Space Shuttle Program Overview

John Shannon
Program Manager,
Space Shuttle Program

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Guiding and Connecting You to NASA

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Space Shuttle on Orbit STS-123

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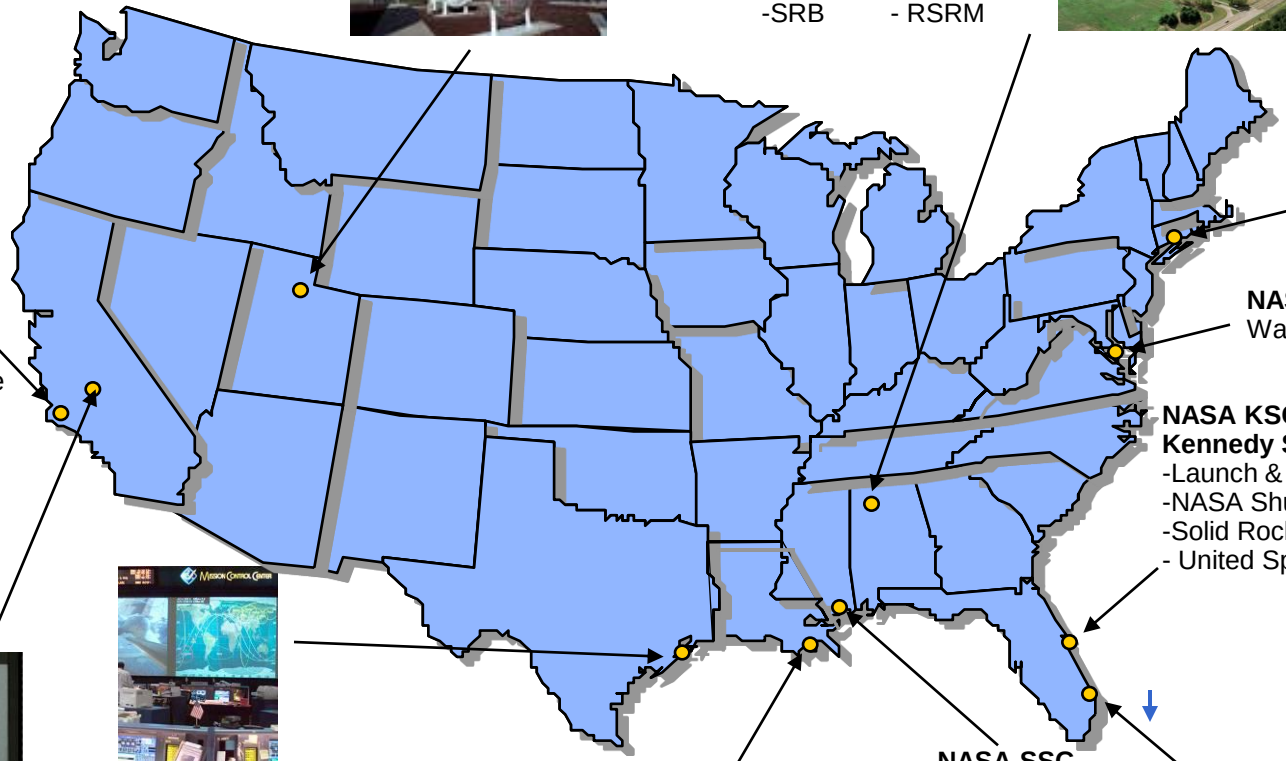
Major Space Shuttle Program Facilities

Reusable Solid Rocket Motor
ATK Thiokol Propulsion
Brigham City, Utah

NASA MSFC
Huntsville, AL
-Shuttle Projects Office
-SSME - ET
-SRB - RSRM

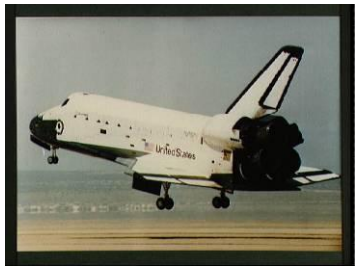
Space Shuttle
Main Engines
Pratt & Whitney/Rocketdyne
Canoga Park, CA



EVA Suits
Hamilton Sundstrand
Winsor Locks, CT

NASA Headquarters
Washington, D.C.

