

Topside ionosphere as observed by the Science and Technology Satellite-1 (STSAT-1) of Korea

Jaeheung PARK^{1,3}, *Young-Sil Kwak^{1,3}, Kyoung Wook Min², Jae-Jin Lee^{1,3}, Junga Hwang^{1,3}, Hee-Jun Kim²

1. Korea Astronomy and Space Science Institute, 2. Korea Advanced Institute of Science and Technology, 3. University of Science and Technology

The Science and Technology Satellite-1 (STSAT-1) of Korea monitored high-latitude ionosphere at a sun-synchronous (1040-2240 local time) circular (altitude~680 km) orbit. The satellite was launched in September 2003, and its scientific observations began approximately two months later. It carried two Langmuir Probes (LPs) measuring cold electron density and temperature, an ElectroStatic Analyzer (ESA) sensitive to auroral electrons of <20 keV, and two Solid-State Telescopes counting radiation belt electrons in the energy range between ~100 keV and 400 keV. Operations of those payloads were normally restricted to northern high-latitudes, but occasionally extended to equatorial regions such that the low-latitude ionosphere can be monitored. In this presentation we show representative examples of the STSAT-1 observations at various regions and discuss how the data set can be exploited.

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