COSPAR/URSI International Reference Ionosphere 2020

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This presentation will give an overview of the current status of the International Reference Ionosphere (IRI) project and model. Shortcomings and improvements of the model were discussed during several IRI-related meetings in 2018 and 2019. We will report the outcome of these meetings and the decisions made regarding the 2020 release of IRI. IRI-2020 will include several important improvements and additions in particular a more accurate description of the electron density in the lower ionosphere, in the F-region and in the topside, and a better representation of the variability of ion temperature. We will highlight some of the ongoing activities that are geared towards future improvements of IRI. Great advances have been made in progressing IRI from the standard climate model to a model that can represent the real-time space weather changes. This is achieved by assimilating real-time ground and space data into the background IRI model. An important upcoming milestone in 2020 is the re-certification as the ISO standard for the ionosphere. The International Standardization Organization (ISO) requires this re-evaluation of a standard every five years.

We will present the latest usage statistics of the model that show the continued increase of IRI usage across many disciplines and for many applications. A good metric are the acknowledgements of IRI usage in scientific journals and the wide range of these journals.

Keywords: IRI, Ionosphere, Climatology

