyond those achievable from Earth observatories. Extends the MOU to Dec 31, 2019.	12/23/2014	12/31/2019
568	Johnson Space Center (JSC)	Universite Blaise Pascal	France (FR)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Maud Boyet of the Universite Blaise Pascal in Clermont-Ferrand, France proposes to use these Lunar samples to undertake scientific investigations led by its Principal Investigator.	12/29/2014	10/31/2019
569	Johnson Space Center (JSC)	Universitat zu Koln	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Carsten Munker of the Universitat zu Koln in Koln, Germany proposes to use these Lunar samples to undertake scientific investigations led by its PI.	1/7/2015	10/31/2019
570	Jet Propulsion Laboratory (JPL)	Technical University of Denmark (DTU)	Denmark (DA)	Agreement for the Nuclear Spectroscopic Telescope Array (NuSTAR) Mission	Cooperative Agreement	Collaboration on the NuSTAR Mission	1/20/2015	12/31/2017
571	Johnson Space Center (JSC)	Vrije University Brussels (VUB)	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Stepan M. Chernozhkin of Vrije Universiteit Brussel in Pleinlaan 2, 1050 Brussels, Belgium proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
572	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Frederic Moynier of The Institut de Physique du Globe de Paris in Paris, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
573	Johnson Space Center (JSC)	Institut fur Planetologie	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Marian Horstmann of the Institut fur Planetologie, WWU Munster in Munster, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
574	Johnson Space Center (JSC)	Institute of Geosciences, University of Jena	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. Dr. Falko Langenhorst of the Institute of Geosciences, University of Jena, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
575	Johnson Space Center (JSC)	Institut fur Geologie und Mineralogie, Universitat zu Koln	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Frank Wombacher of the Institut fur Geologie und Mineralogie, Universitat zu Koln proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
576	Johnson Space Center (JSC)	Japan Space Forum	Japan (JA)	International Lunar Sample Loan Agreement: Reimbursable Space Act Agreement between the National Aeronautics and Space Administration and Japan Space Forum for Two Lunar Sample Display Cases	Cooperative Agreement	NASA/JSF agree to the construction and reimbursement of two specially assembled lunar sample display cases that will each house one Apollo lunar sample. The samples to be displayed in the cases are Apollo lunar sample numbers 15499,177 and 60025,767 (hereinafter referred to as the lunar samples), which were brought to Earth by the Apollo 15 and 16 astronauts, respectively. These lunar samples will be loaned to JSF for long-term display inside the lunar sample display cases as part of museum exhibit, as documented in the cooperative Lunar Sample Display Agreement concluded by JSC and JSF on August 13, 2014	1/23/2015	1/23/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
577	Johnson Space Center (JSC)	Tokyo Metropolitan University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Naoki Shirai of the Tokyo Metropolitan University in 1-1 Minamiosawa, Hachioji, Tokyo, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
578	Johnson Space Center (JSC)	Institute of Geological Sciences, Polish Academy of Sciences	Poland (PL)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Anna Losiak of the Inst. of Geological Sciences, Polish Academy of Sciences, in Wroclaw, Poland proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
579	Johnson Space Center (JSC)	University of the Basque Country (UPV/EHU)	Spain (SP)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Juan Manuel Madariaga of the University of the Basque Country (UPV/EHU) in Leioa, Spain proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
580	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Waheed Akram of ETH Zurich in Switzerland proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
581	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Prof. I. Leya of the University of Bern in Switzerland proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
582	Johnson Space Center (JSC)	University of Glasgow	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Lydia Hallis of The University of Glasgow in Scotland, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
583	Johnson Space Center (JSC)	Natural History Museum	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Sara Russell of the Natural History Museum in London, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/23/2015	1/23/2020
584	Glenn Research Center at Lewis Field (GRC)	Centre National De La Recherche Scientifique	France (FR)	Collaborative Research on Ice Crystal Atmospheric Characterization Studies	Cooperative Agreement	Amendment 2: NASA and CNRS are conducting collaborative research to address engineering and scientific issues related to the failure of jet engines commonly used on commercial aircraft in convective clouds, and a variety of scientific issues related to the microphysical properties and structure of deep convective cloud over land and over the warm tropical ocean of northern Australia. The aviation sector has compiled information on over 100 engine weather-related power loss events, and concluded that these events are due to flight through areas of high concentrations of ice crystals associated with deep convective clouds. As a result, an industry working group has recommended the collection of a data set to characterize the microphysical properties of these clouds, which will be used to provide guidance to manufacturers, and also to develop a new certification rule for engine compliance in ice crystals. Amendment 1: On August 26, 2013, the National Aeronautics and Space Administration (NASA) and the Centre National de la Recherche Scientifique (CNRS), concluded an agreement to conduct research in the area of ice crystal atmospheric characterization studies. This research will help address engineering and scientific issues related to the failure of jet engines commonly used on commercial aircraft in convective clouds, and a variety of scientific issues related to the microphysical properties and structure of deep convective cloud over land and over the warm tropical oce	1/26/2015	12/31/2016

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
585	Goddard Space Flight Center (GSFC)	National Commission on Space Activities (CONAE)	Argentina (AR)	Implementing Arrangement between NASA and the CONAE of the Argentine Republic for Cooperation in Solar and Space Physics (Heliophysics) and Space Weather Research	Cooperative Agreement	This is a data-sharing agreement under which Argentina will provide data downlink for the NASA Van Allen Probes mission, which helps scientists understand the Sun's influence on Earth and near-Earth space by studying the Earth's radiation belts on various scales of space and time. The Van Allen Probes mission is part of NASA's Living with a Star program. Data sharing for this mission will increase scientific output and productivity to the benefit of heliophysics overall. This is an IA under the Framework Agreement between the Government of the United States of America and the Government of the Argentine Republic on Cooperation in the Peaceful Uses of Outer Space, signed on October 2011 (the U.S.-Argentina Framework Agreement).	2/19/2015	12/31/2023
586	Goddard Space Flight Center (GSFC)	Environment Canada	Canada (CA)	Cooperation in the Global Precipitation Measurement (GPM) Cold-Season Precipitation Validation Experiment (GCPEX) Project	Cooperative Agreement	Parties will conduct the project using instrumented NASA DC-8 and NASA-funded University of North Dakota Citation aircraft for flights over ground sites located in and around the Environment Canada Centre for Atmospheric Research Experiments site in Egbert, Ontario. Ground-based equipment to measure precipitation will also be used.	2/20/2015	1/31/2017
587	Ames Research Center (ARC)	Center for Astrobiology (CAB)	Spain (SP)	Life-Detection Mars Analog Project (LMAP)	Cooperative Agreement	LMAP will demonstrate the feasibility of drilling missions on Mars in support of the search for life on the planet.	2/22/2015	2/22/2018
588	Langley Research Center (LaRC)	National Research Council (NRC)	Canada (CA)	NASA and NRC Detailing the Cooperation on Materials Research and Analysis Activity	Cooperative Agreement	NASA and NRC have mutual interest in pursuing cooperation in the area of materials research and analysis. NRC intends to provide NASA with a sample (approximately one gram) of boron nitride nanotube material ("BNNT material") for purposes of evaluating and characterizing the material.	2/25/2015	12/31/2017
589	Goddard Space Flight Center (GSFC)	Yonsei University	Korea, Republic of (KS)	The National Aeronautics and Space Administration and Yonsei University (Yonsei) Cooperation on the CubeSat Mission: "CubeSat Astronomy by NASA and Yonsei using Virtual Telescope Alignment Experiment" (CANYVAL-X)	Cooperative Agreement	CANYVAL-X is a technology demonstration CubeSat mission with a primary objective of validating technologies that allow two spacecraft to fly in formation along an inertial line-of-sight (i.e., align two spacecraft to an inertial source). Learning from Yonsei's ability to demonstrate long baseline, dual-spacecraft separation to achieve fine angular precision will enable a variety of cutting-edge heliophysics and astrophysics science for NASA.	2/25/2015	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
590	Johnson Space Center (JSC)	The University Court of The University of Edinburgh	United Kingdom (UK)	Reimbursable Space Act Umbrella Agreement Between NASA and The University of Edinburgh Regarding Anthropomorphic Robotic Systems	Reimbursable Agreement	JSC is leading an agency-wide effort to advance the state of the art of autonomous robot manipulation and mobility operations. JSC's goal is to develop anthropomorphic robotic "caretaker" systems for deep space missions which can provide autonomous tending of spacecraft in absence of crew, reduction of crew time for spacecraft maintenance chores, and response capability for spaceflight emergencies. These efforts led to anthropomorphic robotic demonstration systems culminating with the R5 system. Meanwhile UoE which is engaged in research and training related to the interactions between robots and their environments, is leading a national UK initiative on robotics research, and has expressed an interest in advancing their efforts through the reimbursable use of an advanced robotic test bed based on the R5 technology. Thus, this Umbrella Agreement shall establish the parameters for the support NASA will provide to the UoE related to the advancement and loan of NASA robotic technologies. Annex 1's purpose is for NASA and UoE to undertake design, delivery, and testing of anthropomorphic robotic systems that address key challenges for managing interactions between robots and their environments, between multiple autonomous systems, and between robots and humans. NASA will further develop the NASA R5B test bed to meet UoE requirements.	2/26/2015	2/26/2026
591	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	Chinese Academy of Sciences (CAS)	China, People's Republic of (CH)	Letter of Agreement between NASA and Chinese Academy of Sciences (CAS) on Space Geodesy	Cooperative Agreement	Cooperation on Space Geodesy for the solution on important scientific problems in geophysics.	3/13/2015	3/15/2020
592	Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA), Ministry of Environment (MOE), National Institute for Environmental Studies (NIES)	Japan (JA)	MOU for Cooperation on OCO-2 and the Greenhouse Gases Observing Satellite (GOSAT) and GOSAT-2	Cooperative Agreement	Calibration, validation	3/17/2015	11/20/2024
593	Johnson Space Center (JSC)	Museum fur Naturkunde, Berlin	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Vera Fernandes of the Museum fur Naturkunde, Berlin in Berlin, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	3/31/2015	10/31/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
594	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Genesis Sample Loan Agreement	Cooperative Agreement	Jamie D. Gilmour of The University of Manchester in Manchester, United Kingdom proposes to use the Genesis samples to undertake scientific investigations (described in one or more sample requests submitted by the PI to the Genesis Sample Curator at JSC and approved by the Genesis Sample Curator).	3/31/2015	3/31/2020
595	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Reimbursable Agreement for the Testing of ESA's Docking Systems at JSC's 6DOF Facility	Reimbursable Agreement	Reimbursable Agreement for the Testing of ESA's Docking System at the Johnson Space Center's 6 Degrees of Freedom Facility	4/7/2015	12/31/2016
596	Johnson Space Center (JSC)	University of Konstanz	Germany (GM)	VRA between NASA and the University of Konstanz	Cooperative Agreement	Dr. Moreno-Villanueva will conduct research aimed at investigating the combined effects of microgravity, high-energy proton radiation and psychological stress on DNA damage response. In order to mimic the combined conditions of space environment and psychological stress, cells will be stimulated with isoproterenol (an epinephrine analogue compound) and exposed to high-energy proton radiation in a bioreactor that simulates microgravity conditions on the ground. Gene expression as well as levels and function of key proteins involved in the adrenergic pathway, oxidative stress and DNA damage response will be measured. In order to better understand the influences of ?space-life? on the human body, it is necessary to investigate the cellular responses under space environment conditions at the molecular level.	4/13/2015	5/31/2017
597	Johnson Space Center (JSC)	Griffin Media	Canada (CA)	Nonreimbursable Space Act Agreement Between NASA JSC and Griffin Media for Book on the History, Design, Construction and Utilization of the ISS	Cooperative Agreement	Agreement between NASA and Griffin Media, a Canadian publishing company, regarding a book on the International Space Station (ISS), specifically a chronology/history of its design, development, systems and operation as well as how NASA and its International Partners utilize the ISS to benefit humankind.	4/15/2015	4/15/2018
598	Wallops Flight Facility (WFF)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Chromospheric Lyman-Alpha Spectro-Polarimeter (CLASP) sounding-rocket mission	Cooperative Agreement	NASA's Science Mission Directorate is sponsoring the development of the CLASP mission, which is a project in the Solar and Heliosphere Supporting Research and Technology program. The CLASP mission is a solar physics experiment, which will be launched on a NASA sounding rocket, to measure the linear polarization profiles caused by scattering processes and the Hanle effect in the Lyman-Alpha line. CLASP will undertake to provide the first ever diagnostic tool for magnetic field measurements in the upper chromosphere and transition region. It is also expected that CLASP will serve as a technical and scientific pathfinder for future solar physics missions. The Principal Investigator (PI) of the CLASP mission is Ken Kobayashi of the NASA Marshall Space Flight Center, who will collaborate with the Japanese Co-PI Ryouhei Kano of the National Astronomical Observatory of Japan (NAOJ), as supported by JAXA.	4/22/2015	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
599	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Europa Feasibility Study Agreement	Cooperative Agreement	Europa Clipper is a concept under study by NASA that would conduct detailed reconnaissance of Jupiter's moon Europa and would investigate whether the icy moon could harbor conditions suitable for life. The mission would perform a detailed investigation of Europa using a highly capable, radiation-tolerant spacecraft that would perform repeated close flybys of the icy moon from a long, looping orbit around Jupiter.	4/28/2015	4/28/2020
600	Ames Research Center (ARC)	National Centre for Space Studies (CNES)	France (FR)	Reimbursable Space Act Agreement Between The Centre National d'Etudes Spatiales and The National Aeronautics and Space Administration for Participation in The National Aeronautics and Space Administration International Internship Program	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating CNES' participation in NASA's International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	4/28/2015	3/29/2017
601	Goddard Space Flight Center (GSFC)	Norwegian Space Centre (NSC)	Norway (NO)	Implementing Arrangement between NASA and the Norwegian Space Center (NSC) on the Interface Region Imaging Spectrograph (IRIS) Mission	Cooperative Agreement	NASA and NSC will collaborate on IRIS observations, which will be collected through several ground stations around the globe, including one located at the Kongsberg Satellite Services - Norwegian Space Centre (KSAT-NSC) station in Svalbard, Norway. NASA and NSC use a solar telescope and spectrograph to explore the solar chromospheres. The collaboration includes analysis of the IRIS observations using 3-D numerical models from the Institute of Theoretical Astrophysics (ITA) at the University of Oslo, Norway. The ground station support from KSAT-NSC in Svalbard will be provided through December 31, 2016, following the launch of IRIS. The ground station will support an adequate number of downlink and uplink passes to support operations and an average data rate on the order of 50 gigabytes (Gbytes) per day.	5/8/2015	1/10/2021
