

STARDUST – Mission & Instrument Status

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The 4th NASA Discovery Mission, STARDUST, was launched on February 7, 1999 and has completed its Earth gravity assist (EGA). The spacecraft is on the second of the third loop around the Sun. The EGA increased the speed of the spacecraft and the second loop would change the orbital inclination angle to match that of P/Wild-2 comet for an encounter in January of 2004 and an Earth return in January of 2006 in the third loop.

STARDUST is a dust focused mission with four dust measurements plus an Imaging Camera: Sample Instrument to collect cometary, interstellar, IDPs, Solar β meteorites samples; Comet and Interstellar Dust Analyzer to provide in situ time-of-flight spectrometry of encounter dust; Dust Flux Monitor to record dust by three sensors covering 10 μm to 1 cm size range; X-band transponder to provide integrated dust by two-way-Doppler shifts and the large impacts by small forces file from the attitude control subsystem; the Imaging Camera guides the spacecraft to the comet by optical navigation as well as provides both Wild-2 coma and nucleus images.

This presentation will discuss the current status of STARDUST as a mission and the various instruments.