

Ganymede

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Earth 390

February 24, 2016



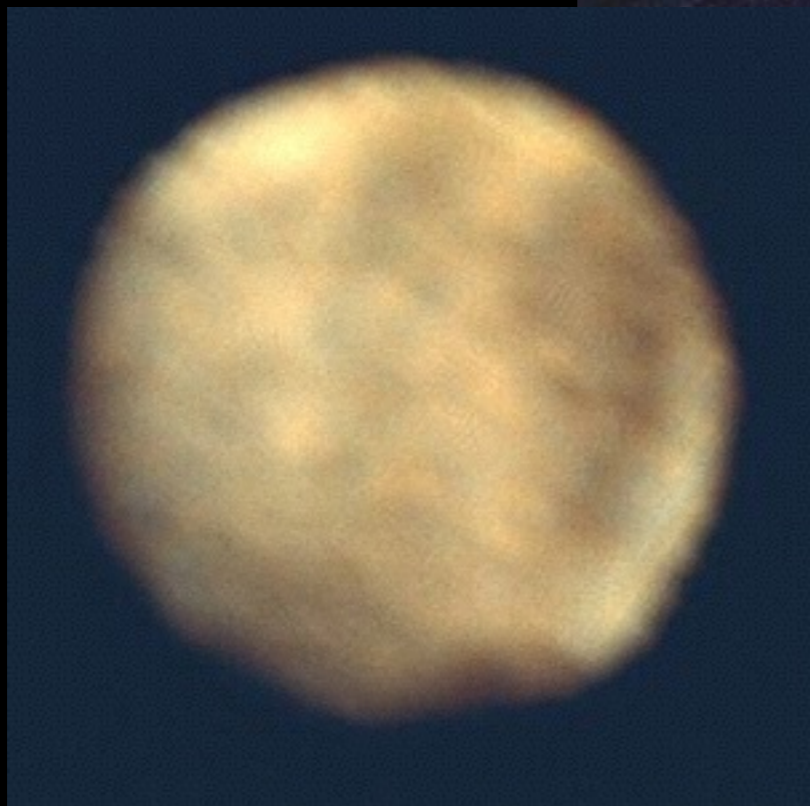
Outline:

1. Discovery and past missions
2. Ganymede's surface
3. Internal structure
4. Atmosphere and magnetosphere
5. Possible formation scenarios
6. Future research/missions