602	Goddard Space Flight Center (GSFC)	World Meteorological Organization (WMO)	Switzerland (SZ)	Cooperation in the Micro-pulse Lidar Network (PMLNET) as a contributing network	Cooperative Agreement	Cooperative research on lidar using ground based detectors integrated into a global network.	5/11/2015	5/11/2100
603	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Hauke Vollstaedt proposes to use these Lunar samples to undertake scientific investigations led by its PI given to the Apollo Sample Curator at JSC and approved by the Apollo Sample Curator.	5/14/2015	10/31/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
604	Jet Propulsion Laboratory (JPL)	Robotic Drilling Systems AS	Norway (NO)	NASA-Robotic Drilling Systems, AS (Seabed RIG AS RSAA) for Automated Composing of Task Schedules Extension	Reimbursable Agreement	NOTE: Modification due to communication received dated November 14, 2012, from the partner agency indicating a change in the name of their organization from Seabed Rig, AS to Robotic Drilling Systems, AS. This objective of this activity is to develop a Drilling Composer, which will receive a set of input task goals and automatically translate these goals into a parameterized activity schedule that will be dispatched to the Drilling Conductor for execution on the rig.	5/27/2015	5/27/2017
605	Langley Research Center (LaRC)	Swerea SICOMP	Sweden (SW)	NASA-Swerea SICOMP Agreement on The Development of Simulation Tools for Composite Laminate Failure	Cooperative Agreement	The research under this agreement shall be for the purpose of creating a software tool to numerically simulate damage in composite laminate materials that is more efficient and user friendly than currently available alternatives. The tool will be created at NASA Langley Research Center in Virginia. Swerea SICOMP has extensive experience in the area of composite damage testing and prediction and as a result has specialized archived test data that will be used to aid NASA in the development and testing of the software.	5/29/2015	3/30/2017
606	Glenn Research Center at Lewis Field (GRC)	National Research Council Canada (NRCC)	Canada (CA)	Amendment to the Agreement between NASA and the National Research Council of Canada (NRCC) Concerning Cooperation in Icing Protection Systems Research	Cooperative Agreement	NASA and the National Research Council of Canada (NRCC) enjoyed mutually beneficial cooperation in the area of icing research to improve aviation safety by addressing airplane engine power loss events associated with the high-altitude convective weather and thermal ice protection systems. The original agreement entered into force on December 2, 2009, and expired on November 30, 2014. During the time period of the original agreement, NASA and NRCC cooperated in a High Ice Water Content (HIWC) Field Campaign and conducted joint research to improve the measurement capabilities of high ice water content and mixed phase (liquid and ice) environments. This effort resulted in the development of Iso-Kinetic Probes (IKP) used for ground-based and flight-based measurements and modifications made to existing atmospheric instruments. Therefore, NASA proposed a new extension to allow for a comparison test to be conducted with data taken from the flight IKP, and new icing capabilities have been added to the Propulsion Systems Laboratory (PSL) at NASA.	6/3/2015	5/21/2020
607	Ames Research Center (ARC)	Catholic University of the North (UCN)	Chile (CI)	Astrobiology Field Investigations in the Atacama and Altiplano Regions of Northern Chile	Cooperative Agreement	Cooperation on astrobiology field campaigns in the Atacama Desert and Altiplan Region of Chile in collaboration with the Catholic Univ. of the North.	6/8/2015	9/30/2020
608	Glenn Research Center at Lewis Field (GRC)	Schaeffler Technologies AG & CO KG	Germany (GM)	Agreement between NASA and Schaeffler Technologies AG & CO KG For Superelastic Materials for Corrosion Resistant and Resilient Bearings	Cooperative Agreement	cooperative activity to research bearings materials and test them.	6/9/2015	6/26/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
609	Headquarters (HQ), Johnson Space Center (JSC)	Chalmers University of Technology	Sweden (SW)	Chalmers VRA for Larry Toups	Cooperative Agreement	This Amendment changes the POC information for Chalmers University and extends the Agreement to September 1, 2018. Visiting researcher will conduct research on technologies and concepts for habitation applicable to long duration space missions. This includes technologies such as water systems, lightweight materials and other autonomous and power efficient systems associated with 'smart homes' of the future, directly applicable to future deep space habitation concepts.	6/11/2015	9/1/2018
610	Glenn Research Center at Lewis Field (GRC)	Embraer S.A.	Brazil (BR)	Fourth Annex to the Reimbursable Space Act Umbrella Agreement between NASA and Embraer for Embraer's Ice Protection System Development	Reimbursable Agreement	In accordance with the terms and conditions set forth in the Reimbursable Umbrella Agreement between the National Aeronautics and Space Administration Glenn Research Center (GRC) and Embraer S.A. (Embraer) (for Ice Protection System Development, this fourth Annex carries out further work beyond the scope of the first, second, and third annex to perform ice protection development testing in GRC's Icing Research Tunnel (IRT) for the Embraer 190 E2 regional jet.	6/14/2015	9/30/2017
611	Goddard Space Flight Center (GSFC)	Charles University in Prague	Czech Republic (CZ)	Living with a Star Program's Geospace-Radiation Belt Storm Probes (G-RBSP) Mission	Cooperative Agreement	NASA) and the Charles University in Prague have a mutual interest in pursuing cooperation in the Living With a Star (LWS) Program's Geospace-Radiation Belt Storm Probes (G-RBSP) mission. One science investigation for the G-RBSP mission that was selected, 'Electric and Magnetic Field Instrument Suite and Integrated Science (EMFISIS),' by the University of Iowa, included a collaboration with Dr. Ondrej Santolik from the Charles University. The EMFISIS instrument suite will improve the understanding of the origin and role of plasma waves in particle acceleration and in the evolution of the magnetic field. Each EMFISIS instrument suite contains two instruments, a magnetometer that measures three components of the low-frequency magnetic field and a magnetometer and waveform receivers (Waves) that measure the three components of the wave magnetic and wave electric fields. The proposed collaboration with Charles University is for flight software on the Waves instrument.	6/16/2015	9/30/2018
612	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and CNES for Cooperation in Orbital Debris Conjunction Assessment & Risk Analysis	Cooperative Agreement	Mission Directorate: SMD. The purpose of this IA is to set forth the responsibilities of the Implementing Agencies for orbital debris conjunction assessment and risk analysis in order to provide improved mitigation options to satellite operators facing in-orbit collisions threats.	6/16/2015	6/15/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
613	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement between NASA and the Centre National D'Etudes Spatiales of France on the SuperCam Instrument for the Mars 2020 Mission	Cooperative Agreement	Mars 2020 is the next strategic mission in NASA's Mars Exploration Program. The mission will land a rover on the planet to conduct a wide range of scientific exploration, consistent with NASA's science goals for the Mars Exploration Program. Mars 2020's objective is to explore for signs of ancient life and habitable environments, study Martian weather and atmosphere, and study Martian geology. NASA plans to launch the mission in July 2020, and land on Mars in February 2021. NASA expects that the rover will conduct operations until at least August 2023. One of the seven scientific and exploration instruments on the Mars 2020 payload includes the SuperCam: Active and Reflectance Mineralogy, Astrobiology, Chemistry, and Imaging at Remote Distances instrument suite. NASA selected Dr. Roger Wiens of the Los Alamos National Laboratory (LANL) as the SuperCam Principal Investigator (PI). Dr. Sylvestre Maurice of the Institut de Recherche en Astrophysique et Planetologie (IRAP/CNRS) is the Deputy Principal Investigator and the science and technical lead of the French contribution to SuperCam. The French team will develop the SuperCam Mast Unit and the American team will develop the SuperCam Body Unit. This Implementing Arrangement will be concluded pursuant to the Framework Agreement between the Government of the French Republic and the Government of the United States of America for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes.	6/16/2015	6/30/2024
614	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and the German Aerospace Center for Experimental Optical Methods Applied to Rotorcraft	Cooperative Agreement	The purpose of this Implementing Arrangement is to set forth the respective responsibilities of the Parties and the terms and conditions under which they shall conduct cooperation in the area of applying experimental optical methods to Rotorcraft. The Parties plan to apply several optical techniques to identify unsteady transition location on a rotor blade and to characterize the rotor wake geometry in forward flight. The results will be jointly published by the Parties and made available to the public and entire international aerospace community.	6/16/2015	12/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
615	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and the German Aerospace Center for Cooperation on Aircraft Noise Simulation	Cooperative Agreement	The purpose of this Implementing Arrangement is to set forth the respective responsibilities of the Parties and the terms and conditions under which they shall conduct cooperation in the area of aircraft noise prediction. The reduction of noise without adversely impacting performance and the environment is a great challenge given the growth of air traffic combined with stricter regulations on noise and emissions. One of the key enablers to finding solutions is sufficiently reliable noise prediction, which takes into account all of the aircraft noise sources and their complex installation effects.	6/16/2015	12/31/2017
616	Jet Propulsion Laboratory (JPL)	National Institute for Aerospace Technology (INTA), The Spanish Centro para el Desarrollo Tecnológico Industrial (CDTI)	Spain (SP)	Implementation Agreement between NASA, CDTI, and INTA Concerning Cooperation on the Mars Science Laboratory (MSL) Mission	Cooperative Agreement): In addition to extending the MSL cooperation, this amendment adds the Spanish provision of the High Gain Antenna (HGA) to the Mars 2020 mission and the Temperature and Wind on InSight (TWINS) sensors on the Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission.	6/16/2015	12/31/2025
617	Ames Research Center (ARC)	Brazilian Space Agency (AEB)	Brazil (BR)	Reimbursable Space Act Agreement Between the Agencia Espacial Brasileira and The National Aeronautics And Space Administration for Participation In The National Aeronautics And Space Administration International Internship Program	Reimbursable Agreement	﻿This Reimbursable Space Act Agreement will be for the purpose of facilitating AEB's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	6/18/2015	5/31/2018
618	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	JAXA-SCaN Support for the NASA Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission	Cooperative Agreement	JAXA is providing tracking network resources and engineering expertise in support of 22 Delta Differential One-Way Range (DDOR) measurements for the NASA InSight spacecraft during cruise and on approach to its Mars landing, from June through September 2016. JAXA is also providing station configuration and meteorological information and raw tracking data measurements in the agreed format within 20 hours for the more critical period of 30 days before the InSight landing.	6/23/2015	12/31/2017
619	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Alison Hunt of ETH Zurich, Institute for Geochemistry and Petrology in Zurich, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6/23/2015	6/23/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
620	Johnson Space Center (JSC)	Scottish Universities Environmental Research Centre	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Benjamin Eric Cohen of Scottish Universities Environmental Research Centre in UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	6/23/2015	6/23/2020
621	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Ray Burgess of the University of Manchester in UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	6/23/2015	6/23/2020
622	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Genesis Sample Loan Agreement	Cooperative Agreement	Ian Lyon of The University of Manchester in Manchester, UK, proposes to use the Genesis samples to undertake scientific investigations (described in one or more sample requests submitted by the PI to the Genesis Sample Curator at JSC and approved by the Genesis Sample Curator).	6/23/2015	6/23/2020
623	Glenn Research Center at Lewis Field (GRC), Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Implementing Arrangement between NASA and ESA concerning NASA's Provision of a Short Duration Flight Opportunity in Exchange for Goods and Services related to the Orion Multi-Purpose Crew Vehicle Service Module	Cooperative Agreement	Barter exchanging short duration increment opportunity on the ISS (Launch 44S, Return 42S) for hardware towards Service Module 2 (or spares for SM 1)	6/25/2015	12/31/2021
624	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	NASA-JAXA Reimbursable Agreement for Mouse Habitat Unit Utilization Services for the ISS	Reimbursable Agreement	NASA will provide JAXA with pre-flight and post-flight ground services and in-flight transportation services to support the JAXA Mouse Habitat Unit on the ISS.	6/26/2015	12/31/2020
625	Langley Research Center (LaRC)	The University of Queensland	Australia (AS)	Non-Reimbursable International Space Act Agreement between NASA and The University of Queensland for Study in Radiative Heating in Strongly Expanding Flows for Planetary Exploration Applications	Cooperative Agreement	To study the radiation spectra from a region of rapidly expanding flow representative of the passage of the shock layer on a re-entry capsule from the windward to leeward surfaces. This work will improve models of radiation energy transfer in vehicles entering planetary atmospheres at super-orbital entry velocities. These results inform spacecraft designers on the entry environments associated with rapidly expanding flow for vehicles returning from the Moon or beyond. Successful Mars missions and the eventual Entry, Descent and Landing for vehicles returning from Mars at super-orbital velocities must minimize spacecraft weight while satisfying overall system and payload requirements.	6/30/2015	6/30/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
626	Headquarters (HQ)	Brazilian Space Agency (AEB)	Brazil (BR)	Implementing Arrangement for Cooperation between NASA and the Brazilian Space Agency (AEB) of the Federative Republic of Brazil of Brazil in Heliophysics and Space Weather Research	Cooperative Agreement	The U.S. National Aeronautics and Space Administration (NASA) and the Brazilian Space Agency (AEB) signed an Implementing Arrangement (IA) under the U.S.-Brazil Framework Agreement on Cooperation in the Peaceful Uses of Outer Space that will facilitate enhanced cooperation in the fields of solar and space physics (heliophysics) and space weather research. Under the IA, AEB, through the Brazilian National Institute for Space Research (INPE), will acquire and process space weather broadcast data from NASA's Van Allen Probes mission, which was launched in 2012. The IA also enables Brazilian participation in the research working groups of NASA heliophysics missions, including the Van Allen Probes mission and the Magnetospheric MultiScale mission, and promotes continued discussion on new projects for potential U.S.-Brazil collaboration in heliophysics and space weather research.	6/30/2015	6/30/2025
627	Headquarters (HQ)	Brazilian Space Agency (AEB)	Brazil (BR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE Program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/30/2015	6/30/2020
628	Headquarters (HQ)	Korea Astronomy and Space Science Institute (KASI)	Korea, Republic of (KS)	KASI-Helio Agreement	Cooperative Agreement	Cooperation in solar and space physics (heliophysics) and space weather research, including sharing the data of new NASA missions, in particular the Solar Dynamics Observatory (SDO), Radiation Belt Storm Probe (RBSP), and Magnetospheric MultiScale (MMS) missions, to increase their scientific output and productivity to the benefit of heliophysics overall. KASI will build a data center and provide access for scientists, provide the necessary ground assets to acquire and process the space weather broadcast data from RBSP, provide measures to safeguard the RBSP space weather broadcast mode operating frequencies, and exchange scientific and technical personnel from KASI.	6/30/2015	6/30/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
