Journey around the Moon powered by Airbus DS

Orion spacecraft and ESM While travelling around the Moon and back on its first mission (EM-1), the unmanned NASA Orion spacecraft will demonstrate its systems and high speed entry performance prior to crewed flights. Under an ESA contract, Airbus Defence and Solar array Crew Module canting during Space is building the European Service Module (ESM) that will power the Main engine burn spacecraft and hence provide critical functions during the whole mission: **Crew Module Adapter European Service** Stand-by for Abort to Orbit Manoeuvre Module (ESM) in case of emergency Re-entry ESM and Crew Module Adapter burn up Main engine Solar array unfolded **Low Earth Orbit Outbound coasting phase** Solar array deployment Trajectory correction manoeuvres (1) (1) (1) (8) (7) (11) Crew Module/Service Module separation Inbound powered Lunar fly-by Main engine burn to return towards Earth (1) (1) (2) **Distant Retrograde Orbit arrival** Main engine burn for insertion **Trans-Lunar Injection** Propulsion on stand-by for launcher/spacecraft separation (1)(1) Inbound coasting phase Trajectory correction manoeuvres (4) (8) (7) 7 Distant Retrograde Orbit **Distant Retrograde Orbit departure** 1st European supply of critical Main engine burn (1) (1) functions for a NASA space mission: (*) (*) (*) Consumable storage (for later crewed flights) Main engine propulsion **Outbound powered Lunar fly-by** () Thermal control Main engine burn (185 km above surface) Reaction control/auxiliary thruster (1) (1) () Electrical power supply