Galileo-1610



Pioneer 10: 1973



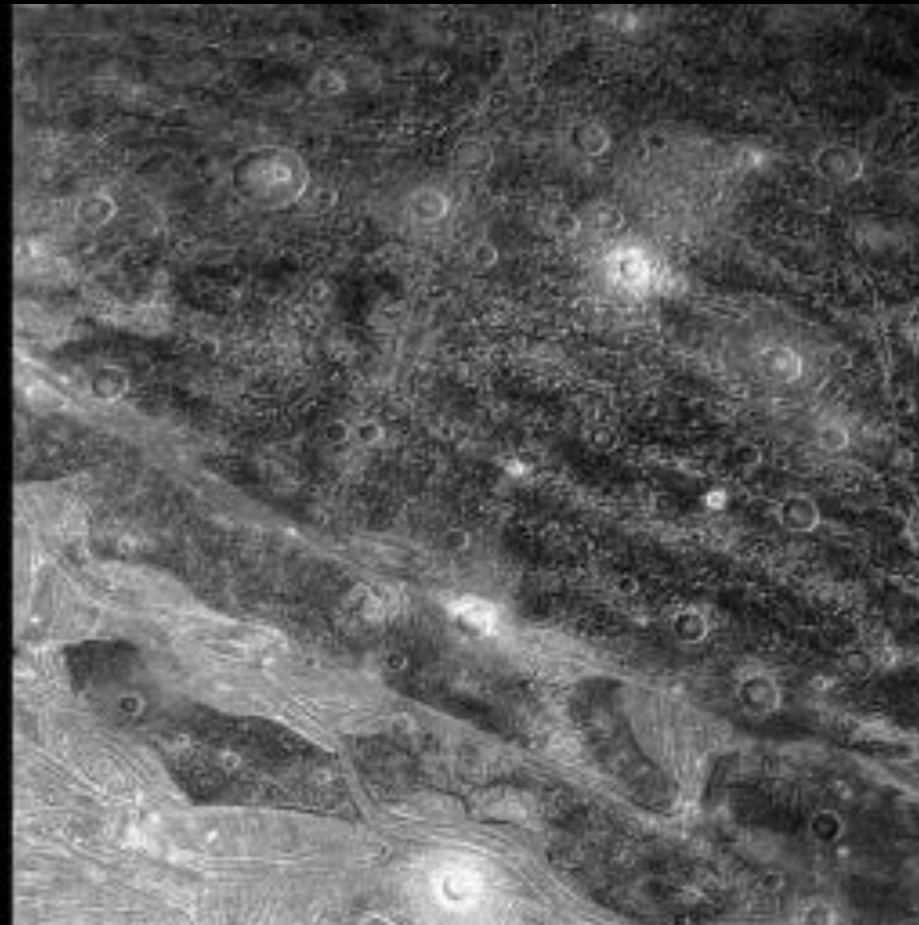
