

Jupiter

Ganymede is the largest moon in our solar system and the only moon with its own magnetic field. The magnetic field causes auroras, which are ribbons of glowing, electrified gas, in regions circling the moon's north and south poles. Ganymede has large, bright regions of ridges and grooves that slice across older, darker terrains. Scientists have also found strong evidence of an underground ocean on Ganymede. Ganymede has three main layers. A sphere of metallic iron at the center (the core, which generates a magnetic field), a spherical shell of rock (mantle) surrounding the core, and a spherical shell of mostly ice surrounding the rock shell and the core. The ice shell on the outside is very thick, maybe 800 km (497 miles) thick. The surface is the very top of the ice shell. Astronomers using the Hubble Space Telescope found evidence of thin oxygen atmosphere on Ganymede. However, the atmosphere is far too thin to support life as we know it.