

## **The Stardust Sample Return Mission**

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The NASA Discovery-class *Stardust* comet sample return mission collected samples from the coma of Comet 81P/Wild 2 and returned them to Earth for study in 2006. The samples were collected at hypervelocities using low-density aerogel as the spacecraft did a flyby of the comet's nucleus. In this talk, I will begin by giving an overview of the mission that covers (i) the mission design, (ii) the spacecraft, and (iii) the spacecraft's encounter with Comet/81P Wild 2 and its subsequent return to Earth. This will be followed by a discussion of many of the principal scientific discoveries that resulted from both the comet flyby and the study of the returned samples in terrestrial laboratories (discoveries that will continue to grow as the returned samples continue to be studied in the future).