NASA KSC
Kennedy Space Center, FL
-Launch & Landing
-NASA Shuttle Log. Depot
-Solid Rocket Booster
- United Space Alliance (USA)

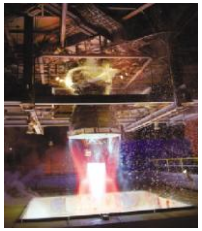


Alternate Landing Site
Edwards AFB, CA

NASA JSC
Houston, Texas
-Shuttle Program Office
-Program Integration
-Space Shuttle Veh. Eng. Office
(ESW, ECE, ORB, PMC)
-United Space Alliance - SPOC

External Tank
LMCO
Michoud Assembly Fac.
New Orleans, LA

NASA SSC
Bay St. Louis, MS
- SSME Test



Alternate Turbo Pumps
Pratt & Whitney
West Palm Beach, FL

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Shuttle Manifest

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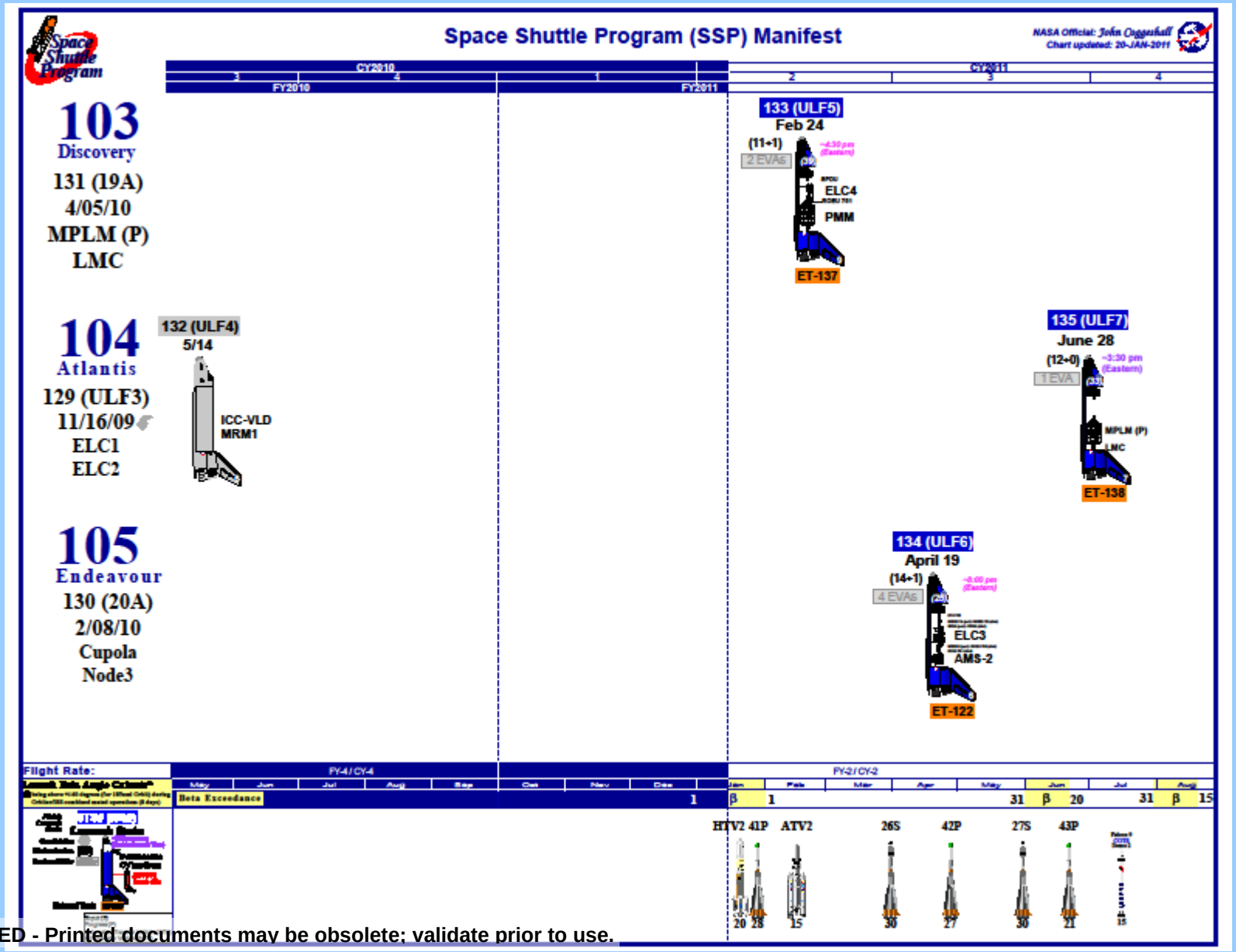
Planning Manifest