629	Headquarters (HQ)	Agencia Espacial Mexicana (AEM)	Mexico (MX)	Nonreimbursable Space Act Agreement Between the Agencia Espacial Mexicana and the National Aeronautics and Space Administration for Collaboration on the Aztechsat-1 Cubesat COMMUNICATIONS Technology Demonstration	Cooperative Agreement	An additional Mission Type: HEO. The AztechSat-1 CubeSat technology demonstration will provide NASA with the opportunity to test economical, commercial, off-the-shelf components, which may be useful in future space missions. AztechSat-1 will use GlobalStar, the low Earth orbit (LEO) satellite constellation for satellite phone and low-speed data communications. AEM will manufacture a prototype, perform ground testing, deliver a flight certified unit of its AztechSat-1 CubeSat, lead mission operations, and share flight data with NASA. NASA will provide project management overview and systems engineering overview, participate in design reviews, perform environmental testing, and support AztechSat-1 mission operations, consistent with U.S. export control laws and regulations.	7/1/2015	3/31/2017
630	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	NASA-CSA HR-pQCT ISLSWG Agreement	Cooperative Agreement	NASA and CSA have agreed to cooperate on CSA's baseline data collection for their TBone experiment, which will require the installation of the High Resolution Peripheral Quantitative Computed Tomography (HR-qQCT) at the NASA Johnson Space Center.	7/9/2015	12/31/2020
631	Langley Research Center (LaRC)	Kungliga Tekniska Hogskolan (KTH)	Sweden (SW)	Partially Reimbursable Space Act Agreement between NASA and the Royal Institute of Technology of Sweden for Aeroelastic Wind-Tunnel Testing	Reimbursable Agreement	The purpose of this Agreement is to acquire data necessary to develop and validate computational methods to predict and analyze nonlinear aeroelastic phenomena, including limit cycle oscillations that result primarily from nonlinear aerodynamics and structural nonlinearities including friction, freeplay, and geometric nonlinearities. The data will result from testing at the NASA LaRC Transonic Dynamics Tunnel (TDT). This effort will be conducted using a KTH-supplied sting-mounted modified full-span flutter model that represents a generic (non-proprietary) fighter configuration with external stores. The model will be instrumented to acquire steady and unsteady pressure data and model response data using accelerometers and strain gauges. This type of data is not currently readily available, thus hampering efforts to model and predict these behaviors, and will be valuable to both U.S. Government agencies and U.S. industry due to its impact on aircraft design, manufacture, maintenance, and certification.	7/10/2015	12/31/2016
632	Goddard Space Flight Center (GSFC)	University of Bern	Switzerland (SZ)	Interstellar Boundary Explorer (IBEX) Mission	Cooperative Agreement	The University of Bern, Switzerland, is cooperating with NASA on the Interstellar Boundary Explorer (IBEX) mission, by providing hardware and testing for the IBEX-Hi Pre-collimator, the IBEX-Lo Pre-collimator, and the IBEX- Lo Outer Electrostatic Analyzer.	7/24/2015	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
633	Ames Research Center (ARC)	National Institute of Higher Education, Research, Science & Technology (NIHERST)	Trinidad & Tobago (TD)	Reimbursable Space Act Agreement between the Nat'l Institute of Higher Educ. Research, Science & Technology (NIHERST) and NASA for Participation in the NASA International Internship Program	Reimbursable Agreement	This agreement enables NIHERST participation in the NASA International Internship Program (NASA I2), designed to provide a collaborative environment where U.S. interns (university undergraduate students) can interact and work alongside international peers on research opportunities.	8/4/2015	9/3/2018
634	Ames Research Center (ARC)	Agencia Espacial Mexicana (AEM)	Mexico (MX)	Reimbursable Space Act Agreement between the Agencia Espacial Mexicana and NASA for Participation in the NASA International Internship Program	Reimbursable Agreement	This agreement enables AEM's participation in the NASA International Internship Program (NASA I2), designed to provide a collaborative environment where U.S. interns (university undergraduate students) or fellows (university graduate students) can interact and work alongside international peers on research opportunities.	8/20/2015	9/3/2018
635	Jet Propulsion Laboratory (JPL)	Swedish Institute of Space Physics (IRF)	Sweden (SW)	ASPERA-3 on Mars Express/ASPERA-4 on Venus Express	Cooperative Agreement	This is an amendment and extension of the existing agreement with the Swedish Institute of Space Physics (IRF) for cooperation on the Analyzer of Space Plasmas and Energetic Atoms (ASPERA) version 3 and 4 on Mars Express and Venus Express missions. NASA will provide the Electron Spectrometer and a subassembly for the Ion Mass Analyzer Detector, which will be integrated into ASPERA-3. ASPERA-3 will use energetic neutral atom imaging to visualize the charged and neutral gas environments around Mars. Agreement amended to include ASPERA 4 on Venus Express and extend the agreement by 1 additional year.	8/31/2015	12/31/2017
636	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Spectroscopic Investigation of the Characteristics of the Atmosphere of Mars (SPICAM) on Mars Express	Cooperative Agreement	NASA support for US Co-I on French-built SPICAM instrument on ESA Mars Express mission. SPICAM is part of the Mars Express orbiter.	9/7/2015	12/31/2017
637	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Earth Observatoin Research Related to Environmental Monitoring and Hazard/Disaster Management (COSMO-SkyMed)	Cooperative Agreement	Cooperative research using ASI COSMO-SkyMed data. May involve downlink at the Alaska Satellite Facility and access to NASA postdoc programs.	9/9/2015	10/31/2020
638	Goddard Space Flight Center (GSFC)	All Nations University College in Koforidua (ANUC) of Ghana	Ghana (GH)	Cooperation in the Aerosol Robotic Network (AERONET) with All Nations University College in Koforidua, Ghana	Cooperative Agreement	Cooperative research on aerosols using sun photometers integrated into a global network.	9/17/2015	9/16/2025
639	Headquarters (HQ)	South African Space Agency (SANSA)	South Africa (SF)	Reimbursable Space Act Agreement Between the South African National Space Agency and the National Aeronautics and Space Administration	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating SANSA's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	9/18/2015	9/3/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
640	Langley Research Center (LaRC)	University of Innsbruck	Austria (AU)	North Atlantic Aerosols and Marine Ecosystem Study (NAAMES)	Cooperative Agreement	This agreement is for a scientific airborne campaign that will study the annual life cycle of phytoplankton in the North Atlantic Ocean and the impact of small airborne particles derived from marine organisms on climate. Further, the agreement will allow Dr. Armin Wisthaler and his Proton-Transfer-Reaction Mass Spectrometry (PTRMS) instrument to fly on the NASA C-130 aircraft for the NAAMES study.	9/24/2015	1/15/2020
641	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	AVIRIS-NG Airborne Campaign	Cooperative Agreement	This agreement is for a scientific airborne imaging spectrometer mission over India using the Airborne Visible and InfraRed Imaging Spectrometer ' Next Generation (AVIRIS-NG) instrument. NASA will fly the AVIRIS-NG instrument on ISRO's B-200 aircraft. This agreement falls under the Framework Agreement between the National Aeronautics and Space Administration and Indian Space Research Organisation for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes, signed on February 1, 2008.	9/24/2015	9/24/2020
642	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Cooperation between NASA and JAXA on Wind Tunnel Testing in JAXA's High Enthalpy Shock Tunnel (HEIST)	Cooperative Agreement	A continuation of previous cooperation involving use of JAXA's High Enthalpy Shock Tunnel (HEIST) to provide wind tunnel testing on a NASA Apollo-like capsule.	9/24/2015	3/31/2018
643	Goddard Space Flight Center (GSFC)	Polytechnic of Namibia, Namibia University of Science and Technology (NUST)	Namibia (WA)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the Polytechnic of Namibia will cooperate on the AERONET program. NASA will provide equipment on loan which Gobabeb will host at a mutually agreed location.	9/25/2015	9/24/2025
644	Headquarters (HQ)	The Ministry of Education and Human Resources, Tertiary Education and Scientific Research of the Republic of Mauritius	Mauritius (MP)	Global Learning and Observations to Benefit the Environment (GLOBE)	Cooperative Agreement	The GLOBE Program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/5/2015	10/5/2020
645	Glenn Research Center at Lewis Field (GRC)	Canadensys (CAC)	Canada (CA)	Umbrella Agreement between NASA and Canadensys Aerospace Corporation Regarding Environmental Testing of Space Exploration Hardware; Annex 1	Reimbursable Agreement	NASA GRC to provide testing of Canadensys technology to include thermal cycling of the partner's rover prototype drivetrain hardware.	10/13/2015	10/12/2020
646	Langley Research Center (LaRC)	The National Institute of Environmental Research of the Republic of Korea (NIER)	Korea, Republic of (KS)	Korea-United States Air Quality Field Study (KORUS-AQ)	Cooperative Agreement	This agreement is for a scientific airborne campaign that will provide critical information on the challenges faced by satellites to distinguish air quality conditions at the surface from conditions at higher altitudes.	10/14/2015	11/30/2020
647	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	Defense Research Establishment (FFI or Forsvarets Forskning Institute in Norwegian)	Norway (NO)	Mars 2020 RIMFAX Phase B-F Agreement	Cooperative Agreement	This agreement is for the Norwegian Defense Research Establishment (FFI) to provide the Radar Imagers for Mars' subsurface eXperiment (RIMFAX) ground penetrating radar (GPR) to NASA for the Mars 2020 rover.	10/20/2015	6/30/2024

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
648	Goddard Space Flight Center (GSFC)	Centre for Geophysical Consultancy and Technological Transfer (CGCTT)	Vietnam (VM)	AERONET (Aerosol Robotic Network)	Cooperative Agreement	NASA and the Center for Geophysical Consultancy and Technological Transfer of Vietnam will cooperate on the AERONET program. NASA will provide equipment on loan which the partner will host at a mutually agreed location.	10/23/2015	10/22/2025
649	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement Between the National Aeronautics and Space Administration and the German Aerospace Center for Cooperation on the Eu:CROPIS Mission	Cooperative Agreement	NASA will develop and provide a secondary payload, the PowerCell Experiment, to DLR for integration into DLR's Eu:CROPIS small spacecraft bus.	10/26/2015	10/26/2019
650	Headquarters (HQ)	Israel Space Agency (ISA)	Israel (IS)	Framework Agreement between NASA and the Israel Space Agency for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Peaceful Purposes	Cooperative Agreement	Framework Agreement	10/31/2015	10/13/2025
651	Goddard Space Flight Center (GSFC)	Royal Institute of Technology (KTH)	Sweden (SW)	Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Cooperative Agreement	Fermi is a NASA mission whose scientific investigations were selected through a NASA AO 99-OSS-03. Glast will identify and study nature's highest energy particle accelerators, measuring, with two instruments, the spectra and temporal histories of gamma rays in the energy range from 10 KeV to 300 GeV	11/2/2015	12/31/2020
652	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	University of Valladolid (UVA)	Spain (SP)	Mars 2020 SuperCam Calibration Target Agreement	Cooperative Agreement	This agreement is for the University of Valladolid (UVA) of Spain to provide a calibration target assembly to NASA for the Mars 2020 rover's SuperCam instrument.	11/3/2015	6/30/2024
653	George C. Marshall Space Flight Center (MSFC)	Ku Leuven, Katholieke Universiteit Leuven of Belgium (KUL)	Belgium (BE)	Global Precipitation Measurement (GPM)	Cooperative Agreement	NASA's GPM mission consists of a constellation of international satellites that provide measurements in the microwave and infrared portions of the spectrum. Data from these satellites are processed into global products that estimate integrated precipitation for timescales on the order of three hours. The GPM mission also includes a ground validation component that quantifies the accuracy of precipitation data products. High-latitude precipitation is of particular interest to GPM ground validation because the data product algorithms used in these regions are relatively new and untested, and there are very few meteorological observations in Antarctica.	11/15/2015	11/15/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
654	George C. Marshall Space Flight Center (MSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Jupiter Icy-Moons Explorer (JUICE) Mission - Particle Environments Package (PEP)	Cooperative Agreement	PEP is a plasma package with six sensors to characterize the plasma environment in the Jovian system. PEP will measure positive and negative ions, electrons, exospheric neutral gas, thermal plasma, and energetic neutral atoms (ENAs) in the energy range from 0.001 eV to 1 MeV. PEP will combine remote global imaging via ENAs with in situ measurements, to address all scientific objectives of the JUICE mission relevant to particle measurements. PEP will seek answers for four overarching science questions: ?How does the co-rotating magnetosphere of Jupiter interact with the complex and diverse environment of Ganymede? ?How does the rapidly rotating magnetosphere of Jupiter interact with seemingly inert Callisto? ?What are the governing mechanisms and their global impact of release of material into the Jupiter magnetosphere from Europa and Io? ?How do internal and solar wind drivers cause such energetic, time-variable and multi-scale phenomena in the steadily rotating giant magnetosphere of Jupiter?	11/23/2015	6/30/2034
655	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA-ESA IA for the Modification and Delivery of the Hexapod Pointing System	Cooperative Agreement	NASA and ESA have reached an understanding regarding ESA's updated scope of work for the Hexapod pointing system (Hexapod) in exchange for NASA providing a Columbus External Payload Adapter for ESA's ASIM, install the Columbus Ka-Bans antenna, and as a means of offsetting ESA's obligation to reimburse NASA for TDRSS support for ATV-4 and -5.	11/24/2015	12/31/2020
656	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Memorandum of Understanding between the Italian Space Agency and the United States National Aeronautics and Space Administration Concerning Cooperation on the Mars Advanced Radar for Subsurface and Ionospheric Sounding (MARSIS) and Planetary Fourier Spectrometer (PFS) to be Flown on the European Space Agency's 2003 Mars Express Mission	Cooperative Agreement	MOU defines the responsibilities of NASA and ASI and the terms and conditions for cooperation for development of the Mars Advanced Radar for Subsurface and Ionospheric Sounding (MARSIS) and the Planetary Fourier Spectrometer (PFS) to be flown onboard ESA's 2003 Mars Express Mission, and also provides for support of the U.S. and Italian P.I.'s and Co-I's.	11/25/2015	12/31/2017
657	Ames Research Center (ARC)	Canadensys (CAC)	Canada (CA)	Investigation of Thermal and Energy Storage Technologies for Small Space Missions	Cooperative Agreement	NASA and Canadensys (CAC) will cooperate on a technology assessment of thermal and energy storage technologies for small, cost-effective spacecraft and associated payloads, which would enable these missions to survive in cold planetary environments including asteroids, Mars, and cis-lunar space.	12/4/2015	6/10/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
658	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Advanced Resistive Exercise Device (ARED) Kinematics Project Letter of Agreement	Cooperative Agreement	A Letter of Agreement between ESA and NASA under the ISLSWG ISS Arrangement for the Advanced Resistive Exercise Device (ARED) Kinematics Project on the ISS.	12/8/2015	12/1/2020
659	Ames Research Center (ARC),Headquarters (HQ),Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA and ESA Letter of Agreement regarding the Vestibular-Evoked Myogenic Potentials in Microgravity (VEMP)	Cooperative Agreement	An LOA under the ISS ISLSWG Arrangement. The LOA concerns NASA support of the ESA sponsored VEMP experiment. VEMP is an experiment that will assess otolith function on 12 crewmembers before, during and after long duration missions on the International Space Station.	12/11/2015	12/31/2020
660	Goddard Space Flight Center (GSFC)	University of Castilla-La-Mancha of Spain	Spain (SP)	Agreement between NASA and the University of Castilla-La-Mancha of Spain for cooperation on the Global Precipitation Measurement (GPM) mission	Cooperative Agreement	ESD/GPM mission ground validation of GPM precipitation retrieval algorithms and data products.	12/14/2015	12/14/2018
661	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Mars Exploration Rover 2003 (MER 2003) Mission - Mossbauer Spectrometers	Cooperative Agreement	The National Aeronautics and Space Administration (NASA) and the German Aerospace Center (DLR) are cooperating on NASA's Mars Exploration Rover 2003 (MER 2003) mission, comprised of two separate rovers. The cooperation involves German provision of Mossbauer Spectrometer engineering and flight models, which will be part of the two rover's Athena payloads and will be mounted on instrument deployment devices.	12/16/2015	12/31/2020
662	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Cooperative Agreement	Fermi is a NASA mission whose scientific investigations were selected through a NASA AO 99-OSS-03. Glast will identify and study nature's highest energy particle accelerators, measuring, with two instruments, the spectra and temporal histories of gamma rays in the energy range from 10 KeV to 300 GeV.	12/16/2015	12/31/2020
