

Comparing Cosmic Cameras

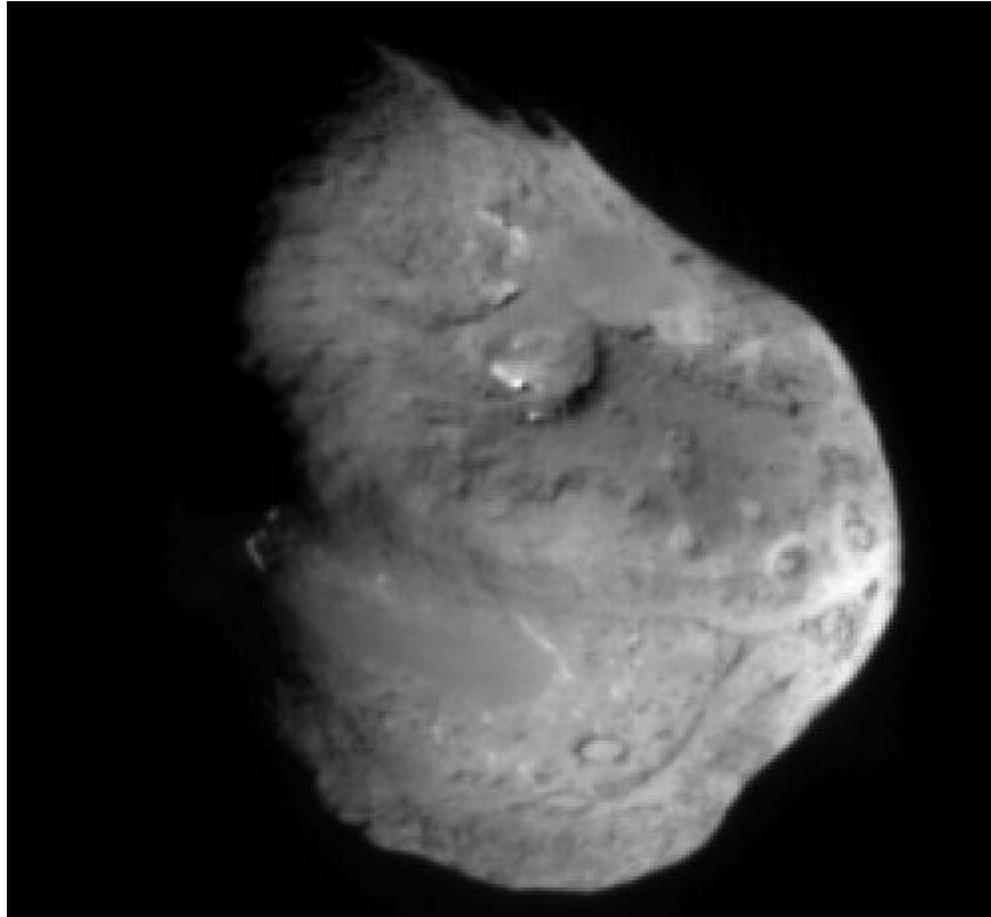


Images from Space



Image of Comet Wild 2
("Vilt") from the Stardust
Navigation Camera

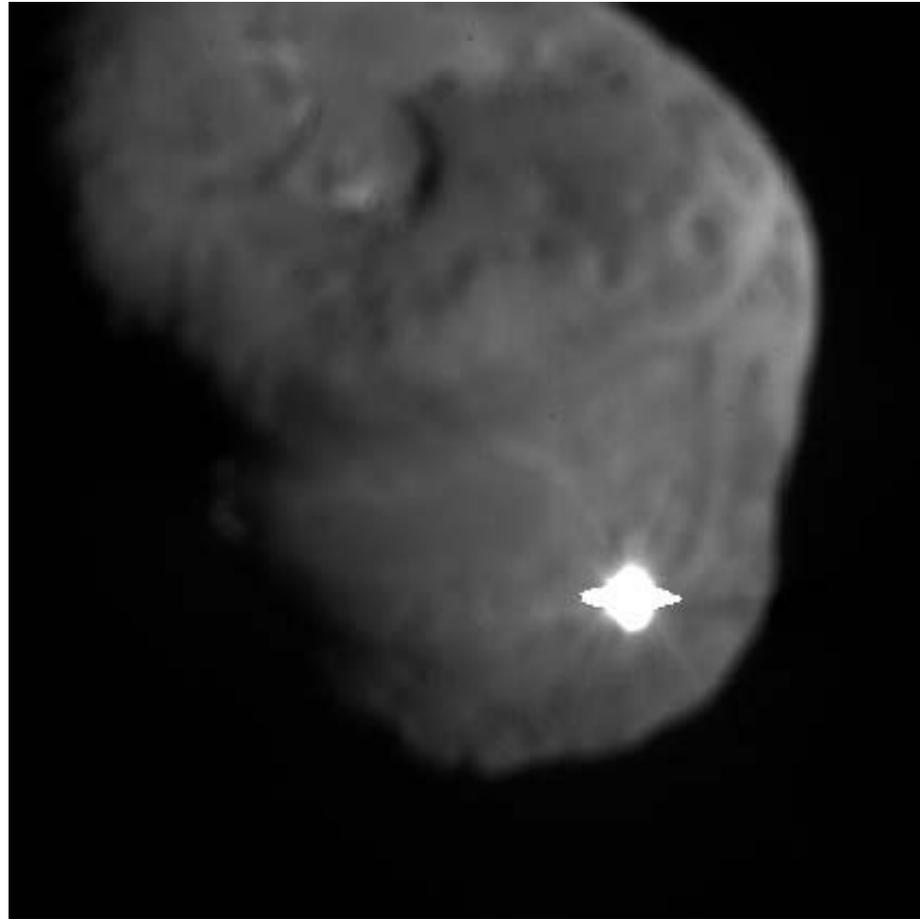
Comet Tempel 1 from the Impactor