as of January 20, 2011



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Previous Mission
STS-132

Launch Target:
May 14, 2010

Orbiter:
Atlantis

Mission Number:
STS-132

Launch Window:
TBD

Launch Pad:
39A

Mission Duration:
12 days

Landing Site:
KSC

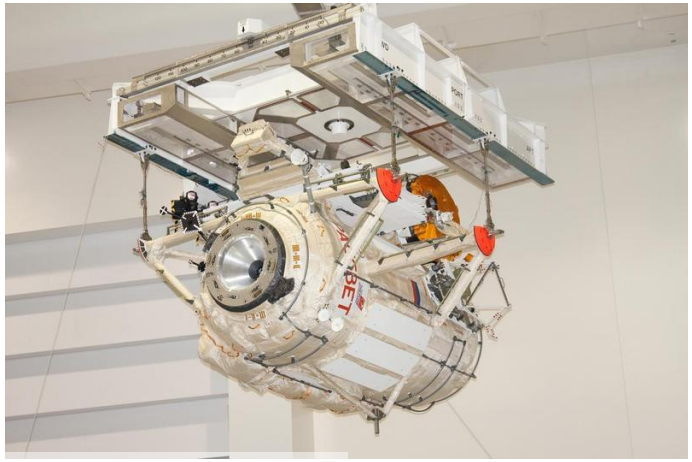
Inclination:
51.6 degrees

Rendezvous Altitude:
190 nautical miles

Primary Payload:
-Multipurpose Research Module 1 (MRM1)
-Integrated Cargo Carrier-Vertical Light Deployable

STS-132 Crew

Ken Ham, Commander
Garrett Reisman
Stephen Bowen
Michael Good
Dominic (Tony) Antonelli, Pilot
Piers Sellers



- 34th construction flight of the ISS.

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Upcoming Mission

STS-133 / ULF5

Launch Target:
February 24, 2011

Orbiter:
Discovery

Mission Number:
STS-133

Launch Window:
3 minutes

Launch Pad:
39A

Mission Duration:
11 days

Landing Site:
KSC

Inclination:
51.6 degrees

Rendezvous Altitude:
190 nautical miles

Primary Payload:
PMM
ELC-4 (Radiator)
LWAPA return

Mission Highlights:

- **Deliver the Permanent Multi-Purpose Module (PMM) and enclosed cargo**
  - **6536 lbs of manifested cargo**
- **Deliver the Express Logistics Carrier (ELC) 4 with the Heat Rejection System Radiator (HRSR)**
- **Return the Materials ISS Experiment (MISSE) 6 Lightweight Adapter Plate Assembly (LWAPA) with Data Loggers**
- **Deliver 1568 lbs of critical cargo in the Shuttle middeck**
- **Conduct 2 EVAs (Extravehicular Activity)**
  - **Relocate Pump Module to External Stowage Platform (ESP) 2 and vent residual NH3**
  - **Retrieve the LWAPA and install in the cargo bay**
  - **Install the Camera Port 3 (CP3) Camera Wedge**
  - **Install the Stbd Crew and Equipment Translation Aide (CETA) Rail stub**
  - **Install the Special Purpose Dexterous Manipulator (SPDM) Camera Light Pan and Tilt Assembly (CLPA) 1**
  - **JAXA Message in the Bottle**
  - **Other EVA tasks**
- **Perform critical utilization activities**

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