663	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	ESA's Mars Express Mission - High Resolution Stereo Camera (HRSC)	Cooperative Agreement	NASA and DLR on the ESA's Mars Express Mission. The cooperation involves NASA support of U.S. Co-Investigators on the German High Resolution Stereo Camera (HRSC), a Mars Express instrument. State Dept said no C175 required on the extension on 7/21/08.	12/16/2015	12/31/2017
664	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Mars Exploration Rover (MER 2003) Mission - Participating Scientists	Cooperative Agreement	The National Aeronautics and Space Administration (NASA) and the German Aerospace Center (DLR) are cooperating on NASA's Mars Exploration Rover 2003 (MER 2003) mission, comprised of two separate rovers. This cooperation involves DLR support of the following three German Participating Scientists on the MER 2003 science team: Mr. Johannes Brueckner, Mr. Stubbe Hviid, and Mr. Lutz Richter. All three were selected as Participating Scientists through the NASA Announcement of Opportunity AO-01-OSS-04.	12/16/2015	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
665	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Temporal History of Events and Macoscale Interactions during Substorms (THEMIS)	Cooperative Agreement	NASA and the German Aerospace Center (DLR) have been cooperating on the THEMIS mission, which launched on February 17, 2007. This unique constellation of satellites has provided scientists with data to help resolve how earth's magnetosphere stores and releases energy from the Sun by triggering geomagnetic substorms. THEMIS aims to determine what physical process in near-Earth space initiates the violent eruptions of the aurora that occur during substorms in the Earth's magnetosphere. DLR is responsible for the development and testing of the Fluxgate Magnetometer instrument. THEMIS is a 2-year prime mission consisting of 5 identical probes that will study the violent colorful eruptions of Auroras. Three of the remaining THEMIS satellites continue to study substorms that are visible in the northern hemisphere as aurora borealis.	12/16/2015	12/31/2017
666	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Mars Exploration Rover 2003 (MER 2003) Mission - Alpha Particle X-ray Spectrometer (APXS)	Cooperative Agreement	The National Aeronautics and Space Administration (NASA) and the German Aerospace Center (DLR) are cooperating on NASA's Mars Exploration Rover 2003 (MER 2003) mission, comprised of two separate rovers. The cooperation involves German provision of Alpha Particle X-Ray Spectrometer (APXS) engineering and flight models, which will be part of the two rovers? Athena payloads.	12/16/2015	12/31/2020
667	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Mars Radio Science (MaRS) Experiment Onboard ESA's Mars Express Mission	Cooperative Agreement	NASA, via U.S. Co-Investigators, will provide the Mars Radio Science (MaRS) Experiment for ESA's Mars Express Mission, which will be used to conduct radio science experiments. The ESA Mars Mission was launched on a Soyuz launch vehicle on June 2, 2003. Through an ESA Announcement of Opportunity, 3 co-investigators from Stanford University were selected for the MaRS Experiment, with the Principal Investigator from the University of Cologne. State Dept said no C175 required on the extension on 7/21/08.	12/16/2015	12/31/2017
668	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA-ESA Portable Pulmonary Function System Agreement	Cooperative Agreement	This agreement amends the original NASA-ESA Portable Pulmonary Function System Agreement for the continued utilization of the Portable PFS and to extend the agreement.	12/18/2015	12/31/2020
669	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Reimbursable Agreement between NASA and ESA for International Space Station Crew Support Services	Reimbursable Agreement	Agreement for NASA to provide ISS crew support services for ESA. Services include training, Star City services, medical, launch and landing.	12/18/2015	12/31/2020
670	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	MOU btw NASA and ASI concerning the Nuclear Spectroscopic Telescope Array (NuSTAR) mission	Cooperative Agreement	NASA and ASI are cooperating on the Nuclear Spectroscopic Telescope Array (NuSTAR) mission. NASA is providing the mission while ASI is primarily providing the ground systems using their Malindi facility in Kenya.	12/21/2015	12/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
671	Glenn Research Center at Lewis Field (GRC)	Norwegian Space Centre (NSC)	Norway (NO)	Reimbursable Space Act Agreement between the National Aeronautics And Space Administration (NASA) and Kongsberg Satellite Services (KSAT) for the Measurement of Ka-Band Propagation Data	Reimbursable Agreement	NASA and KSAT wish to enhance the current radiometric Ka-band propagation measurements being taken in Svalbard, Norway, with a beacon receiver and optical rain gauge. The addition of a beacon receiver and optical rain gauge at the current NASA site will allow for improved accuracy atmospheric propagation characterization and modeling and allow for the measurement of rain attenuation and low elevation angle scintillation effects in the polar climate which will impact future NASA missions. This collaborative activity will provide both NASA and KSAT with atmospheric propagation measurements in the Ka-band, which will be used to improve satellite and ground communications system requirements and designs.	12/21/2015	12/21/2018
672	Goddard Space Flight Center (GSFC), Headquarters (HQ)	Prefeitura de Rio de Janeiro, Brazil	Brazil (BR)	Hazard Monitoring and Disaster Response in and around Rio de Janeiro, Brazil	Cooperative Agreement	The purpose of this Agreement is to forge a closer scientific collaboration between NASA and the City of Rio de Janeiro, specifically through the exchange of knowledge between disciplines and the use of Earth observations data and data products to support innovative and ongoing efforts to anticipate, monitor and assess the contributions to disaster risk from natural hazards (including flooding, inundation, landslides, mudslides, drought, heat islands, etc.) in the vicinity of Rio de Janeiro. Collaboration between scientists at NASA and the Prefeitura, through the Instituto Pereira Passos (IPP), Rio de Janeiro Centro de Operações Rio (COR), and Fundação Geo-Rio, would focus on enabling rapid dissemination of and access to satellite data products to enhance scientific understanding, education and risk awareness, and enabling societal benefit, such as crisis response.	12/22/2015	12/22/2020
673	Headquarters (HQ), Johnson Space Center (JSC)	Canadian Space Agency (CSA), Japan Aerospace Exploration Agency (JAXA), National Space Development Agency of Japan (NASDA), European Space Agency (ESA)	Multiple Signatories	Arrangement among the Canadian Space Agency, the European Space Agency, the National Aeronautics and Space Administration of the United States of America, and the National Space Development Agency of Japan concerning International space Life Sciences Flight Experiments on the International Space Station	Cooperative Agreement	Extension of Comprehensive Arrangement between NASA, CSA, ESA, and NASDA (now JAXA) for International Space Life Sciences Flight Experiments on the International Space Station (ISS). In order to further the goal established by the International Space Life Sciences Working Group (ISLSWG), the Parties as ISLSWG members will implement an international approach to life sciences flight experiment recruitment, review, selection, and implementation on the ISS. This agreement establishes the general principles, terms, and conditions under which the Parties will implement the International Space Life Science experiments (flight experiment) for peaceful purposes on the ISS.	12/22/2015	12/31/2020
674	Ames Research Center (ARC)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	Agreement between NASA and KARI for Associate Membership in the NASA Solar System Exploration Research Virtual Institute (SSERVI)	Cooperative Agreement	Provides for KARI associate membership in the SSERVI, a virtual science institute based at Ames for the study of the moon and planetary bodies.	12/29/2015	12/29/2025

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
675	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement btw NASA and CNES on the Mars Science Laboratory (MSL) mission	Cooperative Agreement	CNES is providing significant portions of the Sample Analysis at Mars (SAM) and the Laser-Induced Remote Sensing for Chemistry and Micro-Imaging (ChemCam) payloads on the NASA Mars Science Laboratory (MSL) mission. This IA is under the U.S.-French Umbrella.	12/30/2015	12/31/2020
676	Glenn Research Center at Lewis Field (GRC)	Bombardier Inc., Bombardier Aerospace	Canada (CA)	Fourth Annex to the Reimbursable Space Act Umbrella Agreement between NASA and Bombardier for Ice Protection System Development	Reimbursable Agreement	Extension 1 of Annex 4. In accordance with the terms and conditions set forth in the Reimbursable Umbrella Agreement between the National Aeronautics and Space Administration's Glenn Research Center (GRC) and Bombardier (for Ice Protection System Development, this fourth Annex carries out further work beyond the scope of the first, second, and third annex to perform ice protection development testing in GRC's Icing Research Tunnel.	1/1/2016	12/31/2017
677	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and DLR for Cooperation on the Mars Organic Molecule Analyzer (MOMA) Instrument	Cooperative Agreement	NASA is providing the MOMA Mass Spectrometer (MOMA-MS) to DLR for integration into the larger MOMA instrument. Germany is the Principal Investigator (PI) for the MOMA instrument and responsible for delivery to the European Space Agency (ESA) for integration onto the ExoMars rover for expected launch in 2018. This Amendment adds additional responsibilities on both sides.	1/4/2016	12/31/2023
678	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Amendment to the Implementing Arrangement between NASA and DLR for Cooperation on the Mars Organic Molecule Analyzer (MOMA) Instrument	Cooperative Agreement	Adds additional responsibilities to the original cooperation on the MOMA instrument. MOMA will fly on the ESA ExoMars mission.	1/4/2016	12/23/2023
679	Goddard Space Flight Center (GSFC)	Hokkaido University (HokuDai)	Japan (JA)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and the partner will cooperate on the AERONET program. NASA will provide equipment on loan which Kokkaido University will host at a mutually agreed location.	1/6/2016	1/5/2026
680	Goddard Space Flight Center (GSFC)	University of Versailles Saint-Quentin-en-Yvelines of France	France (FR)	Agreement between NASA and the University of Versailles Saint-Quentin-en-Yvelines for cooperation on a Network for the Detection of Atmospheric Chemical Change (NDACC) Validation Campaign	Cooperative Agreement	NASA Upper Atmospheric Research Program cooperation with the University of Versailles Saint-Quentin-en-Yvelines of France on a Network for the Detection of Atmospheric Chemical Change (NDACC) validation campaign.	1/11/2016	9/30/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
681	Goddard Space Flight Center (GSFC)	Taipei Economic and Cultural Representative Office in the United States (TECRO)	Taiwan (TW)	Agreement between the National Aeronautics and Space Administration and the American Institute in Taiwan for Coordination Regarding Normal Operations and Special Uplink Operations for the FORMOSAT-3 Satellite System	Cooperative Agreement	This Agreement (and the associated Coordination Arrangement) provides a framework to coordinate the operation of the FORMOSAT-3 Satellite (owned and operated by the National Space Organization (NSPO) of Taiwan) to prevent unacceptable interference to NASA's Earth science missions, including: FAST, GALEX, HESSI, ICESAT, SAMPEX, SWAS, TIMED, TRACE, and GLORY. The Agreement and Coordination Arrangement specify the parameters for uplink and downlink transmissions during normal operation of the FORMOSAT-3 satellite, and specifies pre-coordination required prior to special uplink operations required to upload Global Positioning System data. This activity is implemented by: (1) The Agreement between NASA and the American Institute in Taiwan (AIT), which is the U.S. liaison entity for USG activities with entities in Taiwan; and (2) The Coordination Arrangement between AIT and the Taipei Economic and Cultural Representative Office in the United States (TECRO), which is the Taiwanese liaison entity for Taiwanese activities with entities in the U.S. The period of performance of the activity is June 30, 2015 or until the FORMOSAT-3 Satellite is deactivated, whichever is sooner.	1/12/2016	6/30/2025
682	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Temporal History of Events and Macroscale Interactions during Substorms (THEMIS)	Cooperative Agreement	NASA and the Canadian Space Agency (CSA) have been cooperating on the THEMIS mission, which launched on February 17, 2007. This unique constellation of satellites has provided scientists with data to help resolve how earth's magnetosphere stores and releases energy from the Sun by triggering geomagnetic substorms. THEMIS aims to determine what physical process in near-Earth space initiates the violent eruptions of the aurora that occur during substorms in the Earth's magnetosphere. CSA is responsible for the development and testing of the Ground Base Observatories. THEMIS is a 2-year mission consisting of 5 identical probes that will study the violent colorful eruptions of Auroras. Three of the remaining THEMIS satellites continue to study substorms that are visible in the northern hemisphere as aurora borealis.	1/20/2016	3/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
683	Glenn Research Center at Lewis Field (GRC)	Environment Canada	Canada (CA)	NASA-Environment Canada Agreement for Cooperative Activities Pertaining to Atmospheric Icing Research	Cooperative Agreement	Amendment and Extension to the Agreement. NASA/EC will conduct cooperative activities related to icing cloud and mixed phase atmospheric definition, in-situ and remote instrumentation development, and data processing and analysis techniques. This interest concerns cooperative research to characterized atmospheric icing environments, to study the physical phenomena associated with the impact of liquid water droplets and ice crystals on aircraft surfaces, air data probes and engines, and to improve in-situ and remote sensing of the environment that would generate accurate and credible measurements for use by the aviation community and aviation weather forecasters. This amendment extends the expiration date of the agreement five years, adds new responsibilities to the original Agreement, changes the ECCC Point of Contact, as well as sets a new schedule section within the original agreement.	1/22/2016	1/31/2021
684	Goddard Space Flight Center (GSFC), Headquarters (HQ), Jet Propulsion Laboratory (JPL)	The Gabonese Space Agency for Studies and Observations (AGEOS)	Gabon (GB)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Gabonese Space Agency for Studies and Observations of the Republic of Gabon for Cooperation on the Gabon Terrestrial Ecosystems Collaboration	Cooperative Agreement	The Gabon Terrestrial Ecosystems Collaboration (G-TEC) is a calibration and validation effort in Gabon for two Earth science satellite missions, the Global Ecosystem Dynamics Investigation Lidar (GEDI) and the joint NASA-ISRO Synthetic Aperture Radar Mission (NISAR). NASA will collect science data over test sites in Gabon with airborne instrument testbeds for the NISAR and GEDI missions, including the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) instrument flown on the NASA C-20A research aircraft and the Land, Vegetation, and Ice Sensor (LVIS) instrument flown on the NASA B-200 research aircraft.	2/4/2016	10/31/2021
685	Goddard Space Flight Center (GSFC)	Instituto Superior Politecnico da Tundavala	Angola (AO)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and partner will cooperate on the AERONET program. NASA will provide equipment on loan to the Instituto Superior Politecnico da Tundavala (ISPT). ISPT will host and maintain the equipment, and contribute to the AERONET database.	2/5/2016	2/4/2026
686	Ames Research Center (ARC)	Swiss International Air Lines Limited	Switzerland (SZ)	Nonreimbursable Space Act Agreement Between the National Aeronautics And Space Administration and Swiss International Air Lines Limited on Research Studies for Improvement of Aviation Safety and Assuring Safe and Effective Human Systems Integration	Cooperative Agreement	This cooperative agreement aims to improve aviation safety and assure safe and effective human systems integration through collaborative research. NASA and SWISS will partner in the analysis of flight and human performance data to gain further insight into these issues. Mission Type: Air Space Operations and Safety	2/9/2016	12/31/2020
687	Johnson Space Center (JSC)	The Universite Libre de Bruxelles	Belgium (BE)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Vinciane Debaille of The Universite Libre de Bruxelles in Brussels, Belgium proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/10/2016	10/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
688	Johnson Space Center (JSC)	University of Munster	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Erik Scherer of the (Universitat) University of Munster in Munster, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/10/2016	10/31/2020
