Geophysical Research Abstracts
Vol. 12, EGU2010-11410, 2010
EGU General Assembly 2010

IRI and Space Geodetic Techniques – A Mutually Beneficial Relationship

Dieter Bilitza (1,2)

(1) George Mason University, Fairfax, Virginia, USA (dbilitza@gmu.edu), (2) Herliphysics Laboratory, NASA Goddard Space Flight Center, Greenbelt, Maryland, USA

The International Reference Ionosphere (IRI) is the internationally recognized standard for the specification of ionospheric parameters (densities, temperatures, velocities) and recently was accepted by the International Standardization Organization (ISO) as Technical Specification TS 16457. This talk will review the different ways in which IRI has benefitted space geodetic techniques and in which, on the other hand, ionospheric data from space geodetic techniques have impacted the IRI improvement effort in the past and which improvements are expected in the future. We will report about recent IRI activities especially efforts that affect the parts of the model that are of interest to space geodetic techniques, e.g., the electron density profile in the topside ionosphere and plasmasphere and the Total Electron Content (TEC). A number of groups have used IRI together with current measurements to update the model to current conditions. A special IRI Task Force Activity in 2009 brought representatives from these groups together to discuss the future development of a Real-Time IRI (RT-IRI) based on the assimilation of real-time data, like the data from space geodetic techniques, into IRI .