

# Solar System Exploration: This is the 2006 Solar System Exploration Roadmap for NASA's Science Mission Directorate, National Aeronautics and Space Administration, Jet Propulsion Laboratory, California Institute of Technology, 2006, 2006

Our solar system forms one of the smaller arms, called the Orion-Cygnus Arm, or simply the Orion Arm. If our solar system were the size of your hand, the Milky Way would cover North America, according to NASA Jet Propulsion Laboratory's Night Sky Network. Jupiter is the biggest planet in the solar system. Unlike its four neighbors closer to the sun, Jupiter is a gas giant, mainly made up of helium and hydrogen. It is named after the king of the Roman gods, who is also known as Zeus in the Greek pantheon. Jupiter is twice as big as all of the other planets in the solar system combined, and yet it also has the shortest day of any planet, taking 10 hours to turn about its axis. Follow the latest solar system discoveries with NASA's Solar System Exploration. See all comments (0). NASA, Solar System Exploration Division Roadmap for NASA's Science Mission Directorate, Jet Propulsion Laboratory Technical Report CL#06-1867-A, Pasadena, CA, 2006 (available online at <http://science.hq.nasa.gov/strategy/comm.html>). Smith, P. H. and the Phoenix Science Team, Overview of the Phoenix Mars Lander Mission, 4th Int. Conf. Mars Polar Sci. Explor., Davos, Switzerland. LPI Contribution No. 1323, p. 8010, 2006. Smrekar, S. E., Zurek, R. W., Keating, G. M., et al., Mars Reconnaissance Orbiter's first look at Mars, Lunar Planet. Sci. Conf. XXXVIII, League City, Texas, LPI Contr Why explore Mars. Over the last century, everything we've learned about Mars suggests that the planet was once quite capable of hosting ecosystems and that it might still be an incubator for microbial life today. Mars is the fourth rock from the sun, just after Earth. It is just a smidge more than half of Earth's size, with gravity only 38 percent that of Earth's. It takes longer than Earth to complete a full orbit around the sun but it rotates around its axis at roughly the same speed. That's why one year on Mars lasts for 687 Earth days, while a day on Mars is just 40 minutes longer than on