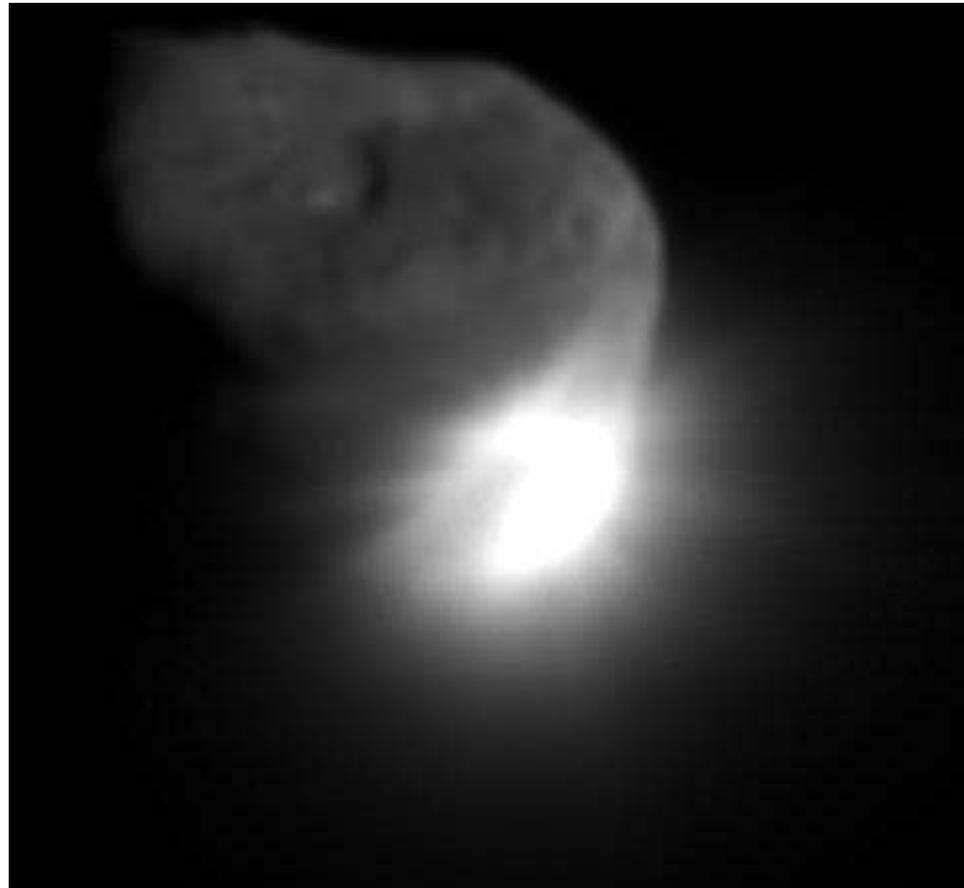
--NASA/JPL-Caltech/UMD



Comet Tempel 1 as seen from the flyby spacecraft's high-resolution camera



Comet Tempel 1 as seen from the flyby spacecraft's medium-resolution camera



Now what?

