

## **Ionospheric Observation Using Korean Satellites**

J. PARK, K. W. MIN, H. J. KIM, and J. A. HWANG Department of Physics, Korea Advanced Institute of Science and Technology

We report in this paper the ionospheric observations made by Korean satellites. Korea's in-situ ionospheric observation started with KOMPSAT-1. KOMPSAT-1 is a remote sensing satellite with a sun-synchronous polar orbit. As a secondary payload, Ionospheric Measurement Sensor (IMS) made nighttime upper ionospheric observations at 685 km. IMS consists of a Langmuir Probe (LP) and an Electron Temperature Probe (ETP), whose spatial resolutions are 28 km and 7 km, respectively. IMS observed the low and mid- latitude ionosphere during the solar maximum from June 28, 2000 to August 1, 2001, with a nominal duty cycle of 30 %. The second is STSAT-1 which was launched in September 2003. STSAT-1 also has a circular sun-synchronous orbit at the altitude of 685 km, but observes polar ionosphere with a Langmuir probe along with other plasma instruments. We are currently developing another Langmuir probe with on-board data processing capability for STSAT-2. STSAT-2 will be launched in 2007, into an 80° elliptic orbit whose perigee is 300km and apogee is 1500 km. Some of the results made from past observations, such as equatorial plasma bubbles and blobs as well as polar patches, and the anticipated results of the future missions will be discussed.