

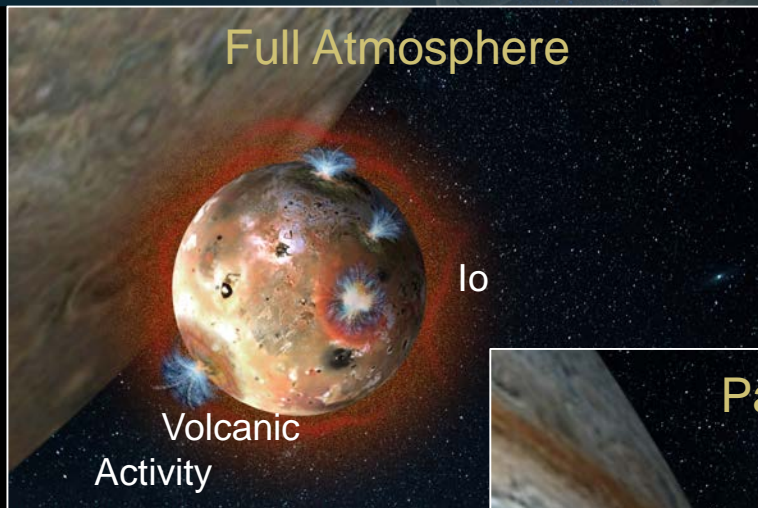
Io's Atmospheric Collapse: What happens to the

Aurora?

The atmosphere on Io, Jupiter's volcanic moon, collapses during Jupiter eclipses. Certain Jovian auroral forms map directly to Io. Juno will observe the changes in the aurora during these times.

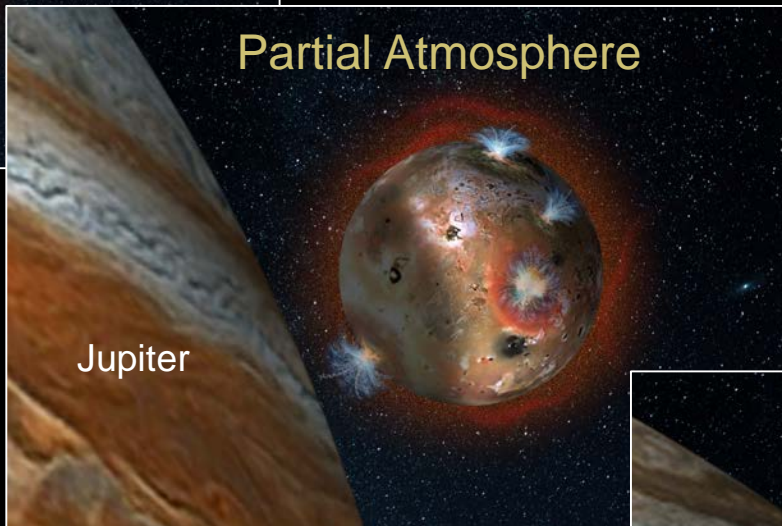
An artist's rendering depicts Io's volcanic plumes creating the atmosphere in sunlight.

Full Atmosphere



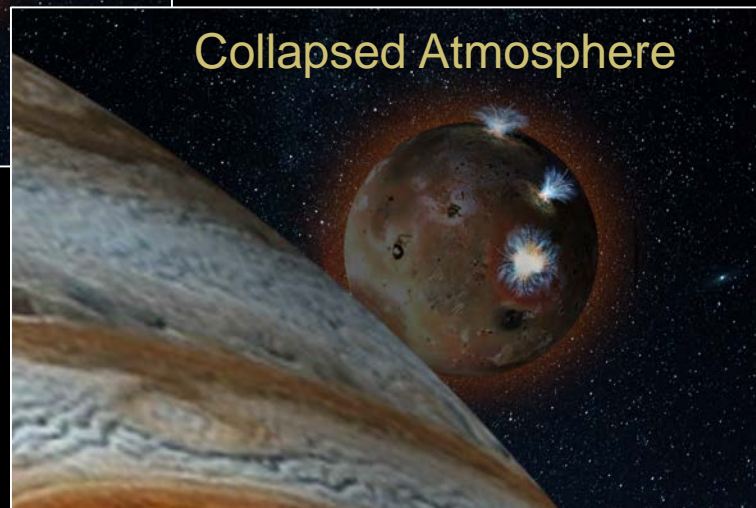
Note: illustration is not to scale

Partial Atmosphere



For two hours of Io's day (1.7 Earth days), is eclipsed by Jupiter. The temperature drop freezes sulfur dioxide (SO₂) gas, causing the atmosphere to "deflate".

Collapsed Atmosphere



In full eclipse, Io's atmosphere "collapses" as SO₂ gas becomes frost on the moon's surface. The atmosphere redevelops when sunlight returns.



Actual Image: This image from the Cassini spacecraft captures Io's volcanoes and atmosphere in the shadow of Jupiter.