



# NASA Space Operations Mission Directorate



**1<sup>st</sup> Space Exploration Conference  
January 31, 2005**

**William F. Readdy  
Associate Administrator  
for Space Operations**





**Return to Flight**



# SHUTTLE LAUNCH PROCESSING UPDATE



- Discovery Main Engine installation complete Dec 10
- First dual sensor Orbiter Boom Sensor System delivered Dec 23
- Solid Rocket Booster stacking complete Jan 4
- First modified External Tank arrived Jan 5
- OBSS installed in OV-103 on Jan 24



Modified External Tank Delivered



Space Shuttle Main Engines Installed



OBSS Delivered & Installed



SRB Stacking Complete

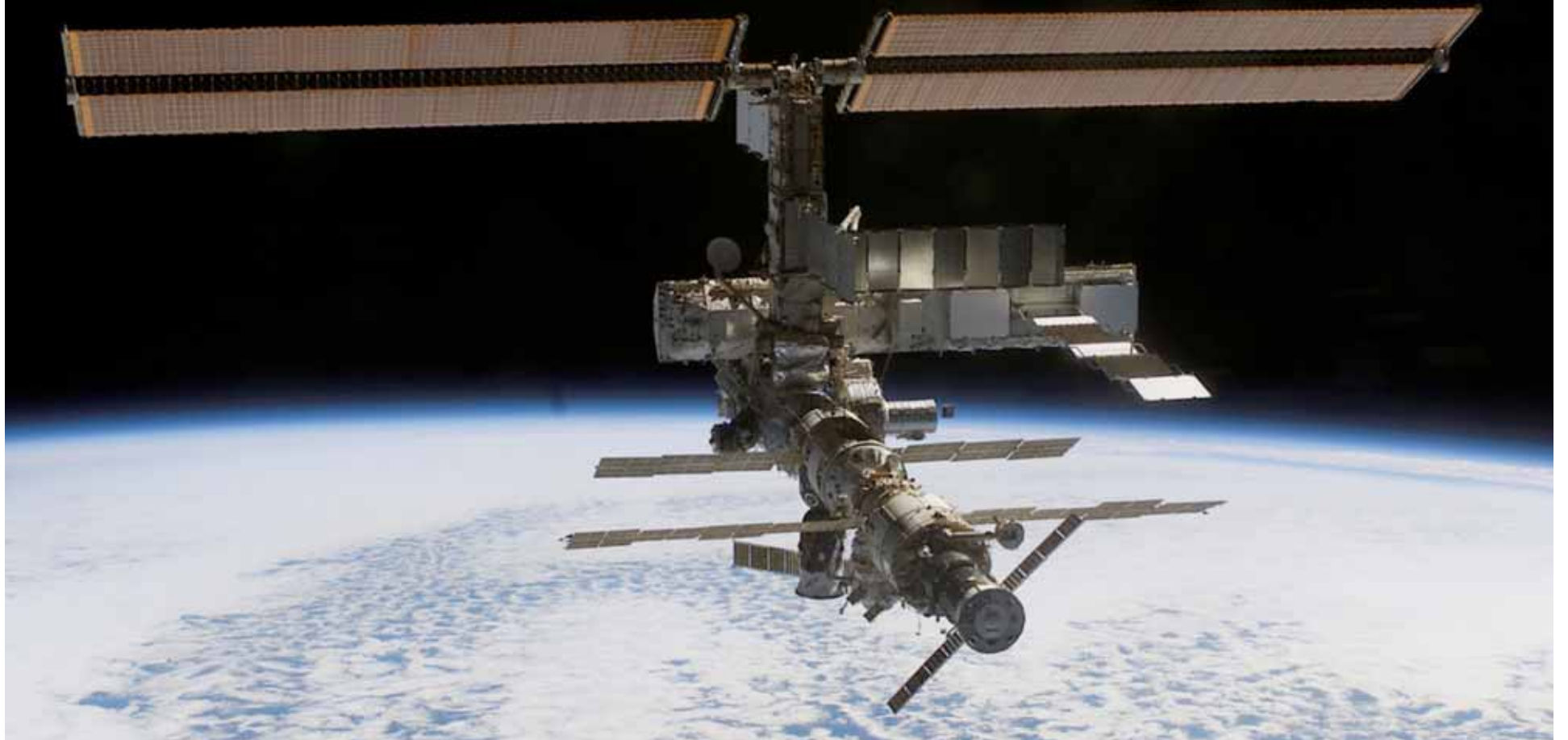
Processing on track for  
May launch window.

