



GPS scintillations over Vietnam on April 2006

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In Vietnam, at Hue (16.4°N, 107.6°E) and Hoc Mon (10.9°N, 106.6°E), are located two GPS receivers specially modified for recording, at a sampling rate of 50 Hz, the phase and the amplitude of the L1 signal and the Total Electron Content (TEC) from L1 and L2. In April 2006 both the receivers have observed post-sunset scintillation inhibition when moderate magnetic storms occurred. These measurements together with a 3D plus time imaging of the ionosphere produced by the Multi-Instrument Data Analysis System (MIDAS) have revealed interesting features that will be described in the present paper. In particular, the results confirm the role of the ring current on the generation of the equatorial F layer irregularities of scale size from less than a hundred meters to a few kilometers, highlighting also its important role in inhibiting scintillation during the storm. The characterization of the different conditions of the Interplanetary Magnetic Field (IMF) will be illustrated, as well, to attempt a description of the scintillation effects over a region scarcely investigated in the open literature.