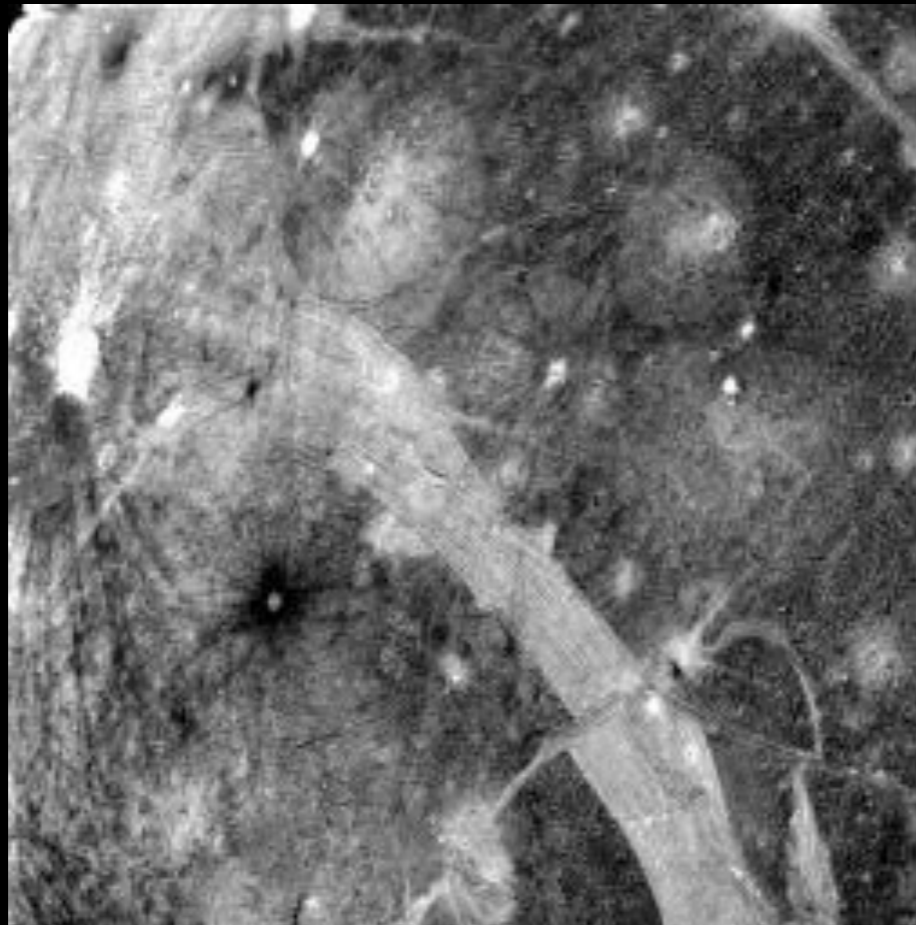
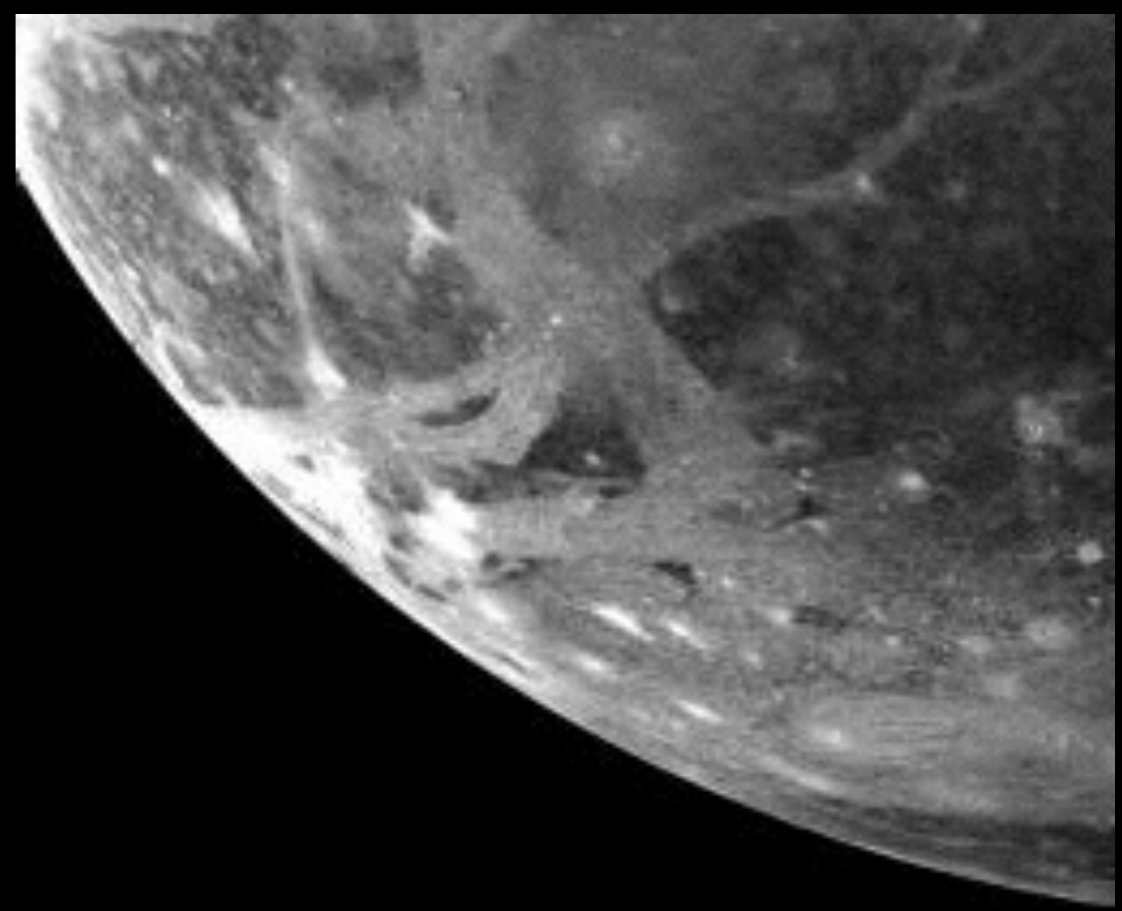
Ganymede:

