



8TH BRIEFING FOR INDUSTRY

Implementing the President's Vision

*JPL and NASA's
Exploration Systems Mission Directorate*

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Background

Why Is JPL Involved?

- ✦ Help ESMD be successful as part of NASA's team
- ✦ Seek to be part of later phases of clear interest
 - Surface operations for Moon and Mars
- ✦ Provide opportunities to further develop capabilities in specific areas of strategic interest

Background Guiding Principles

1) Seek ESMD assignments consistent with JPL unique skills

2) Use Constellation infrastructure to advance combination of science and Constellation objectives

3) Be flexible

Background-Current State

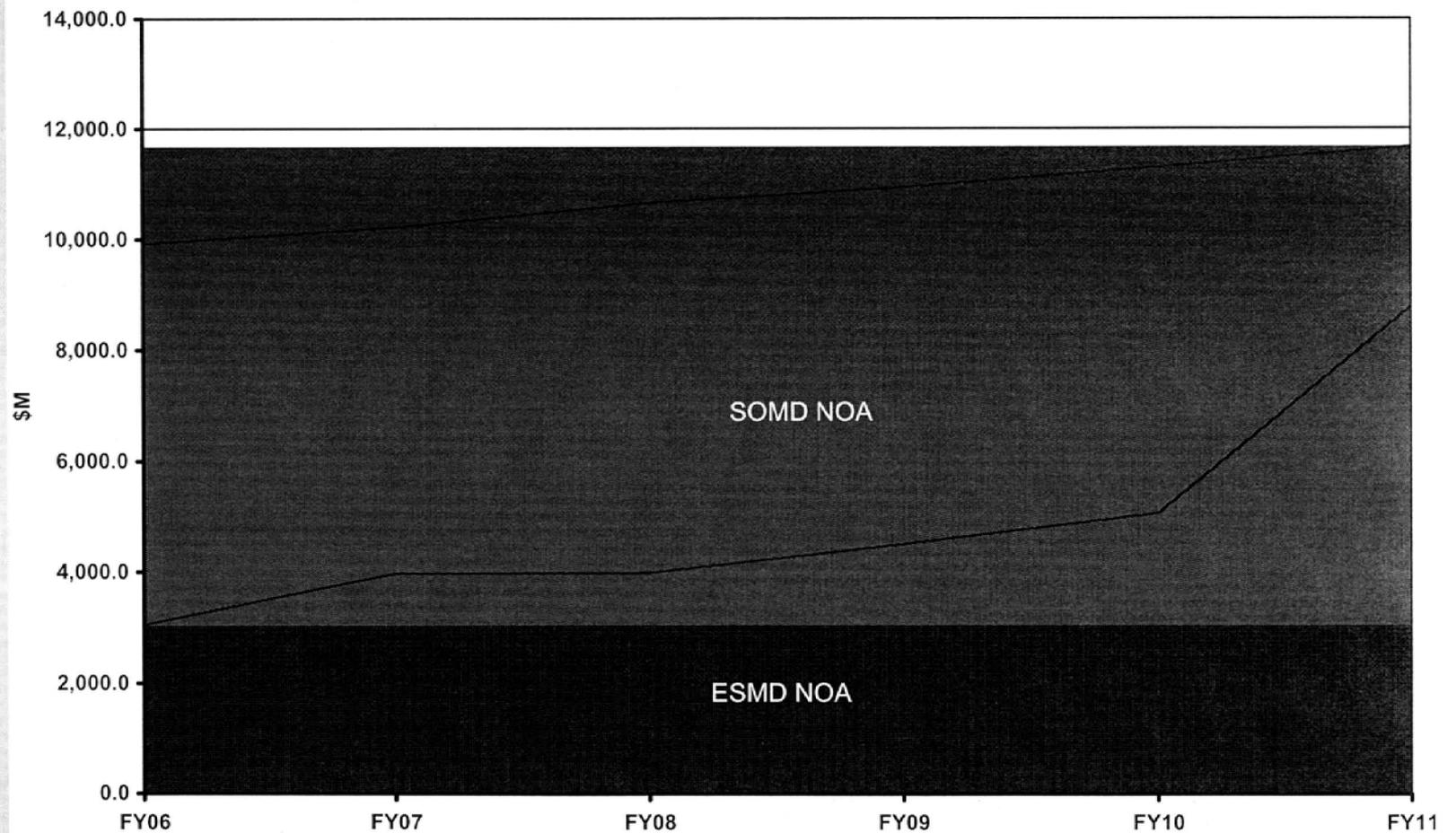
- ✦ Top level ESMD Program roles are stabilizing
 - JSC Level 2 office key staffing well underway
 - ARC RLEP program office staffed
 - LaRC technology program office leadership assignments pending
- ✦ Program content and definition are beginning to move to next levels of detail
- ✦ Budget constraints continue to be the dominant issue
- ✦ ESMD program priorities (ISS support, Moon, then Mars)

