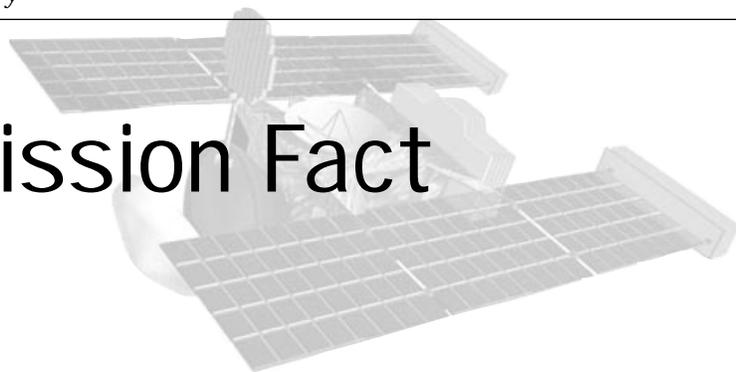


# STARDUST Mission Fact Sheet



## The STARDUST Mission

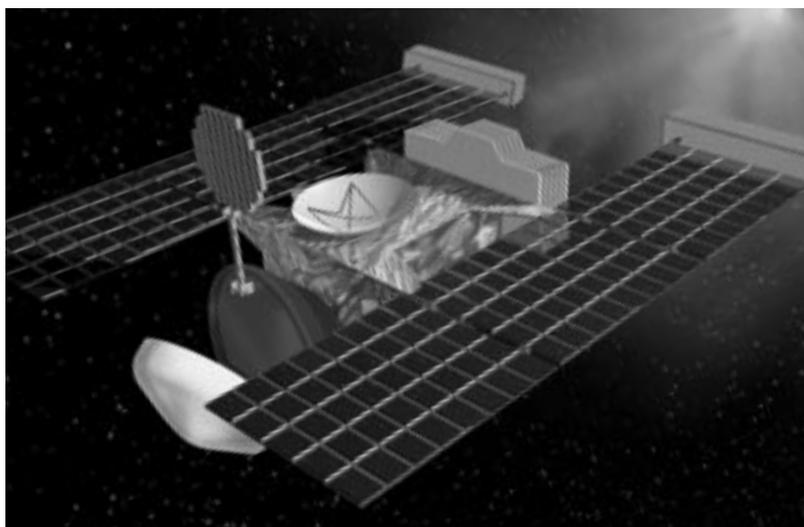
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STARDUST is a small spacecraft that will rendezvous with Comet Wild 2, (pronounced "Vilt" after its Swiss discoverer professor Paul Wild) in 2004. It is the first spacecraft to capture and return cometary dust to Earth for analysis. The spacecraft was launched in February 1999 on board an expendable launch vehicle and rendezvous with Comet Wild 2 in January 2004, coming within 150 kilometers (93 miles) of the comet's nucleus. The particles STARDUST will return are made of ancient material that formed our Sun and planets. What we learn about Comet Wild 2 will probably reshape our understanding of how our Solar System—and perhaps even life—formed.

## Comet Wild 2

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Jupiter changed Comet Wild 2's orbit in 1974 when the comet made a close approach to the gas giant. A predictable six-year orbit made Wild 2 a good target for the STARDUST mission. Also, Wild 2 is a pristine comet - one that is close to its



original state. Every time a comet travels near the Sun it loses gas and dust. Wild 2 will only have made 5 passes around the Sun by the time STARDUST reaches it. The fewer the passes a comet makes near the Sun, the less altered it is from its original state. The more pristine a comet is, the more clues it may reveal to scientists about the formation of the Solar System and possibly life itself.



## Key STARDUST Dates

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|                                  |   |
|----------------------------------|---|
| <b>1974</b>                      | <b>Comet Wild 2 orbit altered by Jupiter, bringing it into the inner Solar System in pristine condition</b> |
| <b>January 1978</b>              | <b>Paul Wild discovers Comet Wild 2</b>   |
| <b>1995</b>                      | <b>NASA selects STARDUST mission</b>  |
| <b>February 1999</b>             | <b>STARDUST Launch</b>  |
| <b>March 2000 - May 2000</b>     | <b>First Interstellar Dust Collection</b>   |
| <b>January 2001</b>              | <b>Earth flyby</b>  |
| <b>July 2002 - December 2002</b> | <b>Second Interstellar Dust Collection</b>  |
| <b>January 2004</b>              | <b>Wild 2 Encounter</b>   |
| <b>January 2006</b>              | <b>Sample Return Capsule returns to Earth</b>   |

