



Contribution of the International Reference Ionosphere to the progress of the ionospheric representation

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The International Reference Ionosphere (IRI), a joint project of the Committee on Space Research (COSPAR) and the International Union of Radio Science (URSI), is a data-based reference model for the ionosphere and since 2014 it is also recognized as the ISO (International Standardization Organization) standard for the ionosphere. The model is a synthesis of most of the available and reliable observations of ionospheric parameters combining ground and space measurements. This presentation reviews the steady progress in achieving a more and more accurate representation of the ionospheric plasma parameters accomplished during the last decade of IRI model improvements. Understandably, a data-based model is only as good as the data foundation on which it is built. We will discuss areas where we are in need of more data to obtain a more solid and continuous data foundation in space and time. We will also take a look at still existing discrepancies between simultaneous measurements of the same parameter with different measurement techniques and discuss the approach taken in the IRI model to deal with these conflicts. In conclusion we will provide an outlook at development activities that may result in significant future improvements of the accurate representation of the ionosphere in the IRI model.