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The impact of the observation of local ionospheric anomalies on our understanding of ionospheric-magnetospheric coupling. (I)

Monday 11 June 2018 11:15 (30 minutes)

Ionospheric physics is rich with anomalies that are typically taking place on short temporal and/or spatial scales. Finding suitable explanations for these anomalies is one thing that keeps the field alive, as they lead to new discoveries into the rich ways by which the ionosphere couples with the atmosphere and magnetosphere, particularly when there are large departures of the system from equilibrium. These localized phenomena may play a key role in the way by which turbulence (or perhaps stochasticity/intermittency?) regulates the exchange of particles, momentum and energy between the subsystems. Given the limited amount of time for a presentation such as this, the talk will be limited to only a few noteworthy items, namely, some neutral atmospheric anomalies, hot ionospheric electron temperatures episodes, unexpected/unusual ion velocity and spectral signatures, and the connection of the latter (or lack thereof) with ion upflows and outflows.

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