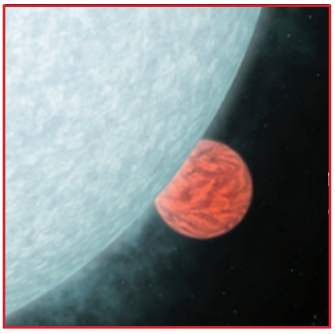
NASA Facts

EPOXI

EPOXI combines two exciting science investigations in an entirely new mission that re-uses the Deep Impact spacecraft already in orbit around the Sun



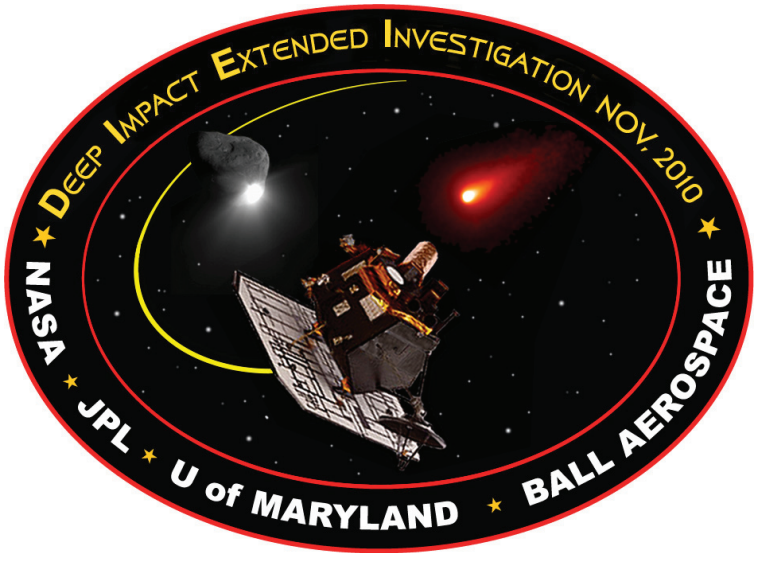
EPOCh: the **E**xtrasolar **P**lanet **O**bservation and **Ch**aracterization investigation observed stars with known transiting giant planets

Science Objectives:

- ❖ Observe multiple transits of giant planets in orbit around other stars, to improve our knowledge of those planets
- ❖ Find additional planets, down to Earth-size, from a direct search for transits and from perturbations to the giant planets transits
- ❖ Search for rings and moons associated with the giant planets
- ❖ Detect light reflected from the giants planets, to learn about clouds and the atmosphere
- ❖ Characterize the Earth as an extrasolar planet analog

DIXI: the **D**eep **I**mpact e**X**tended **I**nvestigation of comets will observe comet 103P/Hartley 2 during a close flyby in November 2010

Science Objectives:

- ❖ Understand the structure, composition, and formation history of cometary nuclei to learn more about the origin of the solar system
- ❖ Understand how features of the cometary nucleus relate to features of the coma
- ❖ Understand diversity between cometary nuclei
- ❖ Understand heterogeneity within a cometary nucleus

EPOXI (epoxi.umd.edu) embraces NASA's mission to explore the origin and history of our solar system by understanding the composition and diversity of cometary nuclei and the properties of other planetary systems.