689	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Maria Schonbachler Eidgenossische Technische Hochschule Zurich in Zurich, Switzerland proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/10/2016	10/31/2020
690	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. John Pernet-Fisher of The University of Manchester in Manchester, United Kingdom, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	2/10/2016	10/31/2020
691	George C. Marshall Space Flight Center (MSFC)	University of Central Lancashire	United Kingdom (UK)	Agreement between NASA and the University of Lancashire for Cooperation on the High Resolution Coronal Imager (Hi-C) mission 36.314NS Certain	Cooperative Agreement	Hi-C is a telescope designed to take the first images of the solar atmosphere with 170 km resolution in the extreme ultraviolet. Initially launched from the White Sands Missile Range -White Sands, New Mexico, on July 11, 2012, as a payload onboard a Terrier Black Brant Rocket, the intent of the Hi-C mission was to demonstrate the technology necessary to collect images at the 170 km resolution and investigate the scientific value of the data.	2/15/2016	9/30/2019
692	Langley Research Center (LaRC)	National Research Council (NRC)	Canada (CA)	Cooperation on the Development and Testing of Boron Nitride Nanotube Materials	Cooperative Agreement	NASA to receive BNNT materials from the NRC, fabricate composites, and test and evaluate the composites.	2/19/2016	2/19/2017
693	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	2005 Mars Reconnaissance Orbiter (MRO) Mission	Cooperative Agreement	A MOU to define NASA-ASI cooperation on activities associated with the NASA 2005 Mars Reconnaissance Orbiter (MRO) mission. ASI provided the Shallow Radar (SHARAD) instrument. MRO is planned for launch in August 2005 on an intermediate-class, expendable launch vehicle from Cape Canaveral Air Station, Florida. MRO will identify and characterize sites for future landed missions, and provide critical telecommunications relay capability for follow-on Mars missions. The nominal mission would end in December 2010, approximately 5.4 years after launch.	3/1/2016	12/31/2017
694	Headquarters (HQ)	Italian Space Agency (ASI)	Italy (IT)	Loan of Shuttle Simulator Hardware and Software	Cooperative Agreement	Four year loan of NASA Shuttle Simulator Hardware and Software to the Italian Space Agency	3/2/2016	3/29/2020
695	Glenn Research Center at Lewis Field (GRC)	Heriot-Watt University	United Kingdom (UK)	REIMBURSABLE SPACE ACT AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) AND HERIOT-WATT UNIVERSITY FOR THE MEASUREMENT OF Q-BAND PROPAGATION DATA IN EDINBURGH	Reimbursable Agreement	The purpose of this Agreement is to set forth the respective responsibilities of the Implementing Agencies and the terms and conditions under which they will cooperate in the installation and operation of the Q-band RF Propagation Monitoring Station at the Heriot-Watt University in Edinburgh, Scotland.	3/4/2016	3/4/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
696	All NASA Centers	Universitat de Barcelona	Spain (SP)	VRA between NASA and the Universitat de Barcelona	Cooperative Agreement	Dr. Farres' research at GSFC will focus on the use of advanced techniques for the control and use of solar sails with respect to advanced modeling of solar perturbations and the investigation of alternate integrators in open source trajectory design software. The results of Dr. Farres' research will aid NASA in the development of robust, efficient techniques for the control and designs of satellite orbits. This work directly relates to the perturbation modeling development and astrodynamics of confirmed missions such as the James Webb Space Telescope and the Wide-Field Infrared Survey Telescope. Both missions demonstrate key guidance, navigation, and control technologies that are required in order to fly observatories influenced by solar perturbations in Sun-Earth dynamically unstable regions.	3/6/2016	10/1/2017
697	Goddard Space Flight Center (GSFC)	Tokai University	Japan (JA)	Visiting Researcher Agreement for Josefino Comiso to Tokai University Japan	Cooperative Agreement	Josefino Comiso will service as a visiting researcher at Tokai Univ. to perform research related to the Advanced Microwave Scanning Radiometer-2 instrument.	3/8/2016	1/31/2017
698	Armstrong Flight Research Center (AFRC)	Canadian Space Agency (CSA)	Canada (CA)	Reimbursable Space Act Agreement between the National Aeronautics and Space Administration and the Canadian Space Agency for Airborne Science Research using the Spatial Heterodyne Observations of Water (SHOW) Instrument	Reimbursable Agreement	The Canadian Space Agency (CSA) will test and use their Spatial Heterodyne Observations of Water (SHOW) instrument on a NASA ER-2 in the United States to measure vertical water vapor distribution in the Upper Troposphere/Lower Stratosphere (UT/LS).	3/11/2016	3/11/2019
699	Goddard Space Flight Center (GSFC)	National Centre for Scientific Research (CNRS)	France (FR)	Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Cooperative Agreement	NASA and CNRS will cooperate on the GLAST mission.	3/15/2016	12/31/2020
700	Ames Research Center (ARC)	Instituto Portugues do Mar e Da Atmosfera (IPMA), Ministry of Foreign Affairs, Government of Portugal	Portugal (PO)	Letter of between NASA and University of Porto in Portugal for Cooperation on Airborne Science through Aerial and Underwater Data Collection, Analysis, and Validation	Cooperative Agreement	NASA and University of Porto in Portugal will cooperate on airborne science through Aerial and underwater data collection, analysis, and Validation	3/15/2016	3/15/2019
701	Glenn Research Center at Lewis Field (GRC)	Mitsubishi Heavy Industries, LTD	Japan (JA)	Second Annex to the Reimbursable Space Act Umbrella Agreement between NASA and Mitsubishi Heavy Industries, LTD for Wind Tunnel Testing of Aircraft Ice Protection Systems	Reimbursable Agreement	The second Annex is for the purpose of carrying our further work beyond the scope of the first Annex to perform wind tunnel testing of ice protection systems in NASA GRC's Icing Research Tunnel (IRT) to obtain system performance data.	3/16/2016	3/16/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
702	Johnson Space Center (JSC)	Australian National University (ANU)	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Trevor Ireland of The Australian National University in Canberra, Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
703	Johnson Space Center (JSC)	Vrije University Brussels (VUB)	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Philippe Claeys of VUB in Brussels, Belgium, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
704	Johnson Space Center (JSC)	The Universite Libre de Bruxelles	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Rosalind Armytage of the Universite Libre de Bruxelles in Bruxelles, Belgium, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
705	Johnson Space Center (JSC)	The Universite Libre de Bruxelles	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Vinciane Debaille of Universite Libre de Bruxelles, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
706	Johnson Space Center (JSC)	CRPG-CNRS	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Yves Marrocchi of CRPG-CNRS in Nancy, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
707	Johnson Space Center (JSC)	Museum National d'Histoire Naturelle	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Emmanuel Jacquet of the Museum National d'Histoire Naturelle de Paris in Paris, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
708	Johnson Space Center (JSC)	the CNRS Midi-Pyrenees	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Ghyslaine Quitte of the CNRS Midi-Pyrenees (on behalf the Institut de Recherche en Astrophysique et Planetologie - IRAP, OMP) in Toulouse, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
709	Johnson Space Center (JSC)	CEREGE	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Jerome Gattacceca of Cerege in Aix en Provence, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
710	Johnson Space Center (JSC)	University of Cologne	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Dominik Hezel of University of Cologne, Dep. of Geology & Mineralogy in Cologne, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
711	Johnson Space Center (JSC)	Universita di Pisa	Italy (IT)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Maurizio Gemelli of Universita di Pisa in Pisa, Italy, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
712	Johnson Space Center (JSC)	Kyushu University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Takaaki Noguchi of Kyushu University in Fukuoka, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
713	Johnson Space Center (JSC)	The University of Cape Town	South Africa (SF)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Geoffrey H. Howarth of University of Cape Town, in Rodebosch, South Africa proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
714	Johnson Space Center (JSC)	Lund University	Sweden (SW)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Stephen Hall of Lund University in Lund, Sweden, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
715	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Maria Schonbachler of ETH Zurich in Zurich, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
716	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Antoine Roth of University of Bern in Bern, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
717	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Dr. Yann Brouet of the Physics Institute at the University of Bern, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
718	Johnson Space Center (JSC)	Natural History Museum	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Cooperative Agreement	Joe Michalski of the Natural History Museum in London, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	3/18/2016	3/18/2021
719	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Reimbursable Agreement Between the National and Aeronautics and Space Administration of the United States and the Japan Aerospace Exploration Agency for International Space Station Crew Support Services	Reimbursable Agreement	NASA will provide crew support services to JAXA on a reimbursable basis. Services include training support, medical support, Star City support, and launch and landing support.	3/23/2016	12/31/2024

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
720	Ames Research Center (ARC), George C. Marshall Space Flight Center (MSFC)	Fundacao Para a Ciencia e a Tecnologia (Foundation for Science and Technology) (FCT)	Portugal (PO)	Reimbursable Space Act Agreement between the Foundation for Science and Technology and the Ministry of Science, Technology and Higher Education of Portugal and the National Aeronautics and Space Administration of the United States of America for Participation in the NASA International Internship Program	Reimbursable Agreement	NASA Centers: Agency-wide, beginning with ARC, MSFC. This agreement enables Portugal's participation in the NASA International Internship Program (hereinafter referred to as "NASA I 2"). NASA I 2 is designed to provide a collaborative environment for U.S. and Portuguese interns (university undergraduate level students) or fellows (university graduate level students) to interact and work alongside each other on research opportunities. NASA internship and fellowship sessions are arranged in three Terms during the calendar year (Spring, Summer, and Fall Terms).	3/28/2016	3/1/2019
721	Goddard Space Flight Center (GSFC)	St. Petersburg State University (Russia)	Russia (UR)	Aerosol/Robotic Network (AERONET)	Cooperative Agreement	NASA St. Petersburg State Univ. (Russia) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at SPSU. SPSU has their own instrument, and NASA will provide calibration on that instrument.	3/29/2016	12/31/2024
722	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	International Rosetta Mission	Cooperative Agreement	MOU for cooperation on the Rosetta mission.	4/14/2016	9/30/2019
723	Ames Research Center (ARC)	Electro Optic Systems PTY LTD.	Australia (AS)	Nonreimbursable Space Act Agreement Between NASA and Electro Optic Systems PTY LTD. for High-Speed Laser Communications with Low-Fidelity Pointing Requirements for Small Spacecraft Using Modulating Retro-Reflectors	Cooperative Agreement	NASA will evaluate data and methodology provided by EOS to determine the feasibility of developing a small spacecraft laser communication demonstration mission.	4/15/2016	4/15/2017
724	Goddard Space Flight Center (GSFC)	Atomic Energy Commission (CEA)	France (FR)	Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Cooperative Agreement	Fermi is a NASA mission whose scientific investigations were selected through a NASA AO 99-OSS-03. Glast will identify and study nature's highest energy particle accelerators, measuring, with two instruments, the spectra and temporal histories of gamma rays in the nergy range from 10 KeV to 300 GeV.	4/15/2016	12/31/2020
725	Goddard Space Flight Center (GSFC)	The Korea Institute of Ocean Science and Technology (KIOST)	Korea, Republic of (KS)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Korea Institute of Ocean Science and Technology of the Republic of Korea for Cooperation on the United States-Korea Ocean Color Field Study (KORUS-OC)	Cooperative Agreement	The Korea-United States Ocean Color Field Study (KORUS-OC) is a science mission that will use ship, airborne, and satellite observations to study ocean color in preparation for future geostationary missions. KORUS-OC follows the Korea-United States Air Quality Field Study (KORUS-AQ).	4/16/2016	10/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
726	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and DLR for cooperation on the development of fundamental aerodynamic data and validation simulations in support of predicting entry and breakup of objects traveling at orbital or sub-orbital speeds	Cooperative Agreement	This is an IA under the NASA-DLR Framework agreement. The IA is for cooperation on the development of fundamental aerodynamic data and validation simulations in support of predicting entry and breakup of objects traveling at orbital or sub-orbital speeds. This activity is funded out of the Planetary Defense Coordination Office in SMD.	4/19/2016	4/19/2019
727	Kennedy Space Center (KSC)	European Space Agency (ESA)	European Space Agency (ESA)	Implementation Plan on Development Approaches for Vehicle Assembly, Integration, Test, and Operations at Launch Complexes	Cooperative Agreement	NASA/ESA under the Framework Agreement (Space Transportation MOU signed 9/11/09) will exchange available information and technical data on and jointly study development approaches for vehicle assembly, integration, test, and operations at launch complexes.	4/20/2016	9/11/2019
728	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Implementation Plan on Development and Test Approaches for Re-ignitable Cryogenic Engines and Stages	Cooperative Agreement	NASA/ESA under the Framework Agreement (Space Transportation MOU signed 9/11/09) will exchange available information and technical data on and jointly study development and test approaches for re-ignitable cryogenic engines and stages.	4/20/2016	9/11/2019
729	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	L-Band (DESDynI-Tandem-L) Synthetic Aperture Radar Pre-Phase A	Cooperative Agreement	Study agreement for potential future cooperation in L-band synthetic aperture radar.	4/21/2016	12/31/2020
730	Headquarters (HQ)	Korea Advanced Institute of Science and Technology (KAIST), Korea Aerospace Research Institute (KARI), Korea Agency for Infrastructure Technology Advancement (KAIA), Korea Astronomy and Space Science Institute (KASI), Korea Meteorological Administration (KMA)	Korea, Republic of (KS)	Framework Agreement Between the Government of the United States of America and the Government of the Republic of Korea for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Civil and Peaceful Purposes	Cooperative Agreement	Framework Agreement which sets for the terms and conditions for cooperation between the Parties in aeronautics and the exploration and use of airspace and outer space for civil and peaceful purposes in areas of common interest.	4/27/2016	4/27/2027
731	Goddard Space Flight Center (GSFC)	Catholic University of Cameroon (CATUC)	Cameroon (CM)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Catholic University of Cameroon (CATUC) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at CATUC. CATUC will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	4/28/2016	3/27/2026

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
732	Langley Research Center (LaRC)	University of Manchester	United Kingdom (UK)	NASA-University of Manchester Agreement to Cooperate in the Area of Synchrotron X-ray Computed Tomography Scans or Polymer Matrix Composite Materials	Cooperative Agreement	The advent of in situ synchrotron radiation computed tomography (SRCT) with resolution on the order of one micrometer has enabled an understanding of the damage events that precipitate failure in composite laminates. The high resolution captures critical damage modes including matrix cracks, fiber-matrix debonding, and fiber breaks. High resolution SRCT has been applied to examine Mode I and Mode II matrix failures as well as tensile fiber fracture failure modes for composite laminates subjected to quasi-static, fatigue, and impact loading conditions. Longitudinal fiber failure under compressive loads typically occurs by the formation of kink bands. Since the formation of kink bands often occurs unstably and usually results in subsequent catastrophic failure of the structure, few detailed experimental investigations revealing the sequence of events in the formation of kink bands have been performed. Fewer still have quantified the kink band formation process. The recently proposed single edge notch compression (SENC) configuration has been shown to yield quasi-stable kink band formation. The objective of this study is to use the SENC configuration with in situ SRCT monitoring to further the understanding of the kink band damage mechanism. The data obtained from this test will provide insight into the mechanisms and sequence of damage development in kink bands in composite laminates.	5/9/2016	4/30/2018
