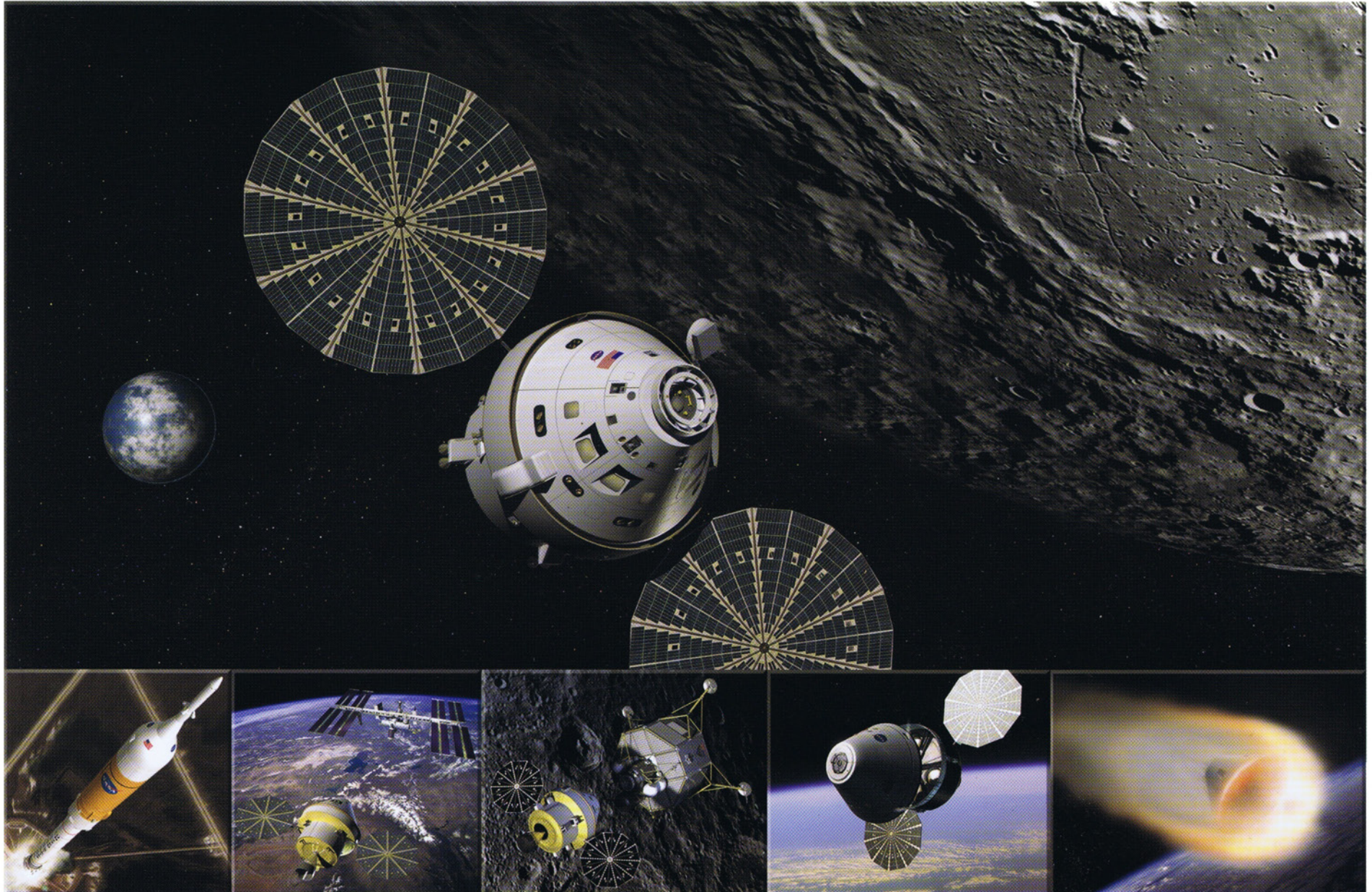


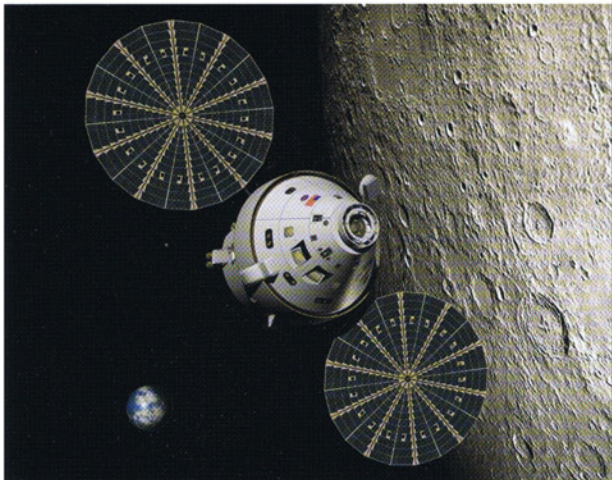


Orion Crew Exploration Vehicle



The Orion Crew Exploration Vehicle

NASA is building a new spacecraft that will become America's primary vehicle for human space exploration beginning in the next decade. The new spacecraft, Orion, is part of the Constellation Program to send explorers to the moon and onward to other destinations in the solar system.



Building on the best of Apollo and shuttle technology, NASA is creating a 21st century exploration system that will be affordable, reliable, versatile and safe. Orion will be able to transport as many as six crew members to the International Space Station and four to the moon. For lunar missions, it will be able to rendezvous in low Earth orbit with a landing craft Earth departure stage. Orion will also be able to rendezvous in low Earth orbit with vehicles that will take explorers to Mars and other destinations in our solar system.

Ares I Launch with Orion

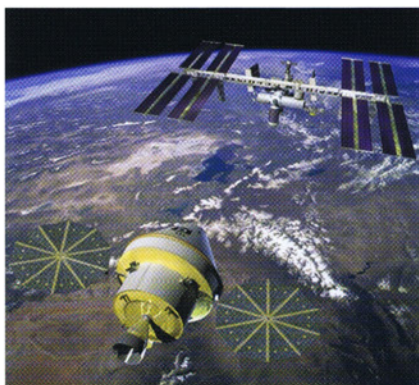
The Orion crew exploration vehicle will be launched into Earth orbit by the Ares I crew launch vehicle. Orion and its launch abort system will be placed at the top of the Ares I rocket to eliminate the threat to the crew from falling debris on launch and ascent.



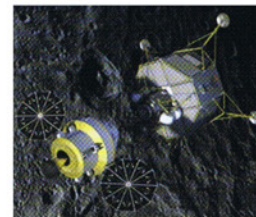