Background

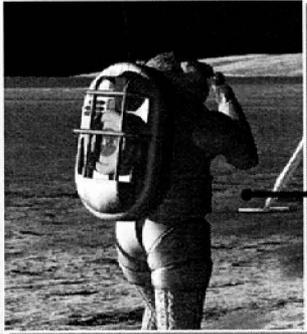
- ✦ Recent key program events
 - Technology program cut, restructured
 - ✦ Very Constellation focused
 - CEV industry strategy modified
 - ✦ CEV RFI and delta released, entering proposal evaluation phase
 - HLV design spinning up
 - ESAS architecture tuned
 - ✦ 5 segment SRM
 - ✦ 5M CEV
 - ✦ Delayed methane/oxygen propulsion, move to J-2x
 - Smart Buyer team for CEV-support module-launch escape system
 - Continuing budget development (Bottoms Up Review and POP preparation)

Human Space Flight NOA

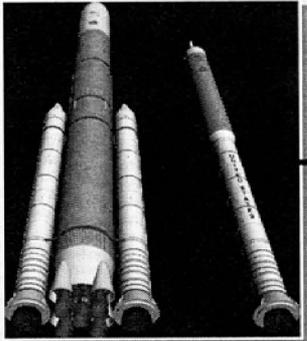
ESMD plus SOMD NOA
(based on President's FY07 Budget)



Major Constellation Assignments



✦ Space Suits (JSC)



✦ Launch Vehicles (MSFC)
(HRLV-CaLV-EDS)

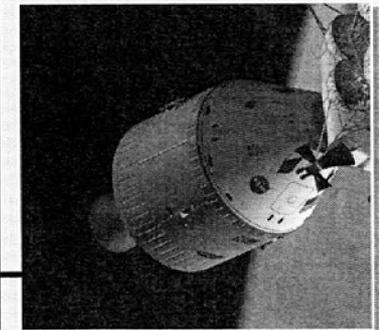
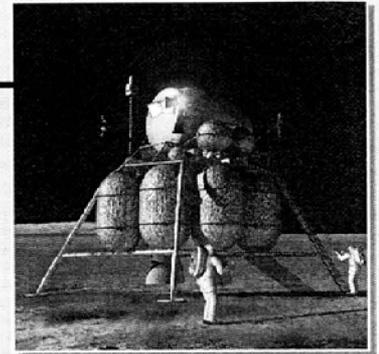


✦ Lunar Surface Access
Module (JSC)

✦ Lunar Ascent (MSFC)

✦ CEV (JSC)

✦ CEV Support Module
(GRC)



