

Ionosphere and Thermosphere Responses to Solar Flares

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Solar flare is one of the most extraordinary processes occurring on the Sun, and is also one of the major sources disturbing the Earth's upper atmosphere. Flare effects on the ionosphere have been investigated for decades using rich ionosphere measurements like the TEC, and NmF₂, the electrojet, etc. However, examination of its neutral counterpart in the thermosphere has been limited. This talk focuses on the contrasting behavior of the thermosphere and ionosphere in response to solar flares at low latitudes. In particular, coupling and decoupling in their temporal variation and latitudinal structures are compared, and the relative contribution from ionization and electrodynamics processes is discussed.