The launch abort system will be placed at the top of the Ares I rocket to eliminate the threat to the crew from falling debris on launch and ascent. The first stage of the Ares I is a single, five-segment reusable solid rocket and its upper stage is powered by a J-2X engine.

Orion on Approach to International Space Station

Orion's first task will be to provide access to the space station. Orion can remain docked to the station for as long as six months, providing the crew a means to return to Earth at any time. Orion will also be able to carry cargo and supplies to the space station.



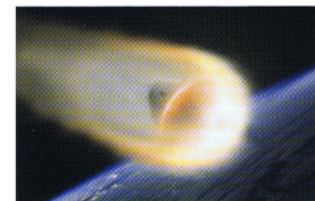
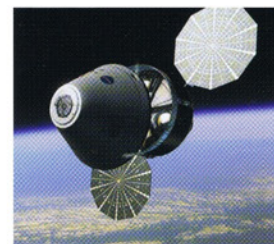
Arrival in Lunar Orbit



For missions to the moon, Orion will dock in low Earth orbit with a lunar lander module, Altair, and an Earth departure stage. The Earth departure stage will propel Orion and Altair to the moon. Once they have reached lunar orbit, astronauts will use the landing craft to travel to the moon's surface. Orion will stay in lunar orbit waiting for the crew to return in a part of the lander called the ascent module. When all the astronauts are back inside Orion, the spacecraft will break out of the lunar orbit and head home to Earth, propelled by the main engine of its service module.

Orion Returns to Earth

The service module will support Orion until just before the crew module reenters Earth's atmosphere. The service and crew modules will separate and Orion will descend to Earth's surface with the aid of parachutes and airbags.



Visit www.nasa.gov for the latest on the Constellation Program and Project Orion.