

Exploring Our Solar System

New Views of Old Worlds

Course #	20SES
Format:	Seminar
Moderator(s):	Martha Hanner, Dorothy Rosenthal
Date and Time:	Tuesday, 10:00- Noon 10 weeks, starting Feb. 25, 2020
Location:	Applewood in Amherst, meeting room
Maximum number of participants:	18
Auditors accepted:	Yes, up to 2

Purpose: In this seminar we will explore the planets, moons, asteroids, and comets comprising our solar system and the space missions that have unveiled their mysteries.

Description: Throughout human history, people have wondered about the planets ("wanderers") that slowly moved against the background constellations. Within our lifetime, our views of the planets have been transformed from distant points of light into individual worlds with a surprising variety of physical properties. In this seminar, we will explore the new views of the solar system based on almost sixty years of exploration by robotic spacecraft and modern telescopes. We begin with the innermost planets, Mercury and the Messenger Mission: Venus and the Magellan Mission. We will study Mars today and yesterday, reviewing evidence for water and early life. We will travel past asteroids Ceres and Vesta, then learn from the Galileo mission about giant Jupiter and its 4 moons. We continue to Saturn and its moon, Titan, before journeying to the outer solar system, where we will visit Uranus, Neptune and Triton. We will arrive at the dwarf planet Pluto, then conclude our journey by learning about comets and their origin.

Role of participants: Participants will select topics about major objects in the solar system from the list provided by the moderators and make a presentation on their topic. All members will participate actively in discussion of each topic.

Resources: Because much of the information is recent, the internet will be a good source of information, particularly the Planetary Society's website, www.planetary.org. In addition, each of the planetary probes has a website. The PBS series of programs on "The Planets" and "Ancient Views" are highly recommended (and may be available on the internet at pbs.org).

About the Moderators: Martha Hanner is an astronomer and planetary scientist who worked on various NASA missions to the planets while at California Institute of Technology/Jet Propulsion Laboratory. After retiring to Amherst, she taught an honors course on planetary exploration at UMass. Dottie Rosenthal is a biologist whose first interest in science was astronomy. She has been a member of LIR for 20 years and moderated or co-moderated many seminars in biology.