CONFIGURATION CONTROLLED DOCUMENT

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Multi-Program Integrated Milestones

Legend

- Shuttle Flight
- uncrewed COTS flight
- uncrewed/crewed Constellation Flight
- ? facility utilization TBD
- X no further facility utilization identified

CY 2006 Q4 | CY 2007 Q1–Q4 | FY 2007 Q1–Q4 | CY 2008 Q1–Q4 | FY 2008 Q2–Q4 | CY 2009 Q1–Q4 | FY 2009 Q1–Q4 | CY 2010 Q1–Q3 | FY 2010 Q1–Q4 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 | FY 2020

Moon

- Lunar Reconnaissance Orbiter
- VSE Milestone: Human Lunar Return

International Space Station (LEO)

- International Partners — Soyuz, Progress, ATV, HTV
- Int'l Partners — Soyuz, Progress, ATV, HTV
- Assembly complete
- Russian purchasing authority ends
- NOTE: Orions 7 and 8 and COTS are contingent on ISS end-of-life date and potential for continuing U.S. ISS ops
- NOTE: Orions 9 and 10 and COTS are contingent on continuing U.S. ISS ops
- NOTE: Orions 11 and 12 and COTS are contingent on continuing U.S. ISS ops
- NOTE: Orions 14 and 16 and COTS are contingent on continuing U.S. ISS ops
- NOTE: Orions 18 and 20 and COTS are contingent on continuing U.S. ISS ops
- NOTE: The potential for ISS operations from 2016 – 2020 is under review

Space Shuttle (LEO)

- 12A.1 (116), 13A (117), 13A.1 (118), 10A (120), 1E (122), 1J/A (123), 1J (124), HST SM4 (125), ULF2 (126), 15A (119), 2J/A (127), 17A (128), ULF3 (129), 20A (130), 19A (131), ULF4 (132), ULF5 (133)
- Six person crew capability
- NOTE: ULF4 and ULF5 are manifested as contingency ISS logistics flights.
- Last SSME on-dock at KSC
- NOTE: *Atlantis* retirement under review.
- *Atlantis* retired
- Last ET on-dock at KSC
- *Discovery* retired
- *Endeavour* retired
- COTS Capability to ISS

COTS

- SpaceX: Demo 1 PDR, Demo 1 CDR, Financing round 2, Financing round 1, Demo 3 SRR, Demo 3 PDR, Demo 2 SRR, Demo 2 PDR, Demo 2 CDR, Demo 3 CDR, Financing round 3, IOC
- SpaceX Demo 1, SpaceX Demo 2, SpaceX Demo 3
- RpK — Alternate Provider
- COTS Phase I
- COTS Phase II

Facilities

- SSP last-need for O&C
- SSP last-need for A-1
- SSP last-need for LCC Firing Room 1; transfer to Cx for modifications
- A-1 ready for Cx testing
- LC-39B configuration for last SSP flight off pad
- SSP last-need for MLP 1
- SSP last-need for VAB HB 2
- LC-39B and MLP 1 configuration for Ares I-X
- SSP last –need for A-2
- A-2 ready for Cx testing
- SSP last-need for VAB HB 4
- SSP last-need for VAB HB 3
- SSP last-need for VAB LB and HB 1
- SSP last-need for CT 1 and 2
- SSP last-need for MLP 2
- SSP last-need for MLP 3
- A-3 ready for Cx testing
- SSP last-need for OPF 1,2, and 3
- SSP last-need date for LC-39A
- LC-39B configuration for Ares I-Y
- LC-39A configuration for Ares V

Constellation

- Sub-Orbital: Pad Abort 1
- Sub-Orbital: Ares I-X *4 seg. 1st stage, dummy u/s*
- Sub-Orbital: AA-1 *transonic*
- Sub-Orbital: Pad Abort 2
- Sub-Orbital: AA-2 *max-q*
- Sub-Orbital: AA-3 *tumble*
- Sub-Orbital: Ares I-Y *5 seg 1st stage, dummy u/s*
- NOTE: Sub-orbital test flights prior to Orion 1 subject to change with test experience and funding requirements.
- Orion 1 *5 seg 1st stage, active u/s, active Orion capsule*
- Orion 2 *IOC test flight LIDS*
- Orion 3 *test flight, LIDS*
- Orion 4 *FOC*
- Orion *IOC*
- Orion 5, Orion 6, Orion 7, Orion 8, Orion 9, Orion 10, Orion 11, Ares V-Y, Orion 12
- Altair 1 / Orion 13, Orion 14, Altair 2 / Orion 15, Orion 16, Altair 3 / Orion 17, Orion 18, Altair 4 / Orion 19, Orion 20
- NOTE: The shadowed Orion 2 IOC flight in 2013 is the programmatic manifest date at the 33% confidence level. The bold Orion IOC in 2015 flight is the current Agency commitment at the 65% funding confidence level for the flight manifest.

- Initial Capability (IC) Level 1 SRR
- IC Level 1 SDR
- IC Level 1 PDR 1
- IC Level 1 PDR 2
- IC Level 1 CDR
- IC Level 1 SAR
- Orion SRR, Orion SDR, Orion pre-NAR, Orion PDR, Orion CDR, Orion DCR and SAR
- Ares I SRR, J-2X SRR, Ares I 1st stage SRR
- Ares I-X PDR, J-2X PDR, Ares 1 U/S SRR
- Ares I SDR and pre-NAR, Ares I-X CDR, Ares I U/S SDR
- Ares I U/S PDR, Ares I 1st stage PDR
- Ares I PDR and NAR, J-2X CDR
- Ares I CDR, Ares I U/S CDR
- J-2X MPTA U/S need date
- Start of J-2X testing on A3
- Ares I 1st stage CDR
- Ares I U/S DCR, J-2X DCR, Ares I 1st stage DCR, Ares I DCR
- Lunar Capability (LC) Level 1 SRR
- LC Level 1 SDR, LC Level 1 PDR, LC Level 1 CDR, LC Level 1 SAR
- Ares V project SRR, Ares V project PDR, Ares V project CDR, Ares V project DCR
- Altair project SRR, Altair project PDR, Altair project CDR, Altair project DCR

NOTE: Reusable Solid Rocket Motor segment production

RSRM

- 0 Constellation 35 Shuttle
- 5 Constellation 35 Shuttle
- 10 Constellation 35 Shuttle
- 10 Constellation 0 Shuttle
- 12 Constellation
- 13 Constellation
- 15 Constellation
- 15 Constellation
- 15 Constellation
- 19 Constellation
- 27 Constellation
- 31 Constellation
- 36 Constellation
- 41 Constellation