



NASA Space Launch System (SLS): *Progress Report DRAFT*

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Space Launch System



SLS Supports NASA's Vision and Mission



*To reach for new heights...
and reveal the unknown so
that what we do and learn
will benefit all humankind*

Exploring Space for America's Future



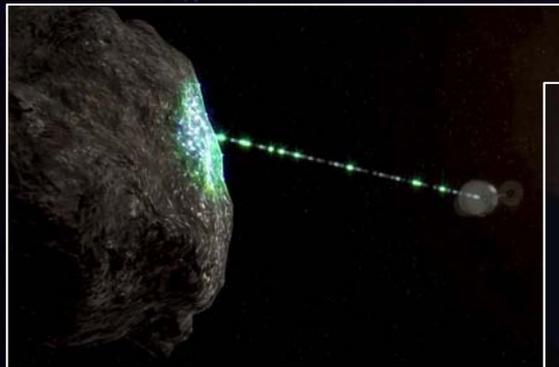
Inspiration



National Security



Scientific Knowledge



Economic Prosperity

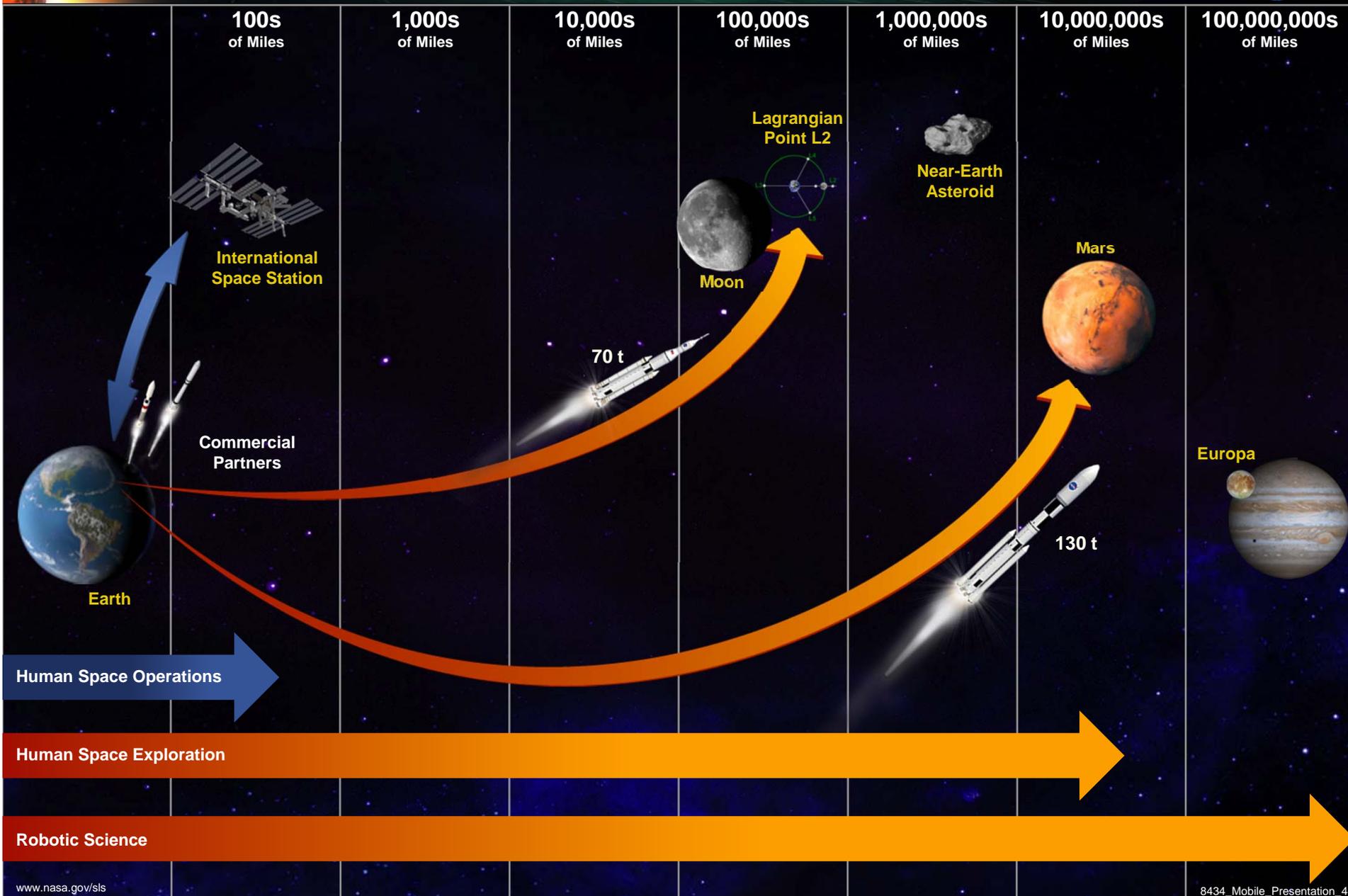


Global Partnerships

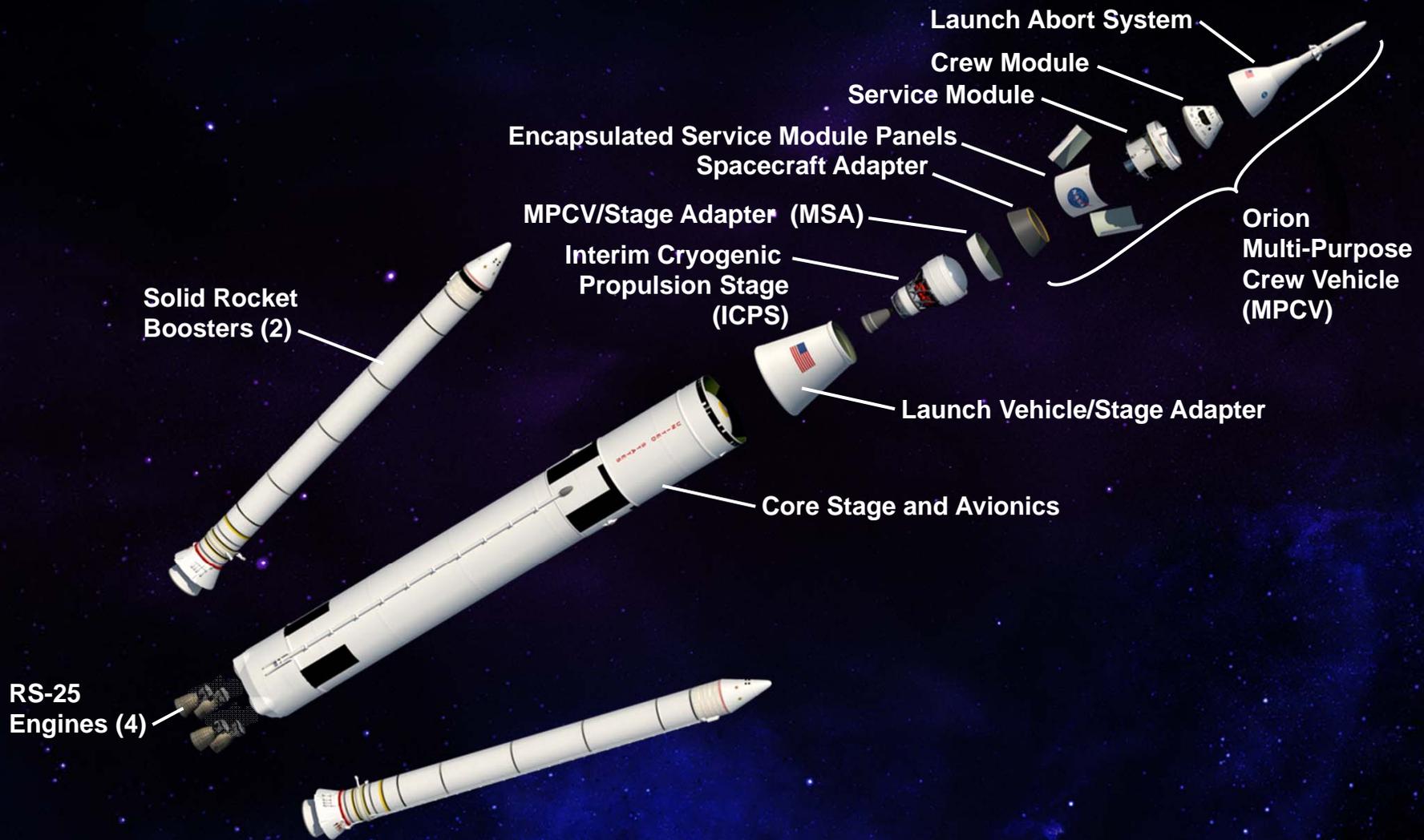


Technology Development

Exploration and Science



SLS 70 metric ton Expanded View



Initial Capability Stands on the Shoulders of Legacy Systems

SLS Development Schedule



2011	2012	2013	2014	2015	2016	2017
▼✓ MCR	▼✓ SRR/SDR	▼✓ PDR		▼ CDR	SIR ▼	PLAR ▼ FRR ▼ Launch ▼

PROGRAM PROGRESS

Concept Studies	Concept & Technology Development	Preliminary Design & Technology Completion	Final Design & Fabrication	System Assembly, Integration & Test, Launch & Checkout
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MCR: Mission Concept Review	CDR: Critical Design Review
SRR: System Requirements Review	SIR: System Integration Review
SDR: System Definition Review	FRR: Flight Readiness Review