Mass: 2.02 Lunar masses

Radius: 2635 km

Mean density: 1.95 g/cm³

Voyagers 1 and 2: 1979

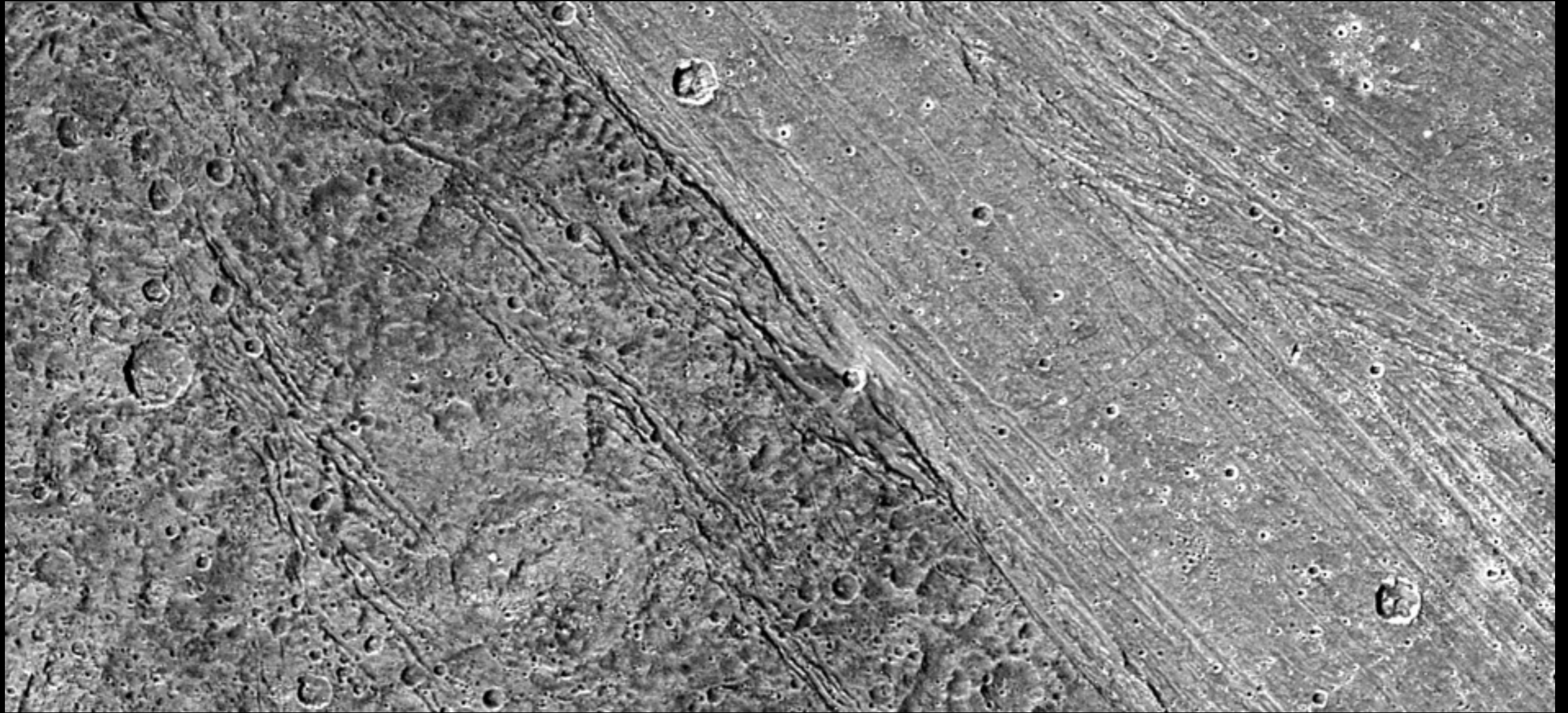


