
JOURNAL CLUB

The NASA Deep Impact Mission

by

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ABSTRACT

Comets have amazed and intrigued observers for centuries. We now know that they are leftover material from the formation of the solar system, that normally reside in reservoirs outside the orbit of Neptune. Three recent comet missions have only observed the exterior of the comet nuclei, but have added greatly to interest in comets. A major unknown is what is the pristine material inside of cometary nuclei. The Deep Impact mission was designed to answer this question by excavating a crater about 100 meters in diameter and 10's of meters deep using a self-guided 350 kg spacecraft that will impact the surface at 10 km / sec (22,000 mph). A flyby spacecraft will observe the impact and the crater development remotely. The mission is expected to give us the first look inside a comet. This talk will discuss some of the outstanding questions in cometary science, the mission design and the spacecraft and science instrument designs, as well as the current status of integration and test.

Friday, March 12, 2004
Elvey Bldg. Globe Room
3:45 pm