The Crew of  
**STS-114**

Target Launch Window:  
**May 12 – June 3, 2005**



# International Space Station





## Expedition 10 Crew

Leroy Chiao,  
Commander

Salizhan Sharipov,  
Flight Engineer

Arrived:  
October 16, 2004

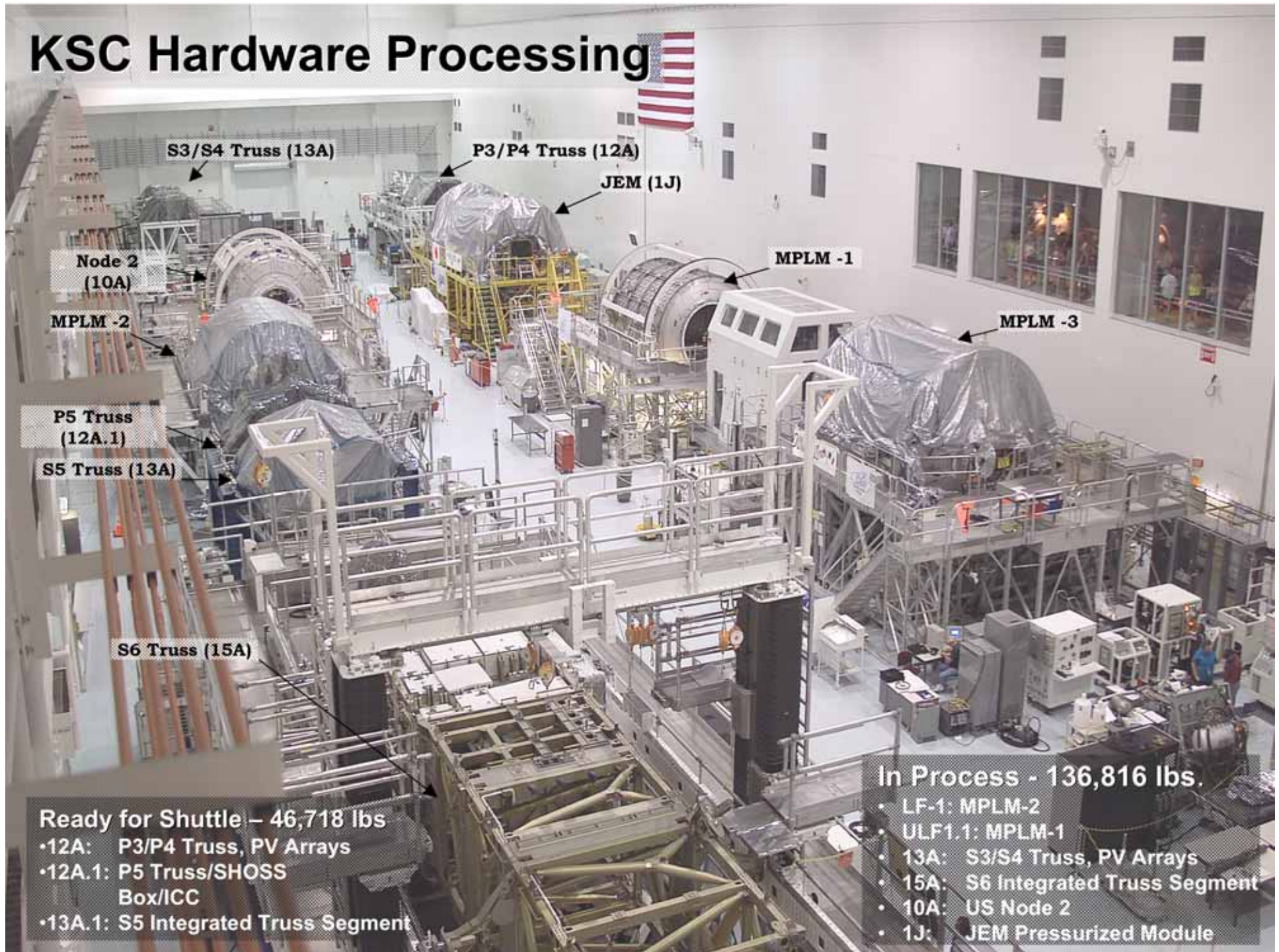
Resupply Flights:  
Progress 16P on December 23<sup>rd</sup>  
Progress 17P on February 28<sup>th</sup>

