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## Plasma density irregularities in the topside ionosphere

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Plasma density irregularities in the ionosphere can affect trans-ionospheric communication between ground facilities and satellites, and constitute an essential part of the space weather. Different latitudes and local times host different types of irregularities, such as equatorial plasma bubbles (EPBs) in night time low-latitude regions, medium-scale traveling ionospheric disturbances (MSTIDs) in the mid-latitude ionosphere, main trough at subauroral latitudes, and polar cap patches inside the polar cap. Low-Earth-Orbit (LEO) satellites equipped with in-situ plasma density probes or dual-band. Global Navigation Satellite System (GNSS) antennae are useful for investigating these irregularities globally. In this presentation are given characteristic features of the various plasma density irregularities observed by LEO satellites, including man-made disturbance in the ionosphere. Their climatological distributions as well as concomitant deflections in electric and magnetic field are also discussed.

## **Biography**

Jaeheung Park has completed his PhD from Korea Advanced Institute of Science and Technology (KAIST) and Postdoctoral studies from National Central University (NCU) in Taiwan and GeoForschungsZentrum (GFZ) in Potsdam, Germany. Now, he is a Scientist of Korea Astronomy and Space Science Institute (KASI).

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