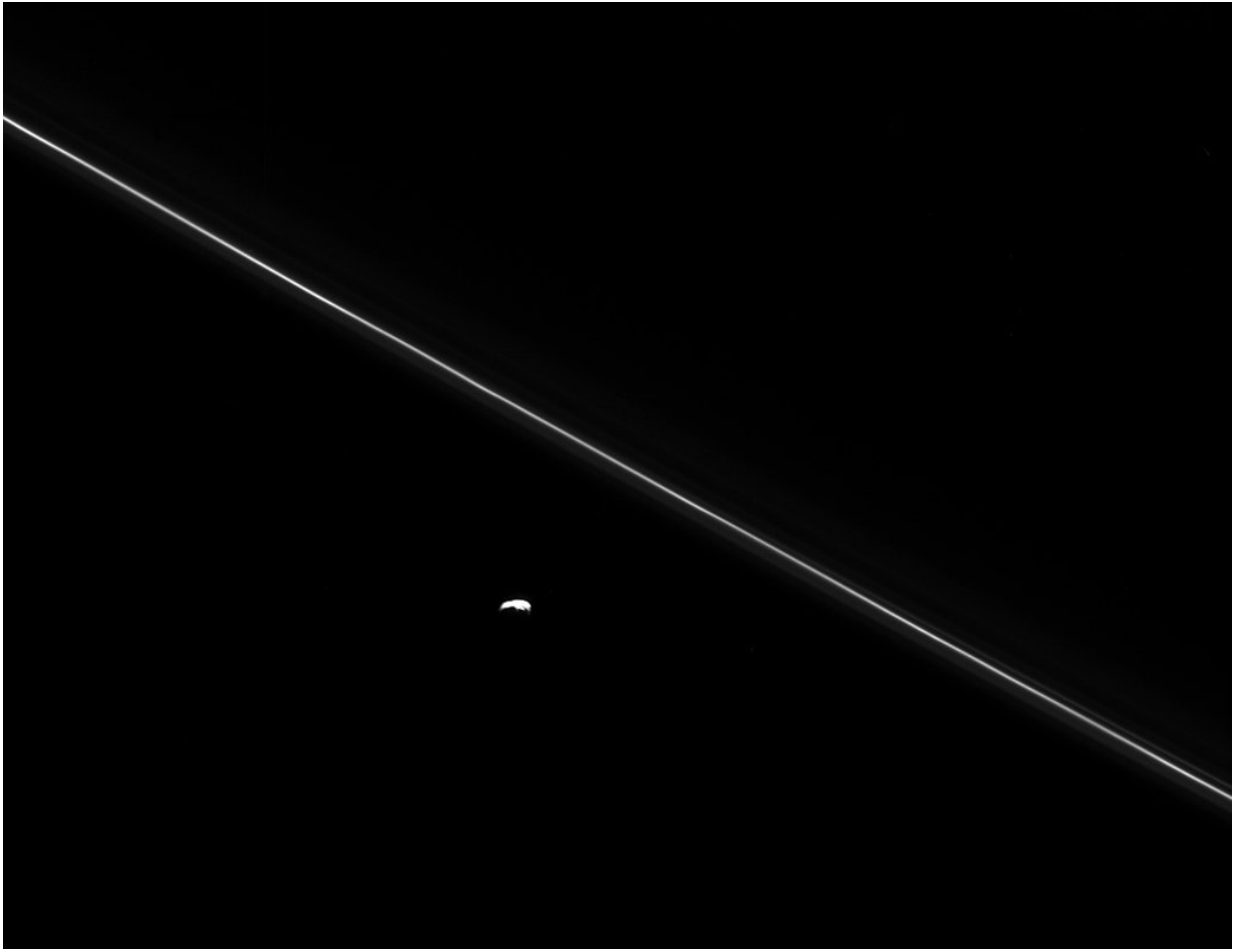


Image: Pandora, the would-be perturber

November 7 2017



Credit: NASA/JPL-Caltech/Space Science Institute

As Cassini hurtled toward its fatal encounter with Saturn, the spacecraft turned to catch this final look at Saturn's moon Pandora next to the thin

line of the F ring.

Over the course of its mission, Cassini helped scientists understand that Pandora plays a smaller role than they originally thought in shaping the narrow ring. When Cassini arrived at Saturn, many thought that Pandora and Prometheus worked together to shepherd the F ring between them, confining it and sculpting its unusual braided and kinked structures. However, data from Cassini show that the gravity of the two moons together actually stirs the F ring into a chaotic state, generating the "gap and streamer" structure seen elsewhere.

Recent models, supported by Cassini images, suggest that it is Prometheus alone, not Pandora, that confines the bulk of the F ring, aided by the particular characteristics of its orbit. Prometheus establishes stable locations for F [ring](#) material where the moon's own gravitational resonances are least cluttered by the perturbing influence of its sibling satellite, Pandora.

This view looks toward the sunlit side of the rings from about 28 degrees above the ringplane. The image was taken in visible light with the Cassini [spacecraft](#) narrow-angle camera on Sept. 14, 2017.

The view was obtained at a distance of approximately 360,000 miles (577,000 kilometers) from Pandora and at a Sun-Pandora-spacecraft, or phase, angle of 119 degrees. Image scale is about 2.2 miles (3.5 kilometers) per pixel.

The Cassini spacecraft ended its mission on Sept. 15, 2017.

Provided by NASA

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