- Stardust-NExT visited Comet Tempel 1 on February 14, 2011
- Scientists used the navigation camera to image the comet nucleus
- Stardust-NExT's camera took images from about 200 km which is much closer than Deep Impact's pass by the comet nucleus at about 700 km
- This lesson investigates how the images will compare



Camera Facts

	Stardust Navigation Camera	Deep Impact Medium- resolution Imager	Deep Impact High- resolution Imager
Focal Length	0.200 m	2.1 m	10.5 m
Field of View	3.5 degrees	0.587 degrees	0.118 degrees
Distance at closest approach	200 km	700 km	700 km
Final Image Resolution (at closest approach)	12 m / pixel	10 m / pixel	2 m / pixel

A prediction about the image quality

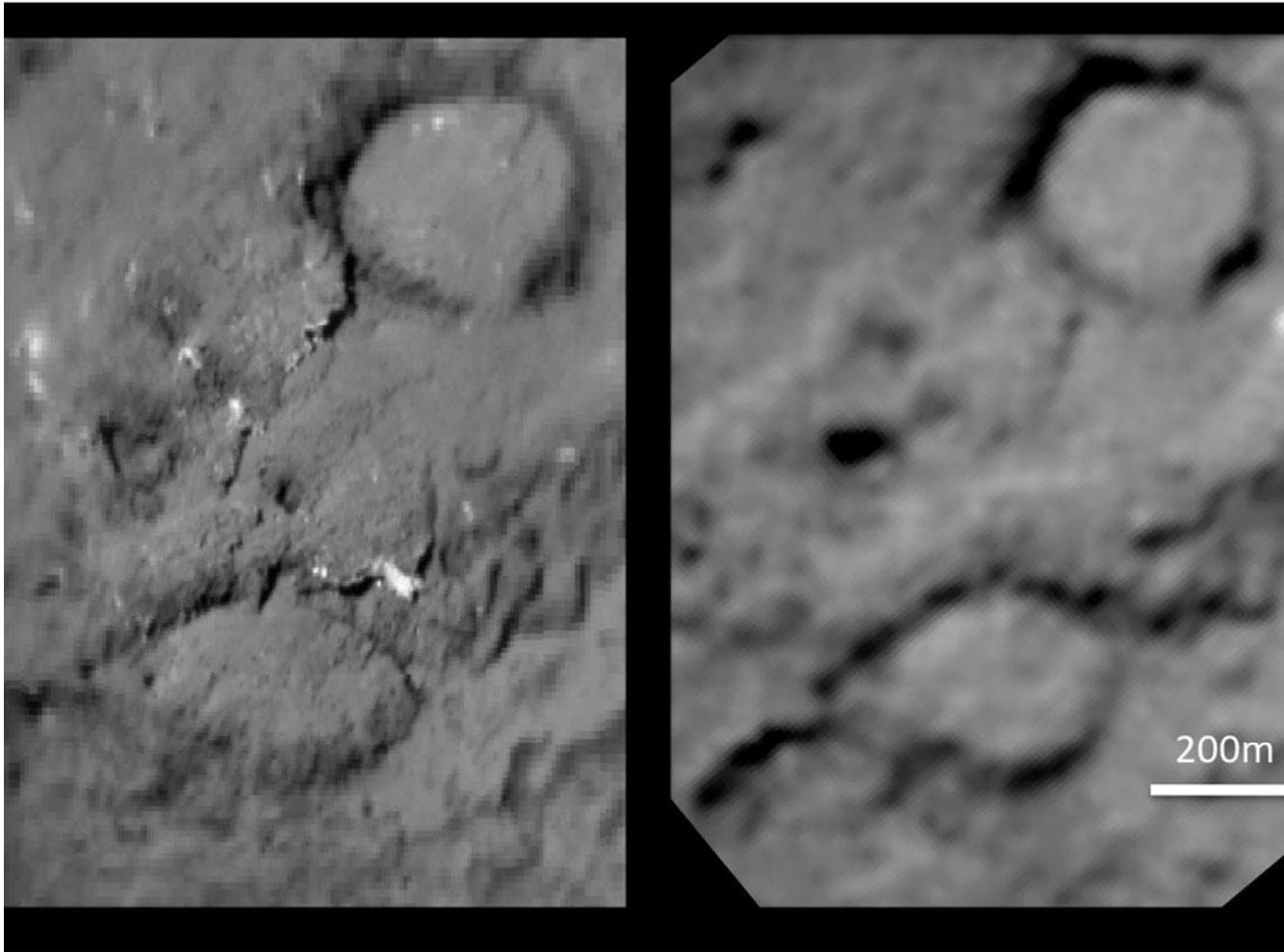


Deep Impact from the medium-resolution imager



Image from the medium-resolution imager modified to show the possible quality of an image from Stardust-NExT

Actual Images



Deep Impact

Stardust-NExT



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Stardust-NExT

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