

Contribution of Joule and auroral particle heating to thermospheric dynamics in the Cusp/LLBL region

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From recent analyses of EISCAT Svalbard radar (ESR) data, it is suggested that strong heating of neutral atmosphere occurs at E-region height in the cusp/LLBL region. It is likely that Joule heating or particle heating is the main process for such a strong heating. However, there are few studies for the estimation of Joule and particle heating rates in the dayside ionosphere by radar observations.

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