Galileo: 1995-2000

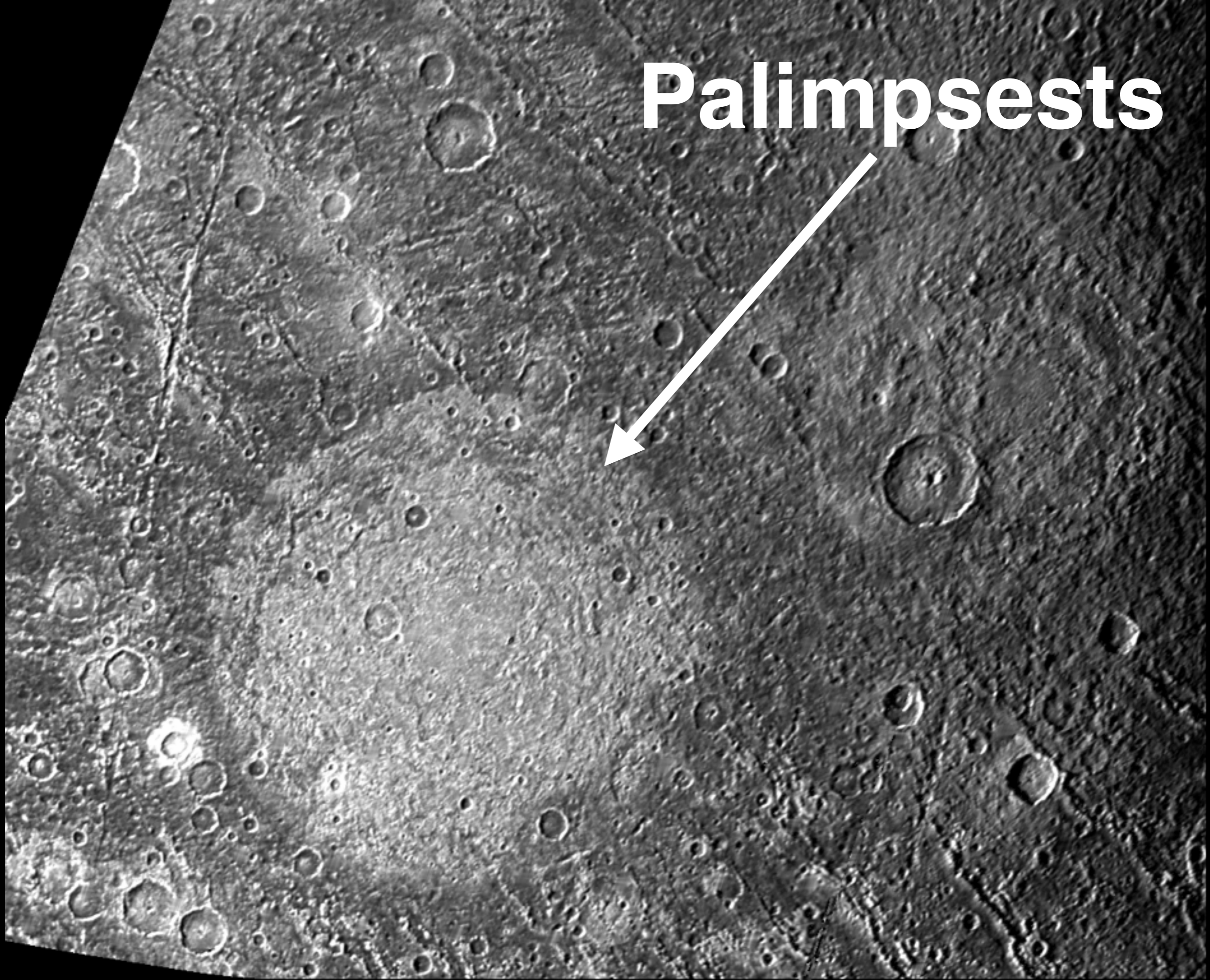
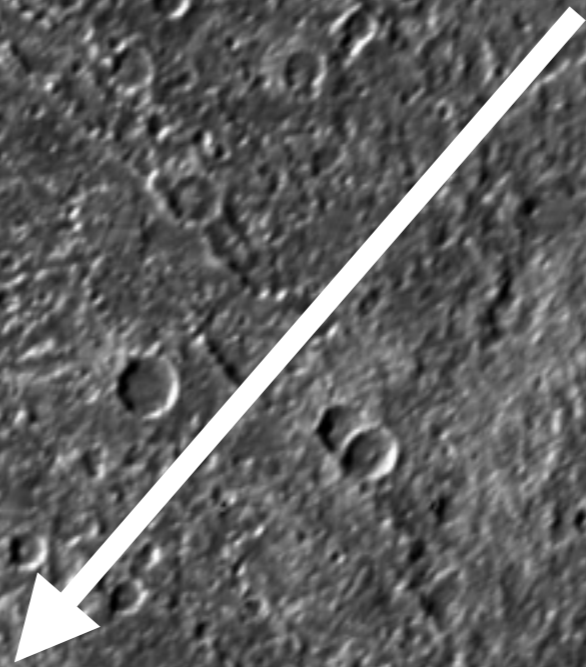


