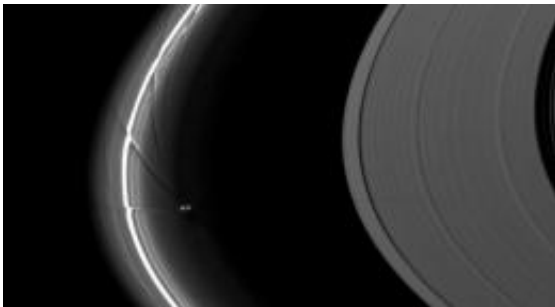


# Image: Prometheus Plays Tug of War with One of Saturn's Rings

November 25 2009

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Saturn's moon Prometheus, orbiting near the streamer-channels it has created in the thin F ring, casts a shadow on the A ring in this image taken a little more than a week after the planet's August 2009 equinox. Image credit: NASA/JPL/Space Science Institute

(PhysOrg.com) -- The diminutive moon Prometheus whips gossamer ice particles out of Saturn's F ring in this image taken by the Cassini spacecraft on Aug. 21, 2009.

The moon and the ring have eccentric, offset orbits, so Prometheus dips in and out of the F ring as it travels around Saturn. Its [gravitational force](#) drags the dust-sized particles at the edge of the F ring along for the ride.

The ability of the potato-shaped Prometheus to pull material out of the F ring was first theorized in the late 1990s and finally imaged by Cassini in 2004. But because these so-called "streamer-channels" have constantly

shifted as Prometheus and the F ring have moved, the F ring has never looked the same twice. The [gravitational pull](#) of other moons on other rings has created waves in the edges, but nothing quite as extreme as the streamer-channels of Prometheus.

More information: [Cassini Captures Ghostly Dance of Saturn's Northern Lights \(w/ Video\)](#)

Provided by JPL/NASA ([news](#) : [web](#))

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