EVAs:  
Russian 12  
Russian 13

Scheduled Return:  
April 25, 2005



# KSC Hardware Processing



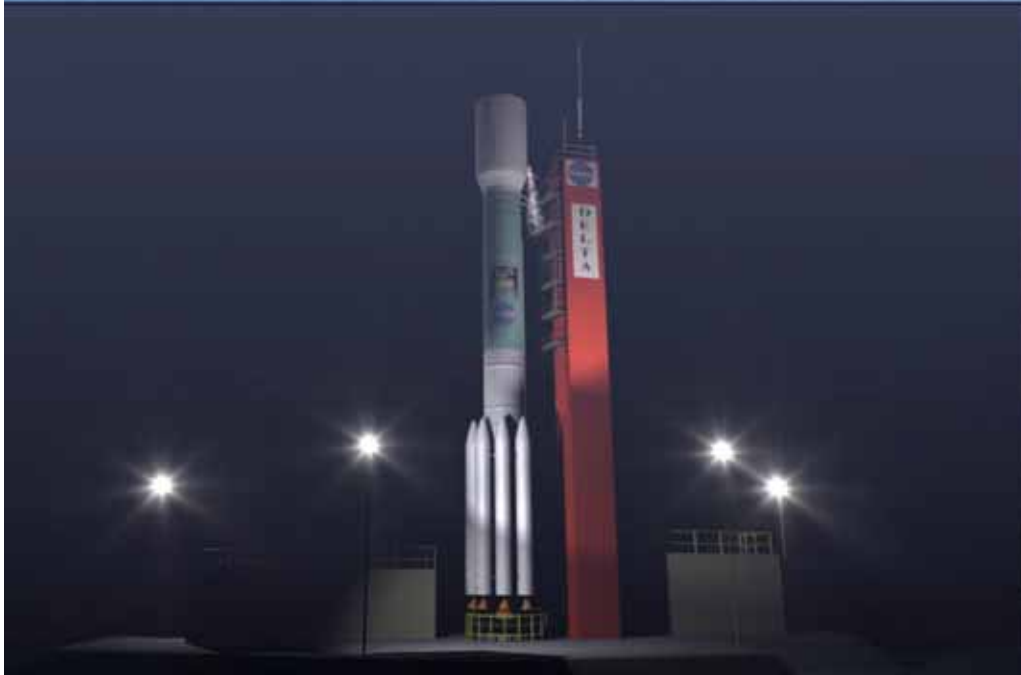
**Ready for Shuttle – 46,718 lbs**

- 12A: P3/P4 Truss, PV Arrays
- 12A.1: P5 Truss/SHOSS Box/ICC
- 13A.1: S5 Integrated Truss Segment

**In Process - 136,816 lbs.**

- LF-1: MPLM-2
- ULF1.1: MPLM-1
- 13A: S3/S4 Truss, PV Arrays
- 15A: S6 Integrated Truss Segment
- 10A: US Node 2
- 1J: JEM Pressurized Module

# Space Transportation





# STATUS OF COMMERCIAL SPACE TRANSPORTATION SERVICES RFI



**End of year, 2005**

RFP award



**Summer 2005**

RFP release based on RFI submittals and acquisition strategy



**Currently**

Complete review of RFI submittals  
Brief NASA senior leadership and finalize acquisition strategy



