

“Worlds Seen for the First Time - Ceres and Pluto”

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This year, the planetary spacecraft Dawn and New Horizons will visit two significant bodies in the solar system. These bodies are the dwarf planets Ceres and Pluto. From these encounters, our hope is that we will be able to understand how Ceres and Pluto fit into the origin and evolution of our solar system.

Ceres was first discovered in 1801 and thought to be a planet. It was only realized 50 years later that Ceres was a member of a huge number of objects in what we now know as the asteroid belt. The Dawn spacecraft was just captured into orbit around the dwarf planet Ceres. After spending more than a year at another asteroid called Vesta and spending 2.5 years finally getting to Ceres. We know almost nothing about Ceres and the new images that are being sent back are showing a fascinating world, from heavily cratered regions, to large smooth plains, and a number of mysterious bright spots that have not been resolved yet. Dawn will continue to spiral down, staying in certain orbits, until reaching an altitude of ~475 km. Ceres is about to reveal it's secrets.

In mid-July another spacecraft, named New Horizons, will fly through the Pluto system revealing another dwarf planet and its five moons. Pluto was discovered in 1930 and is the largest member of the region where thousands of other similar bodies exist beyond the orbit of Neptune. We call that region the Kuiper Belt. We know so very little about Pluto and its moons. We also hope to be able to compare Pluto and Ceres to see how these two bodies might be related. This is indeed a fascinating time for planetary science.