733	Goddard Space Flight Center (GSFC), Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	REIMBURSABLE SPACE ACT AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) AND THE EUROPEAN SPACE AGENCY (ESA) FOR USE OF NASA'S SPACE NETWORK TRACKING AND DATA RELAY SATELLITE SYSTEM (TDRSS) IN SUPPORT OF VEGA LAUNCHES FOR ESA	Reimbursable Agreement	This Reimbursable Space Act Agreement (hereinafter referred to as "Agreement") is for the purpose of setting out the terms and conditions with regard to both the initial and the recurrent work to be performed by NASA for ESA's use of the Space Network Tracking and Data Relay Satellite (TDRS) System (TDRSS) in support of telemetry data independent of the Telemetry Ground Stations for the Vega Launch Systems (Vega).	5/24/2016	5/24/2021
734	Goddard Space Flight Center (GSFC)	Curtin University of Technology	Australia (AS)	Letter of Agreement between NASA and Curtin University for cooperation on Ocean Color Research	Cooperative Agreement	NASA and Curtin University scientists will cooperate on ocean color research in the Antarctic Ocean (aka Southern Ocean).	5/25/2016	5/25/2021
735	Headquarters (HQ)	Polar Knowledge Canada (POLAR)	Canada (CA)	Agreement between NASA and Polar Knowledge Canada for Cooperation in the Arctic Boreal Vulnerability Experiment (ABovE)	Cooperative Agreement	NASA and Polar Knowledge Canada will cooperate on the Arctic Boreal Vulnerability Experiment to study how social-ecological systems in high northern latitude regions of northwestern North America are responding and feeding back to environmental and social change.	5/25/2016	5/25/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
736	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Extension of the MOU between NASA and the Deutsches Zentrum für Luft- und Raumfahrt for the Stratospheric Observatory for Infrared Astronomy (SOFIA)	Cooperative Agreement	Amend and Extension of the SOFIA MOU.	6/2/2016	12/15/2020
737	Glenn Research Center at Lewis Field (GRC)	York University	Canada (CA)	SCWO Test Facility Agreement	Cooperative Agreement	NASA is loaning the SCWO Test Facility to York University in Toronto, Canada. York University will return the Test Facility to operational status and use it for 18 months for research. NASA will be able to collaborate on research and review the data.	6/6/2016	3/31/2021
738	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Solar-B/Hinode Mission Agreement Ext	Cooperative Agreement	Solar-B is a follow-on mission from the successful Solar-A mission, a Japanese Yohkoh satellite, an observatory for studying X-rays and gamma-rays from the Sun. For integration into the Solar-B spacecraft, NASA/PPARC will develop an instrument, Extreme-ultraviolet Imaging Spectrometer (EIS). An advance scientific understanding of the origin of the outer solar atmosphere, the corona, and of the coupling between the fine magnetic structure at the photosphere and the dynamic processes occurring in the corona. This goal will be achieved by measuring the Sun's magnetic field and atmospheric dynamics with instruments placed into a sun-synchronous orbit about the Earth. Amendment and extension of original agreement dated March 24, 2000.	6/7/2016	3/31/2018
739	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Swift Agreement: X-Ray Telescope	Cooperative Agreement	NASA and PPARC will collaborate on the development of the X-ray Telescope (XRT) for the Swift Gamma Ray Burst Explorer mission. Swift is a Medium Explorer (MIDEX) mission. Swift is planned for a fall 2003 launch to make a comprehensive study of approximately 1,000 gamma ray bursts to determine the origin of the bursts and to study their associated physical processes. The XRT instrument will report the x-ray afterglow position within 5 arcsec, measure the red shift and provide photometry over a wide dynamic range. A Ultra Violet and Optical Telescope (UVOT) will generate an optical finding chart with subarcsecond resolution, measure red shifts and provide accurate photometry for eighth to twenty fourth magnitude sources. A Burst Alert Telescope (BAT) will observe and locate hundreds of bursts per year. All three instruments will be mounted on the Swift Optical Bench to form the Swift Observatory.	6/7/2016	3/31/2018

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
740	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Swift Agreement: Ultra Violet and Optical Telescope	Cooperative Agreement	NASA and UKSA will collaborate on the assembly of the Ultra Violet and Optical Telescope (UVOT) for the Swift Gamma Ray Burst Explorer mission. Swift is a Medium Explorer (MIDEX) mission. Swift launched in November 2004 to make a comprehensive study of approximately 1,000 gamma ray bursts to determine the origin of the bursts and to study their associated physical processes. The XRT instrument will report the x-ray afterglow position within 5 arcsec, measure the red shift and provide photometry over a wide dynamic range. A Ultra Violet and Optical Telescope (UVOT) will generate an optical finding chart with subarcsecond resolution, measure red shifts and provide accurate photometry for eighth to twenty fourth magnitude sources. A Burst Alert Telescope (BAT) will observe and locate hundreds of bursts per year. All three instruments will be mounted on the Swift Optical Bench to form the Swift Observatory.	6/7/2016	3/31/2018
741	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Solar Terrestrial Relations Observatory (STEREO)	Cooperative Agreement	STEREO was launched in October 2006 and studies coronal mass ejections. Three investigators were chosen from PPARC in the United Kingdom to provide an instrument and parts of two other instruments in the SECCHI instruments suite. This is an extension of the original March 2001 agreement.	6/7/2016	3/31/2018
742	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Living with a Star (LWS) - Space Environment Testbed (SET-1) (CREDANCE)	Cooperative Agreement	The purpose of this letter is to extend and amend the established Agreement between NASA and UK Space Agency to address our cooperation on the first Space Environment Testbed (SET) mission, SET-1. The LWS Program is a program within the Heliophysics Division within the Science Mission Directorate (SMD). Cooperation on the SET-1 mission is taking place under a Letter of Agreement signed by NASA on October 24, 2005, and initiated by the BNSC letter of affirmative reply sent on December 20, 2005.	6/7/2016	3/31/2019
743	Ames Research Center (ARC)	Canadian Space Agency (CSA)	Canada (CA)	NASA-CSA Astroskin Loan Agreement	Cooperative Agreement	CSA will loan its Astroskin prototype smart biosensor garment to NASA for monitoring ambulatory crew in space environments.	6/16/2016	6/30/2017
744	Goddard Space Flight Center (GSFC)	Space Research Organization of the Netherlands (SRON)	Netherlands, The (NL)	Spectropolarimeter for Planetary Exploration Airborne (SPEX-Airborne) Instrument	Cooperative Agreement	This activity involves integrating SPEX Airborne on the NASA ER-2 to make cloud and aerosol observations and proceed an instrument for space flight.	6/16/2016	9/30/2020
745	Ames Research Center (ARC), Headquarters (HQ), Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	NASA - JAXA Letter of Agreement Mice Tissue Sharing	Cooperative Agreement	Letter of Agreement under the ISLSWG Arrangement. JAXA sharing one and a half eyeballs from each mouse flown to the International Space Station for JAXA's first rodent mission.	6/17/2016	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
746	Goddard Space Flight Center (GSFC)	Federal University of Sao Joao del-Rei (UFSJ)	Brazil (BR)	VRA between NASA and the Federal University of S?o Jo'o del-Rei (UFSJ)	Cooperative Agreement	Dr. Pereira plans to work on the following project: 'Assimilating the Fire Energetics and Emissions Research Version 1.0 into the Brazilian Biomass Burning Emission Model.' He will attempt to assimilate the global fire emissions product developed under NASA's Fire Energetics and Emissions Research (FEER) project into the 'Coupled Aerosol and Tracer Transport model to the Brazilian developments on the Regional Atmospheric Modeling System (CATT-BRAMS)' model. His expertise in biomass burning field and airborne observations and data analysis and modeling is ideally suited for the NASA project at the GSFC Climate and Radiation Laboratory.	6/20/2016	8/21/2017
747	Goddard Space Flight Center (GSFC)	V.N. Sukachev Institute of Forest, Siberian Branch, Russian Academy of Sciences (RAS)	Russia (UR)	Siberian Boreal Forest Research in Krasnoyarsk	Cooperative Agreement	NASA and the Russian Academy of Sciences (RAS) will continue to cooperate on Siberian boreal forest research in Krasnoyarsk, Russia. NASA and RAS conduct joint field campaigns each summer.	6/24/2016	6/15/2021
748	Headquarters (HQ)	LEGO System A/S	Denmark (DA)	Annex 2 Between NASA and LEGO System A/S for Cooperation on the Joint Development of a NASA/LEGO Summer Engagement Activity for Children	Cooperative Agreement	Office of Communications: Annex 2: NASA will provide public video and high-resolution images; NASA will review LEGO designs and content for accuracy, assist in judging, and reviews. LEGO will lead the activity and website. Annex 1: All activities are to be described in Annexes to the Umbrella Agreement. The first Annex provides for cooperation in the development of a Mindstorms classroom starter kit.	6/27/2016	6/26/2017
749	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Bermuda (BD)	Agmt btw NASA and the Ministry of Transport of the Gov. of Bermuda for Space Flight Temporary Mobile Tracking Station	Cooperative Agreement	Agreement between the National Aeronautics and Space Administration of the Government of the United States of America and the Ministry of Transport of the Government of Bermuda for a Space Flight Temporary Mobile Tracking Station.	6/30/2016	6/30/2026
750	Jet Propulsion Laboratory (JPL)	United Arab Emirates Space Agency (UAESA)	United Arab Emirates (AE)	SPACE ACT AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) AND THE UNITED ARAB EMIRATES SPACE AGENCY (UAESA) FOR TECHNICAL ASSISTANCE AND PRELIMINARY SYSTEM ENGINEERING SUPPORT TOWARDS MEETING THE UAESA'S REQUIREMENTS FOR THE DESIGN AND BUILDING OF A DEEP SPACE GROUND TRACKING STATION	Reimbursable Agreement	Under this agreement, the NASA Jet Propulsion Laboratory's Deep Space Network Project Office (JPL/DSN) will assist the UAESA in requirements definition and pre-ground station feasibility studies, including a site selection study and preliminary system engineering, towards meeting the UAESA's requirements for a UAEGS.	7/8/2016	7/8/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
751	Jet Propulsion Laboratory (JPL)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	Cooperation on Disruption Tolerant Networking (DTN) Ground Testing	Cooperative Agreement	This Amendment adds respective responsibilities for NASA and KARI to discuss proposed: (1) DTN flight testing scenarios during the KPLO mission; and (2) options to incorporate DTN protocols into the communication systems of KPLO; BUT still limits the actual conduct of DTN testing to ground testing only. The Basic Agreement provided for NASA and the Korea Aerospace Research Institute (KARI) to cooperate on ground testing of Disruption Tolerant Networking (DTN) data communication protocols. KARI will establish DTN nodes at KARI and at the Electronics and Telecommunications Research Institute (ETRI); and NASA will support KARI in setting up a connection to NASA nodes located at the Goldstone Deep Space Network (DSN) ground station and any of all of the NASA Engineering Network (DEN) nodes located at Johnson Space Center, Jet Propulsion Laboratory, Glenn Research Center, and Goddard Space Flight Center.	7/11/2016	9/30/2018
752	Ames Research Center (ARC)	Victorian Space Science Education Center (VSSEC)	Australia (AS)	Cooperative Agreement for Collaboration on a Quantum Computing Curriculum	Cooperative Agreement	The Agreement enables ARC advice and guidance on the contents of the academic curriculum. VSSEC in Australia will lead and perform most of the work on the curriculum, which will be used in Australia, not the USA.	7/13/2016	7/19/2019
753	Ames Research Center (ARC)	Korea Agency for Infrastructure Technology Advancement (KAIA)	Korea, Republic of (KS)	VRA for Dr. Yeonju Eun	Cooperative Agreement	Dr. Yeonju Eun will conduct joint research with NASA researchers to continue developing a simulation model of Incheon International Airport (ICN) for various operational conditions. Dr. Eun and NASA researchers will also jointly develop optimization schedulers to schedule surface traffic to improve efficiency, predictability, and throughput of airport surface operations in the presence of uncertainties and various operational constraints. Dr. Eun will also learn how to use the real-time traffic generation software to eventually develop a real-time simulation model for human-in-the-loop simulations.	7/18/2016	12/31/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
754	Headquarters (HQ)	Mad Science Group (MSG)	Canada (CA)	Extension Letter to the Non-Reimbursable Space Act Umbrella Agreement between The Mad Science Group of Canada and NASA for a Strategic Alliance to Foster Science, Technology, Engineering and Mathematics (STEM) Education and Public Outreach Activities	Cooperative Agreement	Mission Directorates: Education, SMD, and OCOM. Extension: This letter extends Agreement CA-0452-0 which shall govern NASA's ongoing collaboration with Mad Science to foster STEM education and public outreach activities. NASA agrees to provide support of projects undertaken in any Annex, internal coordination of approvals for Annexes, and provide a single point of contact for Annex development and operations. Original: This Umbrella Agreement shall be for the purpose of continuing and expanding the NASA and MSG relationship begun in 2006, under the November 2006 "Nonreimbursable Space Act Agreement between NASA and the Mad Science Group" for education and outreach focused on science, technology, engineering, and mathematics (STEM) concepts and NASA content in an entertaining, instructional format. Annex One will continue The Academy of Future Space Explorers ("ACADEMY" or "AFSE") which is an instructor-mediated, entertaining educational experience in the form of in-school, afterschool, summer, and community-based programming designed for children in grades K-6 and currently available in North America and in international locations. MSG delivers NASA content in a format that is correlated to all state curricula and the National Science Education Standards throughout the world via its franchise network.	7/21/2016	7/22/2021
755	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Dawn Mission	Cooperative Agreement	NASA and DLR have expressed a mutual interest in cooperating on NASA's Dawn mission. The Dawn mission will observe the two most massive asteroids known, Vesta and Ceres, to improve our understanding of how planets formed during the earliest epoch of the solar system. JPL will manage the Dawn project and the Orbital Sciences Corporation will develop the spacecraft. The mission is scheduled to launch in May 2006 from KSC.	7/21/2016	7/31/2019
756	Ames Research Center (ARC)	The Centro Federal de Educacao Technological Celso Suckow da Fonseca (CEFET)	Brazil (BR)	VRA for Dr. Ana Ferreira de Barros	Cooperative Agreement	Dr. de Barros will conduct research, including investigations of the photochemistry of polycyclic aromatic hydrocarbons (PAHs) in water ice and possibly cosmic ice analogs.	7/29/2016	9/13/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
757	Glenn Research Center at Lewis Field (GRC)	Embraer S.A.	Brazil (BR)	Fifth Annex to the Reimbursable Space Act Umbrella Agreement between NASA and Embraer S.A. for Embraer's Ice Protection System Development	Reimbursable Agreement	In accordance with the terms and conditions set forth in the Reimbursable Umbrella Agreement between the National Aeronautics and Space Administration Glenn Research Center(GRC) and Embraer S.A. (Embraer) for Ice Protection System Development, this fifth Annex carries out further work beyond the scope of the first, second, third, and fourth annexes to perform ice protection development testing GRC's Icing Research Tunnel (IRT) for the Embraer 190 E2 regional jet.	8/1/2016	9/30/2017
758	Ames Research Center (ARC)	Tokyo University of Science	Japan (JA)	Visiting Researcher Agreement Between the National Aeronautics and Space Administration (NASA) and the Tokyo University of Science	Cooperative Agreement	The purpose of this letter is to enter into a Visiting Researchers Agreement between NASA and the Tokyo University of Science, to provide for Dr. Hiroharu Yui to conduct research at NASA's Ames Research Center as a participant of NASA's Visitor Exchange Program.	8/1/2016	5/1/2017
