TOWARDS ISO STANDARD EARTH IONOSPHERE AND PLASMASPHERE MODEL

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Space exploration has been identified by several governments as a priority for their space agencies and commercial industry. A good knowledge and specification of the ionosphere and plasmasphere are the key elements necessary to achieve this goal in the design and operation of space vehicles, remote sensing, reliable communication and navigation. The International Standardization Organization, ISO, recommends the International Reference Ionosphere (IRI) for the specification of ionosphere plasma densities and temperatures and lists several plasmasphere models for extending IRI to plasmaspheric altitudes, as described in the ISO Technical Specification, ISO/TS16457:2009. IRI is an international project sponsored jointly by the Committee on Space Research (COSPAR) and the International Union of Radio Science (URSI). The buildup of IRI electron density profile in the bottomside and topside ionosphere and its extension to the plasmasphere are discussed in the paper. We report about the current status of the ISO standardization process for IRI. A Draft International Standard (DIS) document was prepared and circulated widely. Feedback and comments led to the latest revision of the document. We will also present a brief review of IRI-related activities and model status.