National Aeronautics and Space Adminstration

A Mars mission, launching from Cape Canaveral, Florida on an Atlas V 401 rocket. Learn more at:

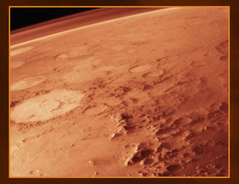
http://nasa.gov/maven
http://mars.nasa.gov/maven

What happened to Mars?

NASA's MAVEN spacecraft will orbit Mars to explore how the sun may have stripped Mars of most of its atmosphere, turning a planet that may have been habitable for microbial life into a cold and barren desert world.

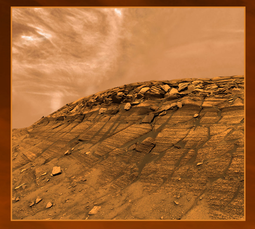
Why does MAVEN Matter?

- MAVEN will provide information on how quickly atmospheric gasses are being lost to space today and study how the Martian atmosphere was lost to space.
- MAVEN will reveal clues about the impact of that change on Martian climate, geology and geochemistry over time.



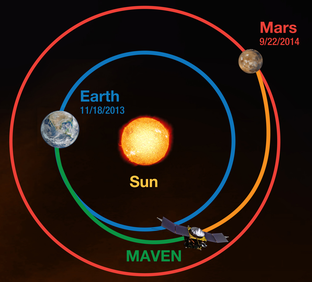
MAVEN: Exploring Mars Climate History

- First spacecraft to make direct measurements of the Martian upper atmosphere
- First Mars mission managed by the Goddard Space Flight Center
- Responsive to high-priority planetary science and heliophysics goals.



MAVEN Timeline

- MAVEN will launch from Cape Canaveral, Fla., during a 3-week period that begins on November 18, 2013.
- The trip to Mars takes 10 months, when MAVEN will go into orbit around Mars in September 2014.
- It will take 5 weeks for the spacecraft to get into its final science-mapping orbit, test the instruments, and test science mapping sequences.
- MAVEN has a 1-Earth-year primary mission during which time it will make key measurements.

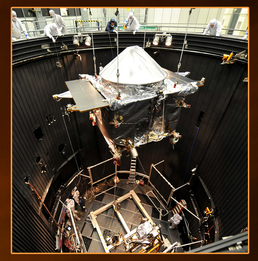


MAVEN will follow a ballistic trajectory from Earth to Mars. Launch is timed so that MAVEN gets to Mars at the same time that Mars is there waiting for us.

The Payload

MAVEN will carry three instrument suites:

- Particles and Fields Package (PFP) contains six instruments that characterize the solar wind and the ionosphere of the planet.
- Remote Sensing Package will determine global characteristics of the upper atmosphere and ionosphere.
- Neutral Gas and Ion Mass Spectrometer (NGIMS) will measure the composition and isotopes of neutrals and ions.



MAVEN

Mars Atmosphere and Volatile Evolution Mission

— Exploring Mars Climate History —

www.nasa.gov