759	Glenn Research Center at Lewis Field (GRC)	Meggitt Polymers & Composites	United Kingdom (UK)	Reimbursable Space Act Agreement between NASA and Meggitt Polymers & Composites for Electro-Thermal Wing Ice Protection System Test	Reimbursable Agreement	This agreement shall permit Meggitt to use the NASA Icing Research Tunnel (IRT) to develop an electrothermal ice protection system on an aircraft wing model. The objective of the activity is to evaluate system performance over a range of icing cloud conditions and to record ice shape characteristics after each test run.	8/3/2016	7/1/2017
760	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement Between NASA and DLR for Cooperation on Human Research Investigations Utilizing the Human Exploration Research Analog (HERA) Facility	Cooperative Agreement	This IA enables DLR sponsored human research investigations which utilize the NASA HERA facility.	8/11/2016	11/1/2021
761	Ames Research Center (ARC)	Netherlands Organization for Scientific Research (NWO)	Netherlands, The (NL)	Astrochemistry and Astrobiology Project (AAP)	Cooperative Agreement	The National Aeronautics and Space Administration (NASA) and the Netherlands Organization for Scientific Research (NWO) have expressed a mutual interest in pursuing cooperation on the Astrochemistry and Astrobiology Project (AAP). The AAP is the study of the organic inventory of space, in particular in regions of star and planet formation, and its relationship to the prebiotic origin of life. The AAP program consists of a coherent set of experimental, quantum chemical, and astronomical modeling efforts on characteristics and reaction pathways on molecules of astrophysical relevance jointly performed by NASA's Ames Research Center's (ARC) Astrochemistry Laboratory and the NWO/Dutch Astrochemistry Network-II (DAN-II).	8/16/2016	8/16/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
762	Ames Research Center (ARC)	easyJet Airline Company, Ltd.	United Kingdom (UK)	2nd Extension to the NASA-easyJet agreement for Collaboration in Human Factors	Cooperative Agreement	Amendment 2: This second extension will continue collaboration in fields including automated capabilities for extracting operationally significant information from very large, diverse databases, flight data analysis, human performance, and fatigue. NASA and easyJet have remained interested in assessing and testing NASA's automated capabilities for extracting operationally significant information from very large, multiple terabyte, diverse (textual and numerical) databases, much larger than can be handled practically by human experts. By working together, NASA and easyJet continue cooperating in the comparison of easyJet's existing analytical results with those of automated NASA analyses. This has helped evaluate and validate NASA's automated analysis tools, while providing easyJet with new methods of analyzing its massive data sets. Amendment 1: NASA/easyjet will generate reliable, automated procedures that improve understanding of the levels and characteristics of flight-crew fatigue factors, both latent and proximate, whose confluence will likely result in unacceptable flight-crew performance. NASA has already demonstrated automated capabilities for extracting operationally significant information from very large, diverse (textual and numerical) databases, and has had partnerships with air carriers in the U.S. in testing and evaluating these tools. Original: Conduct analyses using easyJet's flight-recorded discrete data sets and compare easyJet's...	8/23/2016	5/31/2019
763	Johnson Space Center (JSC)	Universitat zu Koln	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Frank Wombacher of the Universitat zu Koln, in Koln, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	8/24/2016	10/31/2021
764	Johnson Space Center (JSC)	HelmholtzZentrum Muenchen	Germany (GM)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Philippe Schmitt-Kopplin of HelmholtzZentrum Muenchen in Neuherberg, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	8/24/2016	10/31/2021
765	Johnson Space Center (JSC)	Naturhistoriska Riksmuseet	Sweden (SW)	International Lunar Sample Loan Agreement	Cooperative Agreement	Dr. Joshua Snape of Naturhistoriska Riksmuseet in Stockholm, Sweden proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	8/24/2016	10/31/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
766	Goddard Space Flight Center (GSFC), Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA), Mitsubishi Heavy Industries, LTD	Japan (JA)	Reimbursable Space Act Agreement Between The National Aeronautics and Space Administration (NASA) And The Mitsubishi Heavy Industries, LTD. (MHI) For NASA Tracking and Data Relay Satellite System (TDRSS) Support Of The MHI H-IIA / EMM Launch Vehicle	Reimbursable Agreement	This Reimbursable Space Act Agreement (hereinafter referred to as 'Agreement') will be for the purpose of documenting the work to be performed by NASA for the MHI H-IIA / EMM launch, currently scheduled for the summer of 2020. The H-IIA flight plan for this launch requires communication coverage by the NASA TDRSS. MHI will develop the preliminary flight plan in 2016, in order to confirm the compatibility of the EMM requirement to H-IIA with TDRSS. As such, NASA and MHI have agreed on a staged approach for the funding of this work. In the event that the preliminary flight plan determines that there is no compatibility with TDRSS, MHI will terminate this agreement.	9/2/2016	9/2/2021
767	Kennedy Space Center (KSC)	The Open University	United Kingdom (UK)	NASA Testing of an Open University Provided Spacecraft Valve	Cooperative Agreement	This Amendment extends the Agreement through March 31, 2017. Under the Agreement, NASA will test an Open University (OU)-provided spacecraft valve in order to evaluate the valve's suitability for use in NASA's Lunar Advanced Volatile Analysis Instrument (LAVA). LAVA is one of four instruments comprising the advanced instrument package for NASA's Resource Prospector (RP) Mission. OU has been building these types of spacecraft valves for over ten years for similar applications, and these valves are unique and are of much lower power and mass than spacecraft valves produced in the United States.	9/6/2016	3/31/2017
768	Goddard Space Flight Center (GSFC)	Dibrugarh University	India (IN)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	Cooperative research on aerosols using sun photometers integrated into a global network. Dibrugarh University will host a NASA-owned instrument.	9/7/2016	9/6/2026
769	Ames Research Center (ARC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Lunar Lander Conceptual Studies	Cooperative Agreement	This 4th Amendment extends the Agreement through March 31, 2017, retroactive to March 31, 2016 and also provides for additional cooperation on a lunar site study. Under the basic Agreement, JAXA conducted a conceptual study to define a lunar lander to meet the requirements for NASA's Resource Prospector Mission (RPM). The 1st Amendment extended the Agreement from March 31, 2014, to March 31, 2015, and further refined the lunar lander conceptual design for RPM, developed a conceptual approach to night survival, and conducted other studies of lander concepts for lunar sample return missions. The 2nd Amendment added an additional task for JAXA and NASA to develop a NASA-JAXA robotic lunar-landing mission concept, covering NASA's RPM objectives. The 3rd Amendment added additional lunar lander study areas, e.g., a human lunar lander descent stage.	9/8/2016	3/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
770	Headquarters (HQ)	International Space University (ISU)	France (FR)	Vesting Researcher Placements of ISU MSS Students, Amendment	Cooperative Agreement	Amendment 6 - This VRA provides for approved students enrolled in ISU's Master of Space Studies (MSS) program to work on projects and/or research of benefit to NASA at selected NASA installations in satisfaction of Module 5 of ISU's MSS program, entitled: Professional Placements. The Parties desire to extend this cooperation, wherein approved ISU students will be assigned to selected NASA installations for a period of approximately 12 weeks to work in areas and on projects agreed to by NASA. Amendment 5 - It provides for approved students enrolled in ISU's Master of Space Studies program to be assigned to selected NASA installations for a period of approximately 12 weeks to work in areas and on projects agreed to by NASA. Amendment 4 - It provides for approved students enrolled in ISU's Master of Space Studies program to be assigned to selected NASA installations for a period of approximately 12 weeks to work in areas and on projects agreed to by NASA. Amendment 3 - NASA/ISU have enjoyed successful cooperation for many years in a cooperative activity wherein students enrolled in ISU's Master of Space Studies (MSS) program and Master of Space Management (MSM) program work on projects and/or research of benefit to NASA at selected NASA Centers in satisfaction of Module 5 of ISU's MSS or MSM programs, entitled: Professional Placements and Individual Projects. Approved ISU students will be assigned to selected NASA Centers for a period of approximately 12 weeks to word	9/9/2016	9/24/2019
771	Langley Research Center (LaRC)	Delft University of Technology (DUT)	Netherlands, The (NL)	Agreement Between NASA and Delft University of Technology for the Advancement of Composite Aerospace Structures	Cooperative Agreement	NASA and TUDelft will each develop advanced composite aerospace structural test articles and test the materials in their respective facilities.	9/9/2016	9/9/2018
772	Goddard Space Flight Center (GSFC)	Technion-Israel Institute of Technology	Israel (IS)	NASA - Technion VRA for Ehud Behar to NASA GSFC	Cooperative Agreement	During his temporary assignment at GSFC, Dr. Behar will serve under the direction of Dr. Demos Kazanas, Astrophysicist, Astrophysics Science Division, where he will collaborate with scientific and other personnel on the X-ray spectra of Active Galactic Nuclei.	9/11/2016	10/31/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
773	Goddard Space Flight Center (GSFC)	Royal Museum for Central Africa	Belgium (BE)	VRA between NASA and the Royal Museum for Central Africa (RMCA)	Cooperative Agreement	The main focus of Ms. Monsieurs's research is to analyze the rainfall characteristics behind the landslide processes in Eastern Africa and how it can help to improve prediction of these disasters. In preparation for this work, the researcher has been preparing a landslide inventory over the East Africa study area. The goal of the research at NASA is to assess the impact of weather and climatic factors on landslide processes utilizing satellite-based data, including specifically Tropical Rainfall Measurement Mission (TRMM) and Global Precipitation Measurement (GPM) precipitation estimates. The landslide event inventory will serve as input for successive data processing to understand their correlation with rainfall characteristics. There is also rainfall gauge data available over the researcher's study region that will be useful in validating the GPM and TRMM precipitation products over the study area.	9/12/2016	11/30/2017
774	Goddard Space Flight Center (GSFC)	Universidad de San Francisco de Quito (USFQ)	Ecuador (EC)	Aerosol Robotic Network (AERONET)	Cooperative Agreement	NASA and Universidad de San Francisco de Quito (USFQ) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at USFQ. USFQ will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	9/16/2016	9/16/2026
775	George C. Marshall Space Flight Center (MSFC)	Swedish Institute of Space Physics (IRF), Swedish National Space Board (SNSB)	Sweden (SW)	Jupiter Icy-Moons Explorer (JUICE) Mission - Particle Environments Package (PEP)	Cooperative Agreement	NASA and the SNSB will collaborate on the development of the Particle Environment Package (PEP) of the Jupiter Icy-Moons Explorer (JUICE) mission. PEP is a plasma package with six sensors to characterize the plasma environment in the Jovian system. PEP shall measure positive and negative ions, electrons, exospheric neutral gas, thermal plasma, and energetic neutral atoms (ENAs) in the energy range from 0.001 eV to 1 MeV. PEP shall combine remote global imaging via ENAs with in-situ measurements, to address all scientific objectives of the JUICE mission relevant to particle measurements. Their work on the JUICE mission will be governed by the terms and conditions of the Framework Agreement between the Government of the United States of America and the Government of the Kingdom of Sweden for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes, signed in Stockholm on October 14, 2005, and amended in Washington, on October 6, 2015.	9/20/2016	9/20/2034

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
776		National Centre for Space Studies (CNES)	France (FR)	Dispositif pur l'Etude de la Croissance et des Liquides Critiques (DECLIC)	Cooperative Agreement	A second amendment was added to the agreement. This amendment also details the refurbishment and re-launch of the DECLIC hardware and extends the Agreement to December 31, 2024, to enable the completion of the ISS operations for the HTI-R insert which is currently on-orbit and the launch and ISS operations of the DSI-R and ALI-R inserts. The original agreement was amended to include collaboration on upgraded versions of the following three DECLIC inserts: the High Temperature Insert-Reflight (HTI-R), the Directional Solidification Insert-Reflight (DSI-R), and the Alice-Like Insert-Relight (ALI-R). In the original agreement, NASA agreed to provide a launch capability to, and on-orbit accommodations for the DECLIC hardware on the ISS. In addition, CNES received a 12-month on-orbit operational period of utilization by its science investigators and the necessary ISS resources, such as power and crew time.	9/21/2016	12/31/2024
777	Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Italy (IT)	NASA's Swift Gamma Ray Burst Explorer Mission	Cooperative Agreement	The overall scientific objective of the Swift mission is to make a comprehensive study of hundreds of gamma ray burst events in order to determine the origin and physical processes of these phenomena. A Burst Alert Telescope(BAT) shall conduct the initial observations of about one hundred burst events per year.	9/23/2016	12/31/2020
778	Headquarters (HQ)	Chinese Aeronautical Establishment (CAE)	China, People's Republic of (CH)	Memorandum of Understanding between the National Aeronautics and Space Administration and the Chinese Aeronautical Establishment Concerning Cooperation in Air Traffic Management	Cooperative Agreement	This agreement establishes a structure for the Parties to advance air transportation automation for the benefit of the U.S. and Chinese aviation industries operating in China. To achieve this purpose, the Parties agree to undertake cooperative activities to collaborate in the area of air traffic flow management in China. This could provide the highest impact to the system as a whole through research on air traffic management system architecture. The work performed through this activity complements the work being performed by the Airspace Operations and Safety Program within NASA's Aeronautics Research Mission Directorate. NASA will accomplish this work in coordination with U.S. airlines and U.S. industry. It is also highly synergistic with work being performed by CAE and CAE's partners, which include but are not limited to the China Civil Aviation Authority, China Air Traffic Management Bureau, Chinese Airports, and Chinese Airlines. The result of this collaboration will lead to improvements in advanced air transportation automation concepts and technologies, which will be mutually beneficial to both NASA and CAE and their respective additional partners.	9/27/2016	9/30/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
779	Langley Research Center (LaRC)	French National Aerospace Research Center (ONERA)	France (FR)	Agreement between the National Aeronautics and Space Administration of the United States of America and the Office National d'Etudes et de Recherches Aérospatiales of France on Reducing Aircraft Noise	Cooperative Agreement	NASA and ONERA seek to cooperate to advance the state-of-the-art in aircraft noise prediction and human response to noise through validation of the requisite models using advanced measurement methods and comprehensive data sets. The cooperation will create a technical forum through which the parties can share technical knowledge and data in order to independently improve their own capabilities with the overall objective of mitigating the effects of civil air transportation noise. The aircraft noise simulation work under this agreement incorporates the content of the NASA, German Aerospace Center (DLR), and ONERA aircraft noise simulation workgroup. An informal series of meetings on microphone phased array signal processing methods, which were partially-sponsored by the American Institute of Aeronautics and Astronautics Aeroacoustics technical committee, have taken place over the past several years. The collaboration among subject matter experts in the noise community has been beneficial in establishing a broad reach and field of input. Under a prior agreement that took place from January 2012 to April 2015, the Parties cooperated in the area of acoustic liners, specifically related to impedance education methods and propagation codes. This Agreement continues work in this area as part of the effort to validate noise prediction methods.	9/27/2016	9/30/2019