Ganymede's Surface



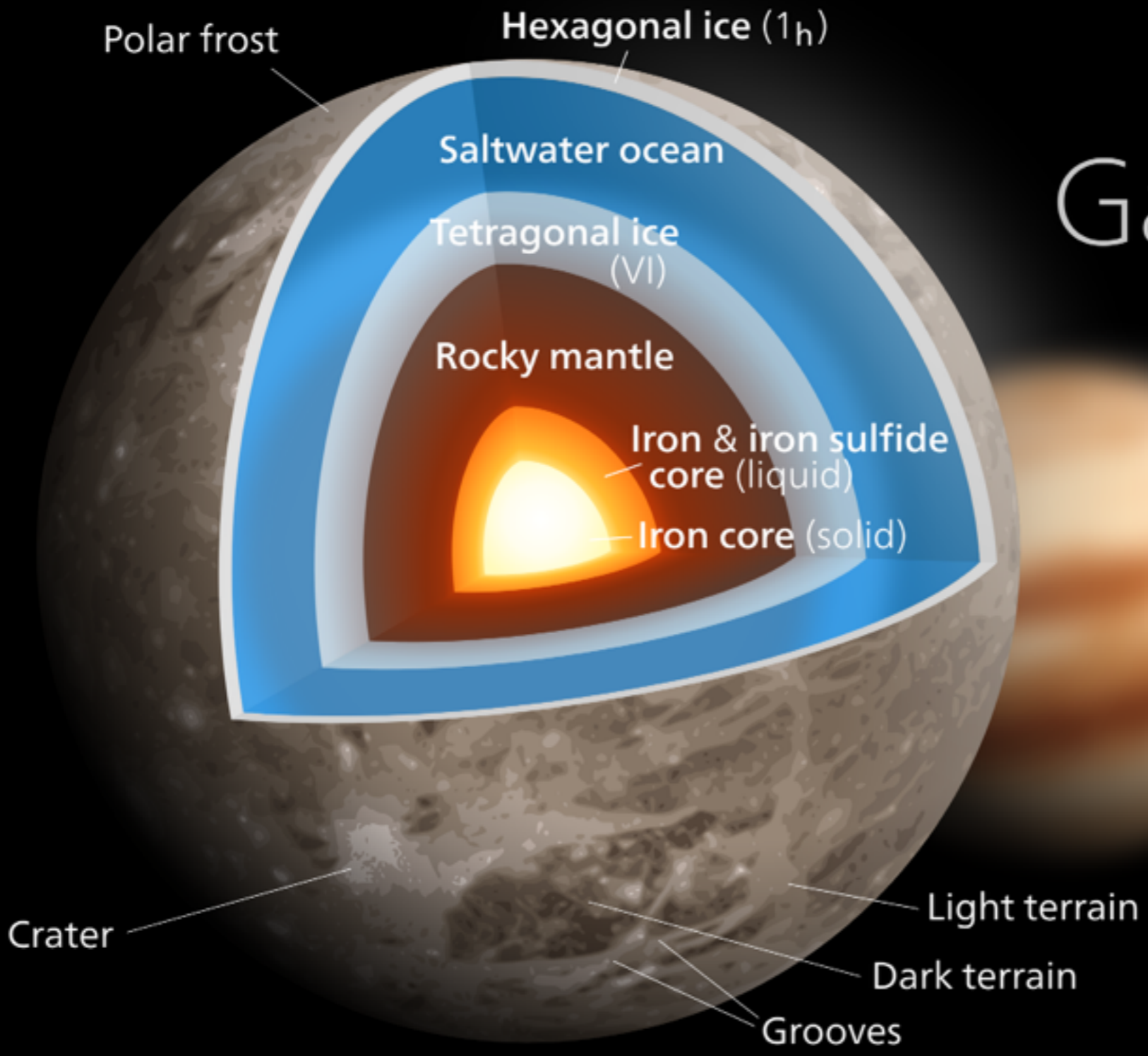


Palimpsests



Ganymede

layers drawn to scale