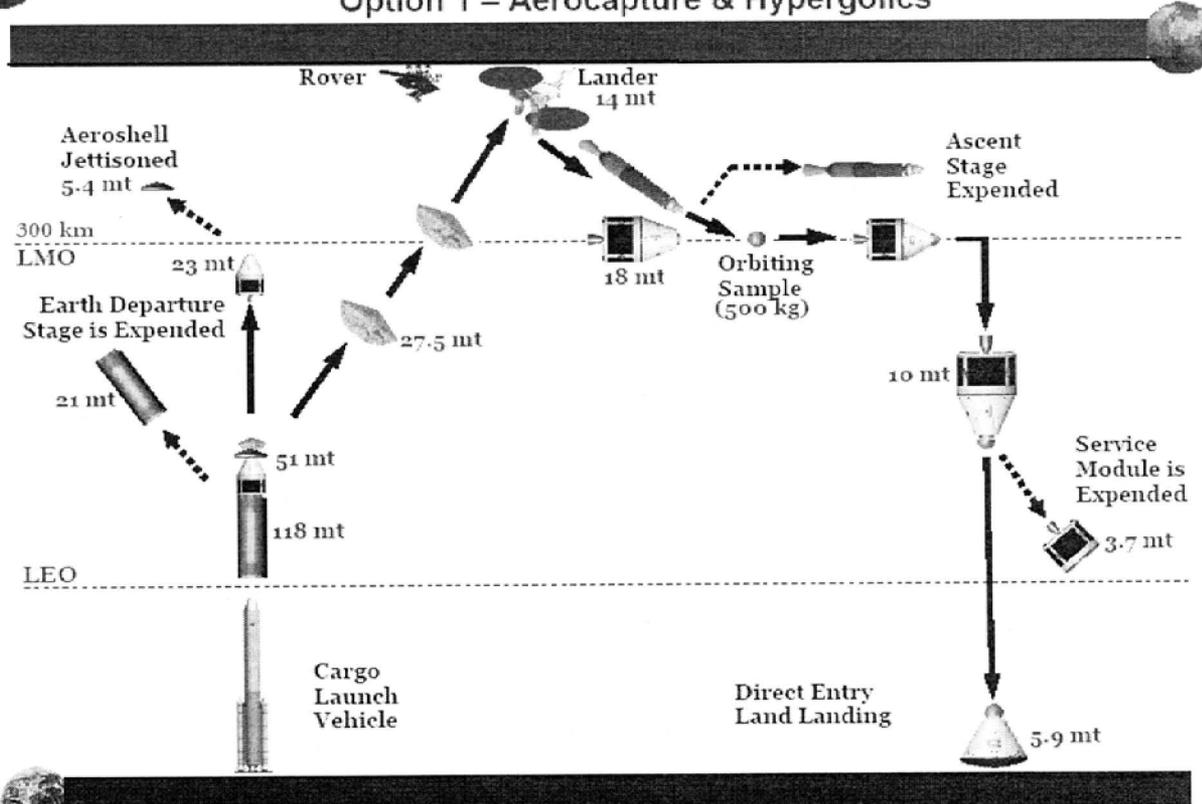
Use Constellation infrastructure to advance combination of science and Constellation objectives



ESAS MSR 1.0 Launch - CaLV w/ CEV SM & CM
Option 1 - Aerocapture & Hypergolics



✦ Example -Cargo launch vehicle and CEV can enable remarkable robotic missions to Mars
 - Multiple sample returns combined with Constellation driven missions on one launch