780	Headquarters (HQ)	Israel Space Agency (ISA)	Israel (IS)	Reimbursable Space Act Agreement between the Israel Space Agency of the State of Israel and NASA of the U.S. of America for Participation in the NASA International Internship Program	Reimbursable Agreement	This Reimbursable Space Act Agreement will be for the purpose of facilitating ISA's participation in the NASA International Internship Program, referred to as NASA I squared, designed to provide a collaborative environment where U.S. interns (university undergraduate level students) or fellows (university graduate level students) can interact and work alongside with international peers on research opportunities. NASA internship and fellowship sessions are arranged in three Terms during the calendar year (Spring, Summer, and Fall Terms). To establish a collaborative and integrated environment, ISA's interns or fellows must schedule internships and fellowships during the same (or substantially similar) Terms as their U.S. counterparts. As part of the program implementation, ISA may provide NASA with a range of 2-5 candidates per Term, from which NASA will select an intern or fellow for the research or project opportunities identified in NASA's One Stop Shopping Initiative (OSSI). In addition, ISA will disseminate information about NASA I squared to university students throughout Israel, including the educational requirements the applicants must meet.	9/27/2016	12/30/2019

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
781	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	Mars Orbiter Mission (MOM) Communications and Navigation Reimbursable Agreement with ISRO	Reimbursable Agreement	In coordination with the ISRO Mars Orbit Mission Project, NASA will provide cross-agency tracking, navigation, SPICE support, and telecommunications support services that will include having ISRO, the ISRO Satellite Centre (ISAC), and the ISRO Telemetry, Tracking and Command Network (ISTRAC), and NASA ground station antennas and orbiting spacecraft provide telecommunications (including telemetry and command) services, tracking services (to include radiometric tracking and Delta-Differenced One-Way Ranging (D-DOR)), and navigation services for spacecraft supported by both agencies.	9/30/2016	1/31/2017
782	Headquarters (HQ)	Government of the Kingdom of Norway	Norway (NO)	Amendment and Extension of the Agreement between the United States of America and the Kingdom of Norway for Cooperation in the Civil Uses of Outer Space	Cooperative Agreement	3rd Amendment and Extension: The U.S. and the Kingdom of Norway, pursuant to Article 11 of the Agreement signed 10/20/2000 and 11/14/2001, and extended for 10 years by an agreement signed on 10/23/2006, agree to extend the duration of the Agreement for another 10 years, thus extending the expiration date until 11/14/2026. The Parties also agree, pursuant to Article 10 of the Agreement to amend the Agreement by replacing Article 7 in its entirety with new language. 2nd Extension: U.S. Geological Survey (USGS) added as a U.S. Implementing Agency pursuant to Article 2. 1st Extension: This is an extension of the umbrella/framework agreement between the US and Norway for cooperation in the civil uses of outer space. The parties cooperation will be in sounding rocket activity, Space science, Earth science, satellite data acquisition and tracking, and other space activities. The specific cooperation will be set forth in Implementing Arrangements between the Implementing Agencies. NASA and NOAA are the Implementing Agencies for the U.S., and the Norwegian Space Centre (NSC) is the Implementing Agency for Norway.	9/30/2016	11/14/2026
783	JSC White Sands Test Facility (WSTF)	Queensland University of Technology	Australia (AS)	Cooperation in Research to Increase Understanding of the Ignition and Combustion of Materials in Elevated Oxygen Conditions in both Normal Gravity and Reduced Gravity Environments	Cooperative Agreement	NASA/QUT have a mutual interest in cooperating in research to increase understanding of the ignition and combustion of materials in elevated oxygen conditions in both normal gravity and reduced gravity environments. In particular, the Parties seek to develop models characterizing the ignition and burning of elemental metals and alloys in oxygen-enriched environments. This will help to facilitate safety in space flight activities.	10/5/2016	7/25/2021
784	Goddard Space Flight Center (GSFC)	Lake Chad Basin Commission (LCBC)	Chad (CD)	Aerosol Robotic Network (AERONET) and Micro Pulse Lidar Network (MPL/NET)	Cooperative Agreement	NASA will provide a Sun Photometer and/or Lidar to the partner; the Partner will tend the instrument(s) and ensure data is uploaded to the global databases.	10/5/2016	10/4/2026

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
785	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	TWINS	Cooperative Agreement	The Two Wide-angle Imaging Neutral-atom Spectrometers mission will allow stereo imaging of different regions of the magnetosphere. This agreement provides for a Co-I from the University of Bonn who will provide the Lyman-alpha detector devices. Amendment and extension of the original agmt that entered into force on April 4, 2001.	10/5/2016	12/31/2018
786	Goddard Space Flight Center (GSFC)	Centre National De La Recherche Scientifique, National Centre for Space Studies (CNES), Universite Joseph Fourier a Grenoble	France (FR)	Implementing Arrangement between the National Aeronautics And Space Administration of the United States Of America and the Centre National D'etudes Spatiales of France on the Space Environment Testbed (Set) Mission	Cooperative Agreement	NASA's Science Mission Directorate (SMD) is directing the development of the SET mission, part of the LWS Program. NASA will develop the SET carrier that provides a single interface between SET experiments and a non-NASA host spacecraft. The carrier holds four experiments as follows: the Cosmic Radiation Environment Dosimetry and Charging Experiment (CREDANCE) space weather monitor; the Dosimetry Intercomparison and Miniaturization Experiment (DIME); the Characterization of Proton Effects and Enhanced Low Dose Rate Sensitivity (ELDRS) in Bipolar Junction Transistors; and the Commercial Off-the-Shelf (COTS-2) digital technologies. The primary scientific objectives will be to define space environment effects and degradation mechanisms, reduce uncertainties in the environment and its effects on spacecraft and spacecraft payloads, and improve design and operations guidelines and test protocols to reduce spacecraft anomalies and failures during operations due to environmental effects. The COTS-2 experiment will be used to measure the effects of the space ionizing radiation environment on COTS digital microelectronics devices in order to improve performance prediction in space for future digital devices. CNES will provide for the design and the breadboard fabrication of the COTS-2 digital microelectronics experiment, in collaboration with the French laboratories.	10/6/2016	12/31/2020
787	Glenn Research Center at Lewis Field (GRC)	Mitsubishi Heavy Industries, LTD	Japan (JA)	Third Annex to the Reimbursable Space Act Umbrella Agreement between NASA and Mitsubishi Heavy Industries, LTD for Wind Tunnel Testing of Aircraft Ice Protection Systems	Reimbursable Agreement	The third Annex is for the purpose of carrying our further work beyond the scope of the first and second Annex to perform wind tunnel testing of ice protection systems in NASA GRC's Icing Research Tunnel (IRT) on this aircraft and to evaluate cloud measurement instrument performance.	10/7/2016	10/6/2018
788	Headquarters (HQ)	Canadian Space Agency (CSA)	Canada (CA)	Surface Water Ocean Topography (SWOT) Phase C-F	Cooperative Agreement	CSA to provide Extended Interaction Klystrons (EIKs) as part of the NASA KaRIn instrument.	10/17/2016	10/20/2030
789	Goddard Space Flight Center (GSFC), Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	NASA-DLR CoSAR IA	Cooperative Agreement	This IA is for NASA and DLR to collaborate on studies related to synthetic aperture radar. It is an implementing arrangement under the NASA-DLR Framework Agreement.	10/24/2016	3/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
790	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	Implementing Arrangement Between NASA and CSA for the Evaluation of a Wearable Biosensor Monitoring System	Cooperative Agreement	NASA and CSA collaboration to evaluate the capabilities of the biosensor monitoring system and supporting technologies and explore its integration into a test demonstration.	10/26/2016	10/26/2019
791	George C. Marshall Space Flight Center (MSFC)	Korea Meteorological Administration (KMA)	Korea, Republic of (KS)	Agreement between NASA and the Korea Meteorological Administration (KMA) for Meteorological Research Cooperation the Joint NASA-JAXA Global Precipitation (GPM)	Cooperative Agreement	NASA and the Korea Meteorological Administration will cooperate on ground validation of Global Precipitation Measurement (GPM) mission precipitation estimates and improved understanding of physical processes associated with snow and other forms of frozen and mixed-phase precipitation.	11/2/2016	11/2/2021
792	Ames Research Center (ARC)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	VRA between NASA and the Korea Aerospace Research Institute (KARI)	Cooperative Agreement	Dr. Gwanghyeok Ju is a senior researcher at the KARI and has expertise and experience in the field of lunar exploration and space mission design. During his visit at ARC, Dr. Ju will conduct research in space mission architecture and concepts. In particular, he will help develop a variety of future NASA mission concepts involving robotic spacecraft and assets, remote sensing measurements, and planetary data processing. The results of Dr. Ju's work will be shared with NASA researchers, scientists, and engineers. This assignment will benefit NASA in the fields of planetary and lunar exploration. In addition, Dr. Ju's research will contribute directly to the achievement of ARC objectives in the area of low-cost space mission design. The effort will be confined to generic, non-export controlled, configurations, whose definition is available in the open literature. While at ARC, Dr. Ju will work under the direction of Dr. David Korskmeier, Director of Engineering.	11/8/2016	11/30/2017

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
793	Langley Research Center (LaRC)	European Transonic Windtunnel GmbH (ETW)	Germany (GM)	Agreement between NASA and the European Transonic Windtunnel GmbH (ETW) on Balance Collaboration Data at the ETW	Cooperative Agreement	The purpose of this collaboration is to document a common understanding for coordination of the Parties' activities to acquire new balance calibration data and compare it with existing calibration data. In 2010, a new model, the common research model that was tested in the National Transonic Facility (NTF) with data being obtained at both low and high Reynolds numbers. In 2014, the CRM was also tested at the ETW. As part of the agreement at that time, both sets of data were shared between NTF and ETW. While analyzing this data, both ETW and NTF personnel discovered some unusual differences between the two datasets which led to a more detailed investigation of the data, which included looking at the calibration data of the balance used at NTF and the one used at ETW to determine if the differences may be a result of different balances being used during the two tests. This agreement allows for the balance used in the NTF (the NTF 118A) to have a calibration performed in the ETW automated calibration system which would provide knowledge that could help clarify if the balances were the cause of the differences.	11/14/2016	12/31/2020
794	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	Canadian Space Agency (CSA)	Canada (CA)	Mars Science Laboratory (MSL) Mission	Cooperative Agreement	This IA Extension is for NASA and CSA to continue collaborating on the Alpha Particle X-ray Spectrometer (APXS) instrument currently on the Mars Science Laboratory (MSL) rover, and falls under the US-Canada Framework Agreement.	11/15/2016	3/31/2019
795	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	RapidScat - ScatSat-1	Cooperative Agreement	NASA and ISRO will cooperate on calibration and validation of data from the NASA ISS Rapid Scatterometer and the ISRO ScatSat-1 Scatterometer.	11/15/2016	11/15/2021
796	Goddard Space Flight Center (GSFC)	Universidad Popular de Cesar (UPC)	Colombia (CO)	Aerosol Robotic Network - AERONET	Cooperative Agreement	NASA and Universidad Popular del Cesar (UPC) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at UPC. UPC will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	11/30/2016	11/29/2026
797	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Solar Terrestrial Relations Observatory (STEREO)	Cooperative Agreement	CNES will provide SWAVES instrument suite. Co-Is were selected to provide portions of instruments for SECCHI and IMPACT suites.	11/30/2016	12/31/2020

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
798	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Alendronate - Zoledronate Experiment	Cooperative Agreement	Extension of original LOA. NASA/JAXA Agreement on a joint study of 'Bisphosphonates as a Countermeasure to Space Flight Induced Bone Loss' (NASA objective) and 'Pre-flight Zoledronate Infusion as an Effective Countermeasure for Spaceflight-Induced Bone Loss and Renal Stone Formation' (JAXA experiment). Joint study referred to as '(the Alendronate - Zoledronate experiment)'. The objective of this experiment is to determine whether bisphosphonates, in conjunction with the routine in-flight exercise program, will protect International Space Station (ISS) crewmembers from the regional decreases in bone mineral density documented on previous ISS flights. The pre-flight, in-flight, and post-flight activities regarding the Alendronate - Zoledronate experiment will be covered by an arrangement among the Canadian Space Agency, the European Space Agency, NASA of the United States, and Japan Aerospace Exploration Agency concerning International Space Life Sciences flight experiments on the International Space Station (ISS) (hereinafter referred to as 'the Arrangement') which went into effect on September 30, 2002, (SIERA # MULT-0008-0).	12/5/2016	12/31/2019
799	Goddard Space Flight Center (GSFC)	National Institute for Space Research (INPE)	Brazil (BR)	VRA between NASA and the National Institute for Space Research (INPE)	Cooperative Agreement	Ms. Penna will perform research that examines the assimilation of aerosol data in numerical models to study Earth's surface. The objective of this research is to gain a better understanding of the role that aerosol distribution plays in the improvement of surface models and their prognosis. The researcher will focus on the surface modeling and prognosis of sensible and latent heat fluxes.	12/7/2016	7/2/2018
800	All NASA Centers	Canadian Space Agency (CSA)	Canada (CA)	Mars Exploration Program	Cooperative Agreement	Amendment and Extension of existing Mars cooperation agreement.	12/9/2016	12/31/2021
801	Johnson Space Center (JSC)	Plymouth University	United Kingdom (UK)	International Hayabusa Sample Loan Agreement	Cooperative Agreement	Dr. Natasha Stephen of Plymouth University in Plymouth, UK, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Hayabusa Sample Curator).	12/12/2016	12/12/2021
802	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Australia (AS)	Reimbursable Space Act Umbrella Agreement Between NASA and Woodside Energy Technologies PTY LTD. Regarding Anthro.pomorphic Robotic Systems	Reimbursable Agreement	NASA will provide reimbursable support to Woodside related to their use of NASA anthropomorphic robotic systems.	12/14/2016	12/14/2021
803	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Australia (AS)	Annex 1 Between NASA and Woodside Energy Technologies PTY LTD. Regarding Anthropomorphic Robotic Systems	Reimbursable Agreement	NASA will deliver a Robonaut 2 system for an initial loan period of one year.	12/14/2016	12/14/2021

Active International Space Act Agreements by Signature Date (as of December 31, 2016)

No.	NASA Installation(s)	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
804	Goddard Space Flight Center (GSFC)	Swiss Space Office (SSO)	Switzerland (SZ)	Solar Terrestrial Relations Observatory (STEREO)	Cooperative Agreement	Dr. Robert Wimmer-Schweingruber selected as Co-I on the PLASTIC instrument suite on STEREO.	12/16/2016	12/31/2020
805	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Cooperation Under Solar Terrestrial Science Programme (STSP) (CLUSTER I and SOHO)	Cooperative Agreement	The STSP composed of 2 missions: Cluster and SOHO. The combination will enhance the scientific return beyond the objectives of the individual missions. Cluster mission is to investigate small-scale structure in the Earth's plasma environment. Spacecraft SOHO - Solar and Heliospheric Observatory mission is developed by ESA to develop the launch of Ariane V. Expiration date was one year past nominal mission (Dec 2, 1998), but due to mission problems and loss of Cluster, agreement was in limbo until formally extended on Jan 16, 2003.	12/20/2016	12/31/2021
806	Goddard Space Flight Center (GSFC), Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	GPM-Megha Tropiques Implementing Arrangement with ISRO	Cooperative Agreement	Cooperation between NASA and the Indian Space Research Organisation (ISRO) on the Global Precipitation Measurement and Megha-Tropiques missions. This is an IA under the NASA-ISRO Framework Agreement.	12/26/2016	12/31/2020
807	Headquarters (HQ), Johnson Space Center (JSC)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	Implementing Arrangement Between the National Aeronautics and Space Administration of the United States of America and The Korea Aerospace Research Institute of the Republic of Korea for Cooperation on the Korea Pathfinder Lunar Orbiter (KPLO) Mission	Cooperative Agreement	NASA will provide instruments for integration into KARI's lunar orbiter; NASA will also provide mission design and navigation support.	12/30/2016	12/31/2023