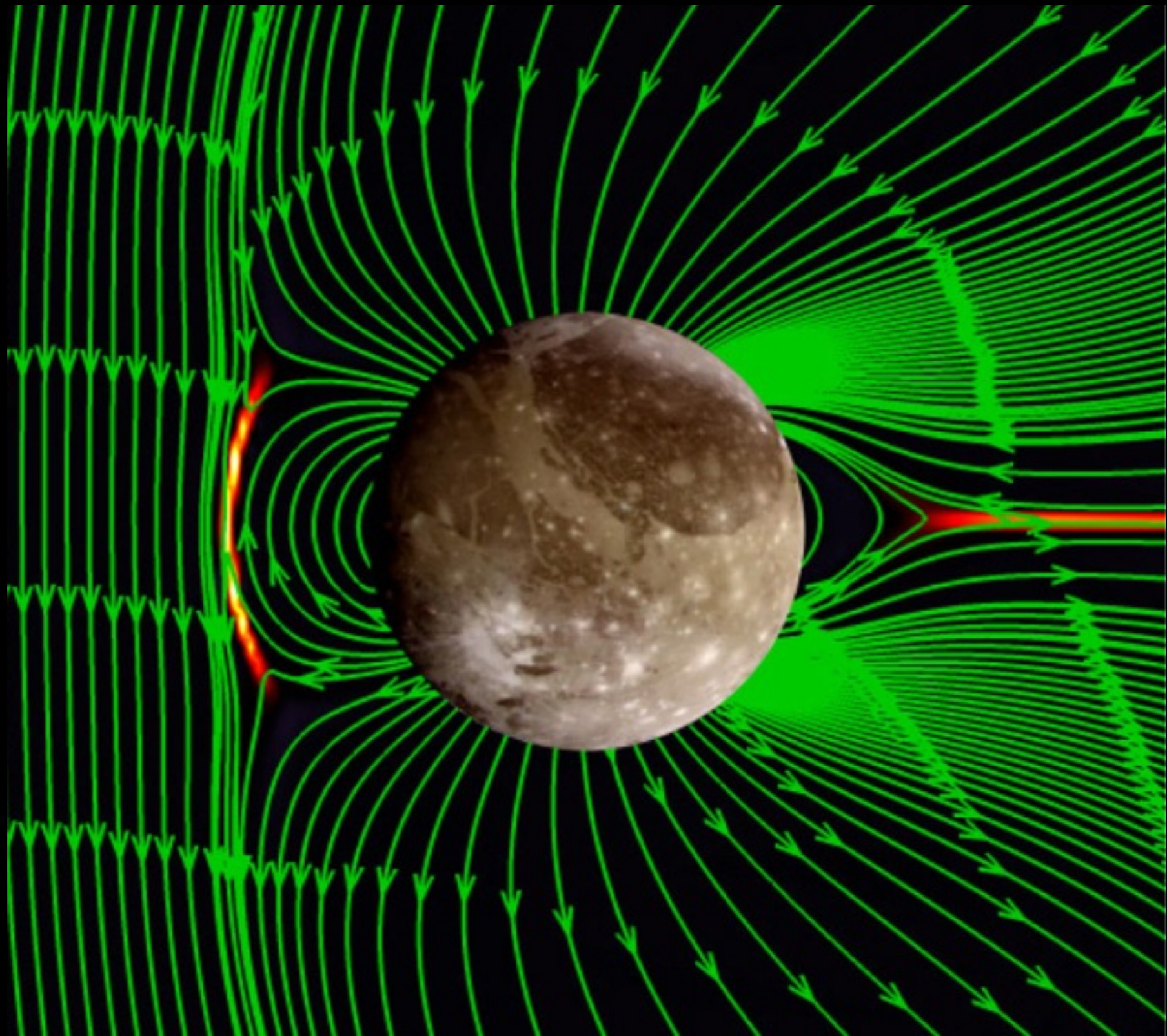
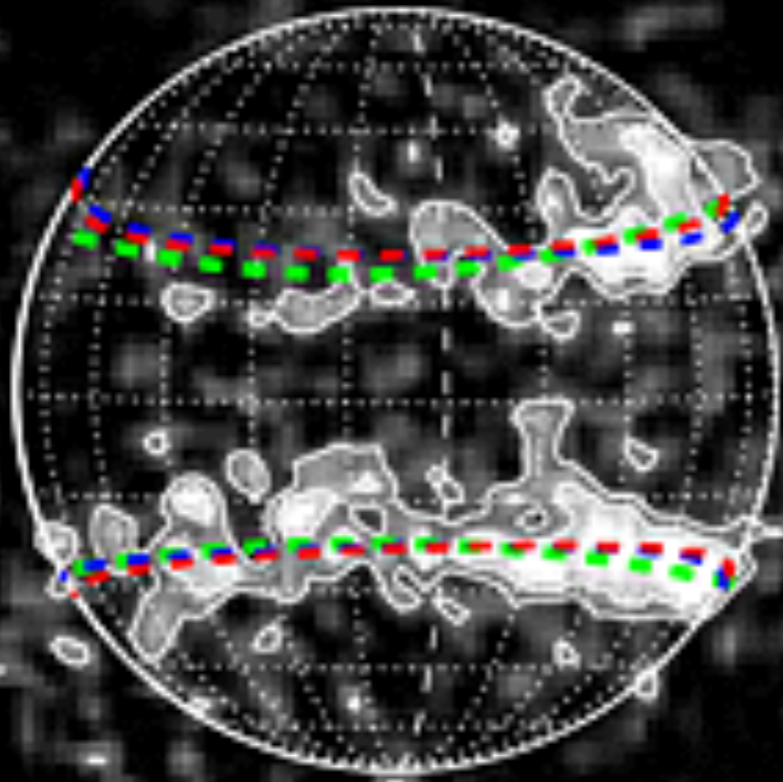
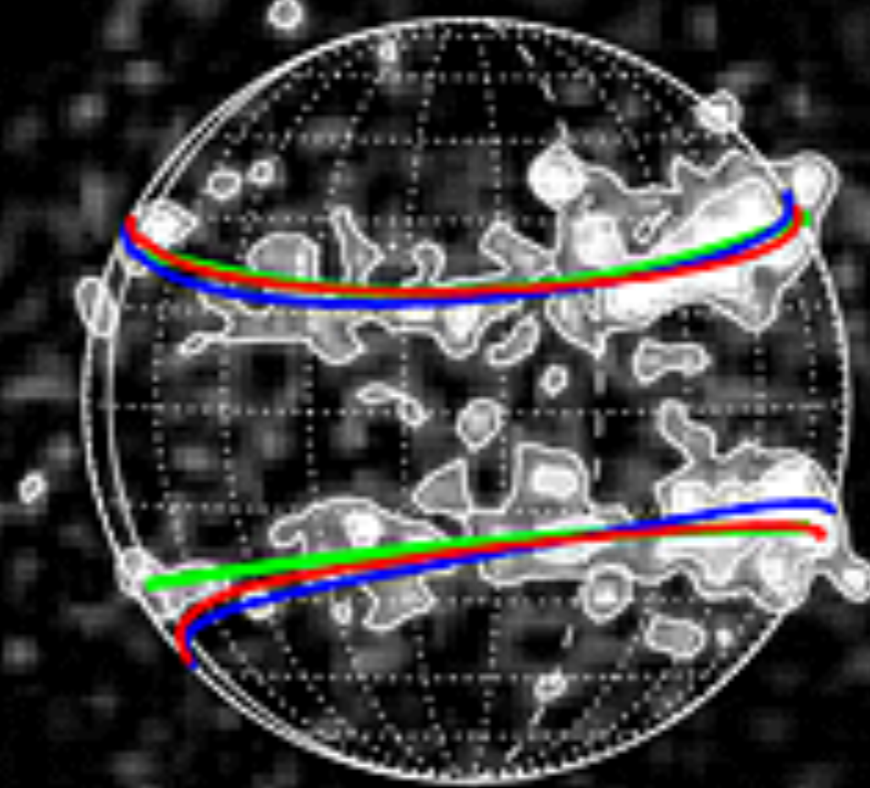