**October 2004 – January 2005**

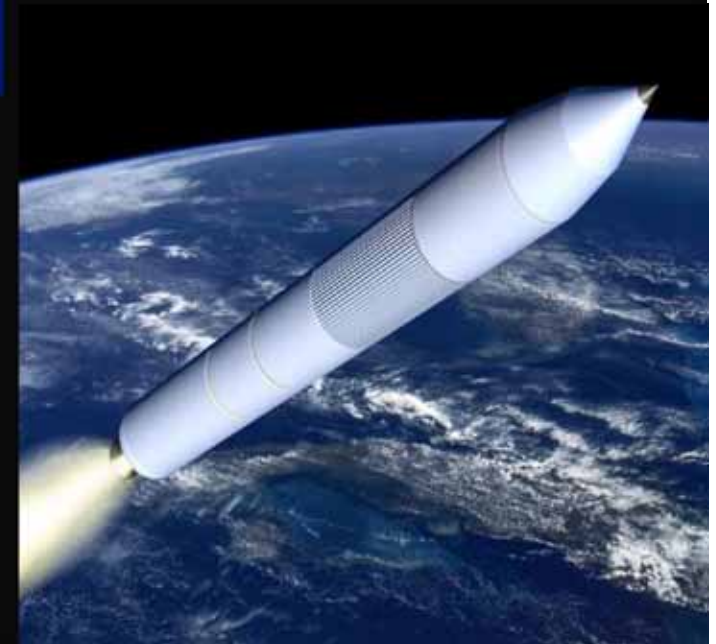
Submissions reviewed against the six transportation requirements + the business model

**October 15, 2004**

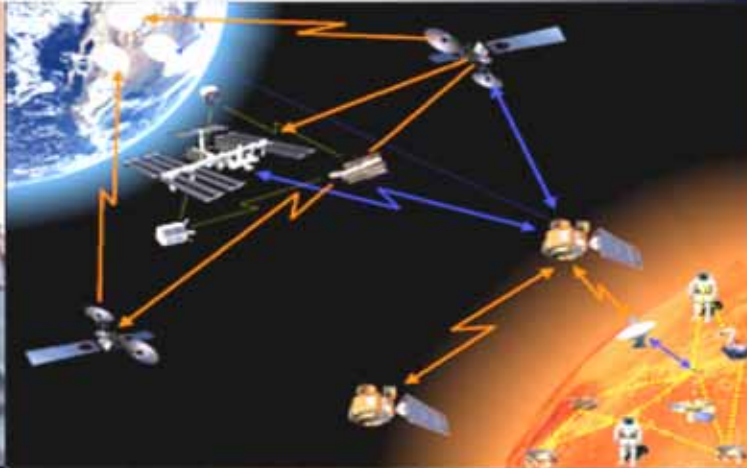
Space Operations closed on an RFI to meet Agency-wide requirements for:

- ground-to-LEO transportation
- ground-to-interplanetary trajectory insertion
- ground-to-LEO rendezvous
- ground-to-staging location
- human transport and return
- in-space operations

26 groups submitted through the RFI



# Space Communications





# SPACE COMMUNICATIONS AND EXPLORATION: BUILDING THE INTERPLANETARY INTERNET



The Office of Space Communications (OSC) leads the development of the Agency's future space communications and navigation architecture including the advocacy of associated data standards in support of the Agency's various missions.



# SUMMARY



- Space Operations is responsible for the first critical elements of the Vision for U.S. Space Exploration – Space Shuttle Return to Flight and assembly and utilization of ISS
- Space Operations will assist in the creation of transformational capabilities in space launch and space communications
- Space Operations will assist the developers in the Exploration Directorate in developing requirements for future systems and accepting the “hand-off” once these systems become operational



**Space Shuttle Return to Flight, a fully utilized ISS, reliable space access, and transformational space communications are the cornerstones of Exploration!**



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