Search for the Drivers of Ionospheric Variability

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Conditions in the ionosphere are more variable than our current knowledge of the key drivers would suggest. Such variability presents difficulties to efforts to predict global ionospheric conditions even 24 hours out, even in the absence of strong solar wind/magnetospheric drivers. In this presentation, examples of the wide range of conditions are discussed, along with the potential explanations for the effects. Further, we describe the approach of NASA's Ionospheric Connection Explorer to resolving the questions regarding this variability.