Image from: www.derekscope.co.uk

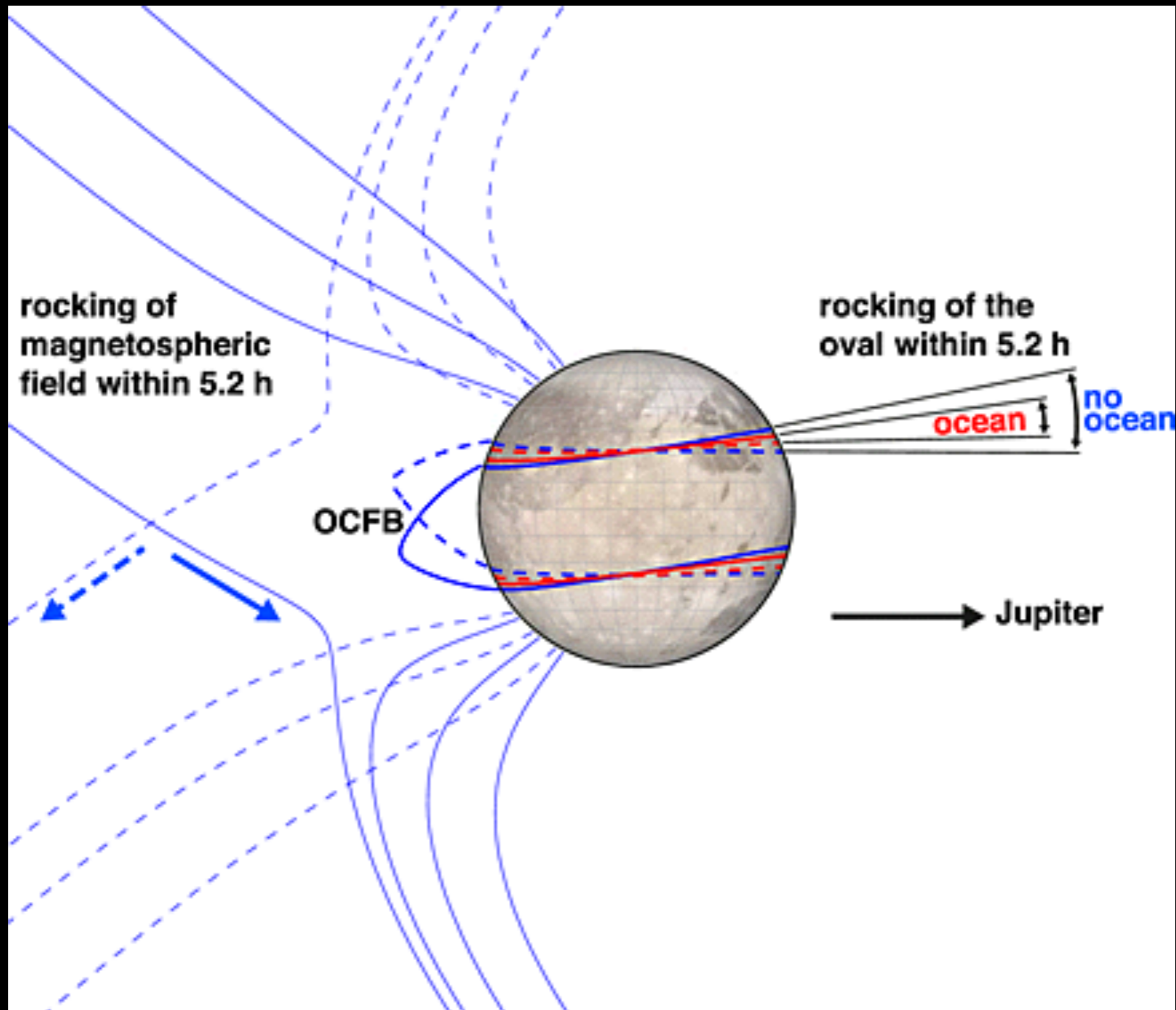
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J. Saur et al. (2015) "The search for a subsurface ocean in Ganymede with Hubble Space Telescope observations of its auroral ovals." *Journal of Geophysical Research*.



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Future Missions



Jupiter Icy Moons Explorer (JUICE)