

Mars Science Laboratory Project Status for PSS

McCuiston
Meyer
Cook

January 9, 2009



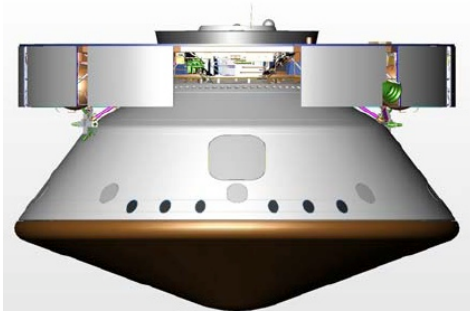
MSL Agenda

PSS—Mars Science Laboratory

- Mission overview
McCuiston 10 Min.
- The MSL Science Story 15 Min. Meyer
- Technical Status 30 Min. Cook
- Replan Status 20 Min. Cook
- Budget Status and Approval Path 10 Min. McCuiston
- Options to Accommodate MSL
Green 30 Min.
Launch Slip



Mission Overview



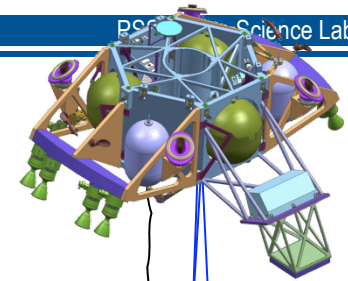
CRUISE/APPROACH

- 10-11 month cruise
- Spinning cruise stage
- Arrive N. hemisphere summer



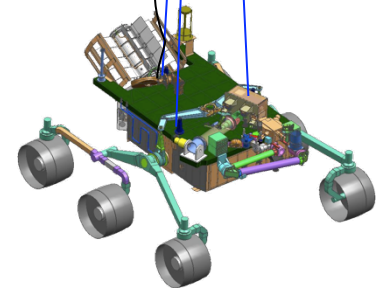
ENTRY, DESCENT, LANDING

- Guided entry and controlled, powered “sky crane” descent
- 20×25-km landing ellipse
- Discovery responsive for landing sites $\pm 30^\circ$ latitude, < 0 km elevation
- 900-kg landed mass



SURFACE MISSION

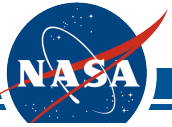
- Prime mission is one Mars year
- Latitude-independent and long-lived power source
- 20-km range
- 80 kg of science payload
- Acquire and analyze samples of rock or soil
- Large rover, high clearance; greater mobility than MPF, MER



LAUNCH

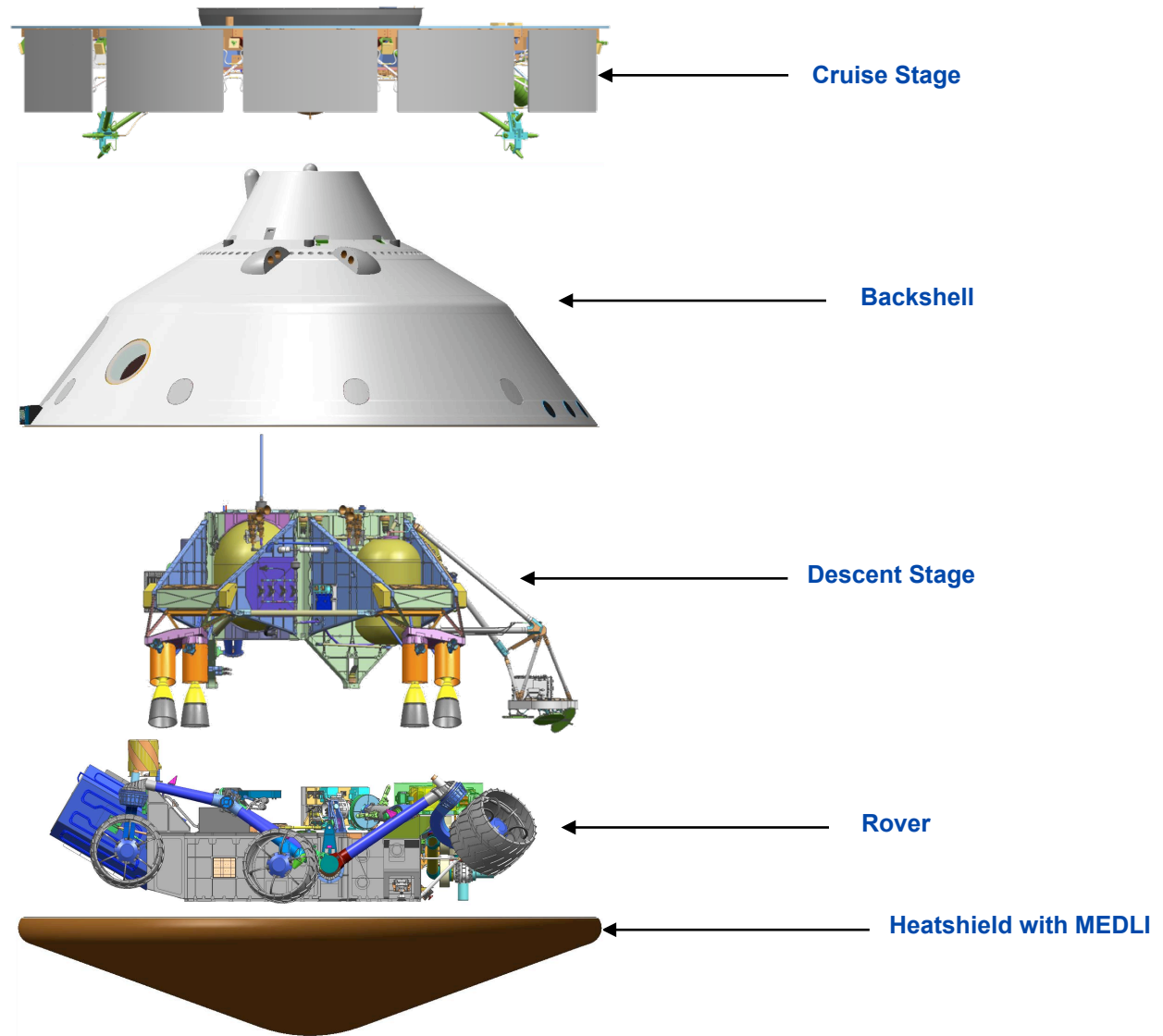
- Atlas V (541)





Major System Elements

PSS—Mars Science Laboratory





Original MSL '09 LRD Schedule

Decision to Delay to 2011

