

Cassini returns images of battered Saturn Moon

March 12 2013, by Jia-Rui C. Cook



This image was taken on March 10, 2013, and received on Earth March 10, 2013 by NASA's Cassini spacecraft. The camera was pointing toward Rhea at approximately 174,181 miles (280,317 kilometers) away, and the image was taken using the CL1 and CL2 filters. This image has not been validated or calibrated. Credit: NASA/JPL/Space Science Institute

(Phys.org) —Following its last close flyby of Saturn's moon Rhea,



NASA's Cassini spacecraft captured these raw, unprocessed images of the battered icy moon. They show an ancient, cratered surface bearing the scars of collisions with many space rocks. Scientists are still trying to understand some of the curious features they see in these Rhea images, including a curving, narrow fracture or a graben, which is a block of ground lower than its surroundings and bordered by cliffs on either side. This feature looks remarkably recent, cutting most of the craters it crosses, with only a few small craters superimposed.

Cassini flew by Rhea at an altitude of 620 miles (997 kilometers) on March 9, 2013. This flyby was designed primarily for the radio science sub-system to measure Rhea's <u>gravity field</u>. During closest approach and while the radio science sub-system was measuring the icy satellite's gravity field, the imaging team rode along and captured 12 images of Rhea's rough and icy surface. Outbound from Rhea, Cassini's cameras captured a set of global images from a distance of about 167,000 miles (269,000 kilometers).





This image was taken on March 09, 2013, and received on Earth March 10, 2013, by NASA's Cassini spacecraft. The camera was pointing toward Rhea at approximately 1,727 miles (2,779 kilometers) away, and the image was taken using the CL1 and CL2 filters. Credit: NASA/JPL/Space Science Institute

Data from Cassini's cosmic dust analyzer were also collected to try to detect any dusty debris flying off the surface from tiny meteoroid bombardments. These data will help scientists understand the rate at which "foreign" objects are raining into the <u>Saturn system</u>.





This image was taken on March 09, 2013, and received on Earth March 10, 2013, by NASA's Cassini spacecraft. The camera was pointing toward Rhea at approximately 2,348 miles (3,778 kilometers) away, and the image was taken using the CL1 and CL2 filters. Credit: NASA/JPL/Space Science Institute

This was the mission's fourth close encounter with Rhea. The spacecraft will pass the moon, but at a much greater distance, in a few years.



Provided by NASA

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