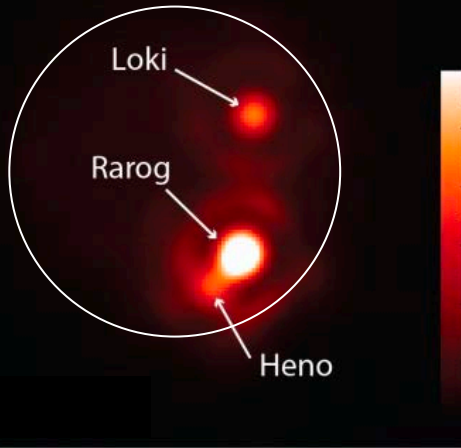
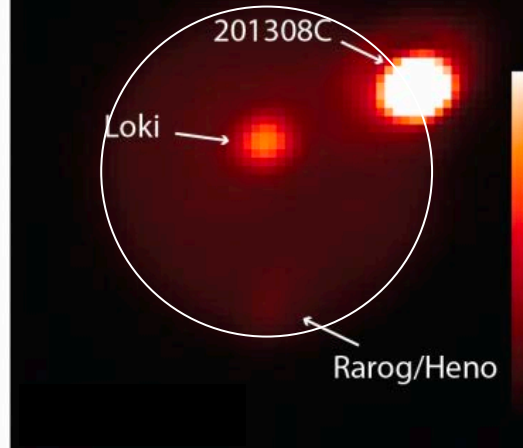


Massive Eruptions on Io

15 Aug. 2013



29 Aug. 2013



Jupiter's moon Io, the only place in the solar system known to have volcanoes that produce hot lava, aside from Earth, may be even more active than previously thought.

- Observations of Io in the infrared, made using the Keck and Gemini Observatories on Mauna Kea in Hawaii, showed three major eruptions in a two week period – much more frequent than the previously assumed rate of once every few years.

- These eruptions are similar to past events on Io where tens of cubic miles of lava (roughly 100 times the eruption of Mt. St. Helens or 10 times the eruption of Pinatubo) erupted in a short period of time.
- The brightest (and therefore hottest) eruption on August 15, at a known caldera called Rarog Patera, was calculated to have produced a lava flow covering 50 square miles, 30 feet thick. The other eruption, near the caldera Heno, produced flows covering 120 square miles.
- The last eruption, labeled 201308C, was one of the brightest ever observed on Io, and was likely in the form of “curtains of fire” where lava blasted out of fissures potentially miles long. This eruption was tracked for almost two weeks to investigate how volcanic eruptions affect the atmosphere and the plasma torus – an area of ionized gas near Io's orbit around Jupiter.
- The extremely hot lavas produced by Io are likely similar to those that erupted on the early Earth, giving us insight into the processes on our young planet.

