NASA’s Mission to explore Ionosphere

NASA has announced two missions to explore the little-understood area of 96 km above Earth’s surface. The two missions, Global-scale Observations of the Limb and Disk (GOLD) and Ionospheric Connection Explorer (ICON), will team up to explore the ionosphere.

ICON will be in low-Earth orbit, at 560 km above Earth, like a close-up camera while GOLD will be in a geostationary orbit over the Western Hemisphere, about 35,398 km above the planet’s surface. It will help in full-disk view of the ionosphere and the upper atmosphere beneath it every half hour.

Ionosphere

- The ionosphere is defined as the layer of the Earth’s atmosphere that is ionized by solar and cosmic radiation.
- It lies 75-1000 km (46-621 miles) above the Earth, the thickness of the ionosphere is quite tiny compared with the size of Earth.
- Due to high energy from the Sun and from cosmic rays, the atoms in this area are “ionized,” and are therefore positively charged.
- These are the layers of near-Earth space and are home to radio signals used to guide airplanes, ships and Global Positioning System satellites.