PDR: Preliminary Design Review	PLAR: Post-Launch Asses. Review

Concept to Preliminary Design in 21 Months



Liquid Engines
Tested selective laser melted part on J-2X at Stennis Space Center (March 2013), and storing RS-25 Core Stage Engines at Stennis Space Center



Spacecraft & Payload Integration
Performed fit-check of Multi-Purpose Crew Vehicle Stage Adapter for 2014 Exploration Flight Test at the Marshall Space Flight Center (June 2013)

Boosters
Conducted Thrust Vector Flight Control Test at ATK in Promontory, UT (Jan 2013)



Completed Vertical Weld Tool at the Michoud Assembly Facility in New Orleans



Advanced Development
Conducted F-1 engine gas generator hot-fire testing at Marshall (Jan 2013)

Core Stage
Completed welding on first confidence barrel section at Michoud Assembly Facility (July 2013)



Systems Engineering & Integration
Tested buffet model in Langley Research Center's Transonic Dynamics Wind Tunnel (Nov 2012)

Low Technical Risk Due to Hardware Maturity

SLS Nationwide Team



2012-2013 Data

- ◆ Engaging the U.S. Aerospace Industry
- ◆ Strengthening Sectors such as Manufacturing
- ◆ Advancing Technology and Innovation

224 Subcontracts in 30 States

