

EXPLORING OUR SOLAR SYSTEM  
5CLIR SEMINAR – SPRING, 2021  
TENTATIVE OUTLINE

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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. 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 Venus, both sizzling worlds, but for different reasons. We will study Mars today and yesterday, reviewing evidence for water and early life. We will travel through the asteroid belt, past the large asteroids Ceres and Vesta, as well as learning about NASA's mission to return a sample from asteroid Bennu. Giant Jupiter and its 4 large moons will be our next stop, then we'll continue to the ringed planet Saturn and its unique moon Titan. We will follow the Voyager 2 spacecraft past the outer planets Uranus and Neptune. Finally, we will arrive at the dwarf planet Pluto, then conclude our journey by learning about comets and their origin.

Tentative Outline

| Session # | Topic                                   |
|-----------|---|
| 1         | Introductions                           |
|           | Overview of the Solar System            |
| 2         | Mercury and the Messenger Mission       |
|           | Venus and the Magellan Mission          |
| 3         | Mars Today and the Rovers               |
|           | Mars Yesterday: Water? Life?            |
| 4         | Asteroids: Mission to Ceres and Vesta   |
|           | Near Earth Asteroids, NASA Missions     |
| 5         | Jupiter and the Galileo & Juno Missions |
|           | The Four Large Moons of Jupiter         |
| 6         | Saturn and Its Rings                    |
|           | Titan: Saturn's Moon                    |
| 7         | Uranus and Voyager 2                    |
|           | Neptune and Triton                      |
| 8         | Pluto and the Kuiper Belt               |
|           | Discussion                              |
| 9         | Comets and the Oort Cloud               |
|           | The Rosetta Mission                     |
| 10        | Discussion                              |
|           | Planets Around Other Stars              |
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