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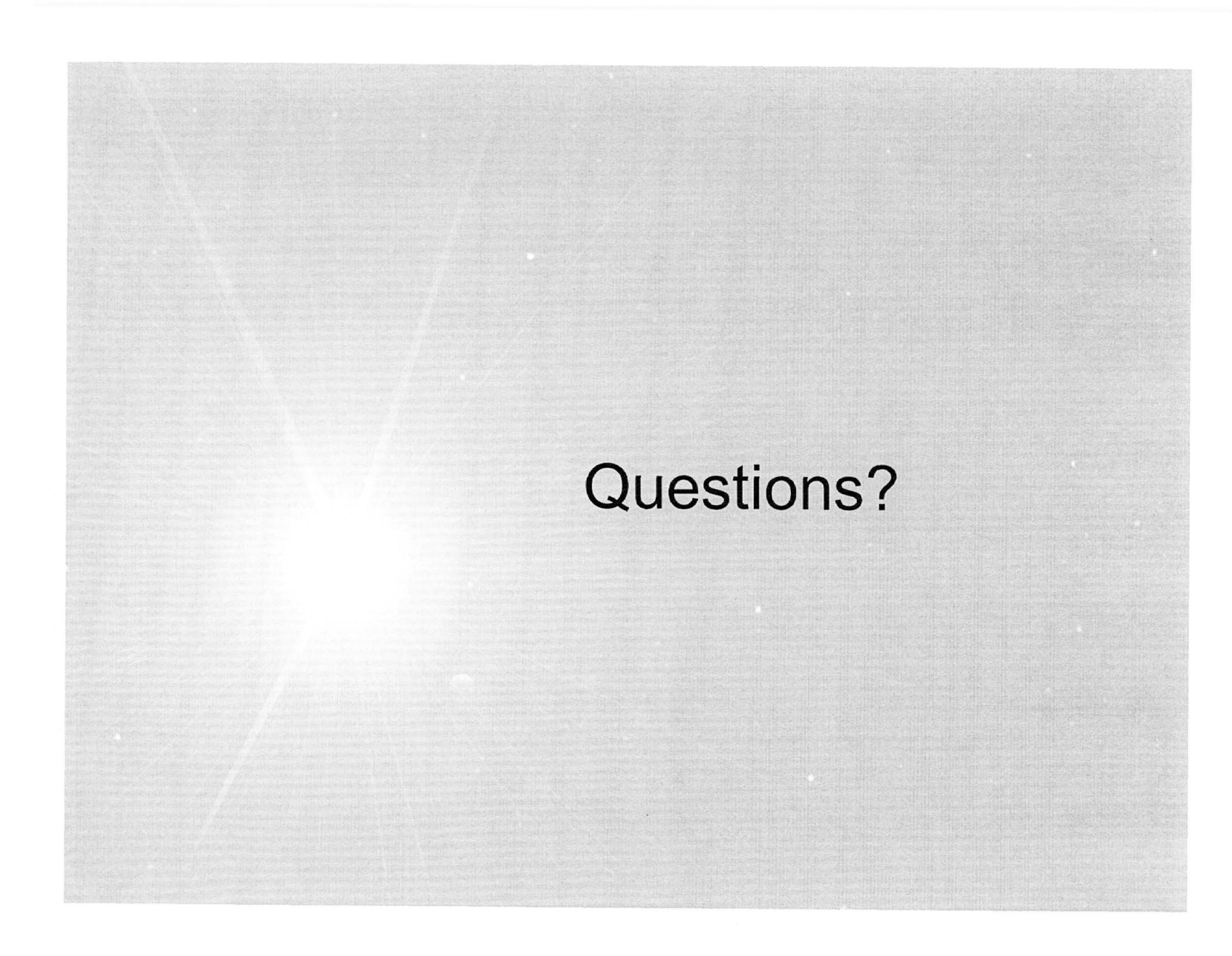
Tom Wilson, 14Mar06

JPL ESMD- Current Participation

- ✦ Systems engineering support to Level 2
- ✦ Command, Control, Computing and Information (C3I) architecture
- ✦ CEV TPS project support/CEV landing assist support
- ✦ Ground support systems support at JSC and KSC
- ✦ Exploration Communication and Navigation System (ECANS)
- ✦ Flight prototypes for cabin atmosphere instruments

Summary

- ✦ ESMD program is stabilizing
- ✦ JPL is engaged
 - Primary current participation is in instruments and Level 2 system engineering
- ✦ Longer term engagement -TBD



Questions?