SLS Contracts and Suppliers in AL, MS, LA, and FL



Contracts

Alabama

- Dynetics Technical Services

Florida

- Baker Hill Industries, Inc.
- Bernd Group, Inc.
- Channel Comp., LLC
- Concurrent Computer Corp.
- Honeywell International, Inc.
- Hydraulic House, Inc.
- International Bolting Technologies, Inc.
- United Technologies Corp.



Suppliers

Alabama

- Alabama A&M
- All Points Logistics, Inc.
- Amtec Corp.
- Analytix, LLC
- Avans Machine & Tool
- AZ Technology
- B&B Precision Machine, Inc.
- Barnhart Crane & Rigging Co.
- Concurrent Computer Corp.
- Dynetics, Inc.
- GE Intelligent Platforms, Inc.
- Medtherm Corp.
- Packaging Unlimited
- Watring Technologies, Inc.

Florida

- Baker Hill Industries, Inc.
- Bernd Group, Inc.
- Channel Comp., LLC
- Concurrent Computer Corp.
- Honeywell International, Inc.
- Hydraulic House, Inc.
- International Bolting Technologies, Inc.
- United Technologies Corp.

Louisiana

- Geocent, LLC

To be updated

America's Rocket for Deep-Space Missions



- ◆ National platform for space leadership
- ◆ Opens frontiers for commerce and economic expansion
- ◆ Unrivaled capability for strategic missions
- ◆ On track for first flight in 2017
- ◆ Opportunities for large and small businesses

www.nasa.gov/sls

