# A Simulation Study of the Upper Thermospheric Dynamics

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At the upper thermosphere, temperature and winds are enhanced by auroral precipitation and Joule heating. Recently, the techniques of optical and radar measurements have been developed and we can discuss about the temperature and wind variations observed with the time scales of several minutes to several hours.

In order to understand the fundamental physics between energy sources and the variations with these time scales, a thermospheric general circulation model have been developed. In this study, temperature and wind variations at the polar upper thermosphere are shown by a numerical simulation.

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