

Seasonal variations of Na density and MLT temperature observed by Na temperature lidar in Japan

Mitsumu Ejiri[1]; Takuji Nakamura[2]; Takuya Kawahara[3]

[1] NIPR; [2] RISH, Kyoto Univ.; [3] Faculty of Eng., Shinshu Univ.

Recently, it is pointed out that longitudinal differences in the mesosphere and lower thermosphere (MLT) are not negligible. Na temperature lidar (developed by Shinshu University and National Institute of Polar Research) that can measure the MLT temperature (80-110 km) was moved from Nagano to Uji (34.9°N, 135.8°E) located about 25 km east from Shigaraki MU observatory at which there are many instruments for observing atmospheric dynamics in the MLT region. The Na temperature lidar has been operated several nights per month since August, 2007. For almost one and a half year, we have obtained temperature and Na density profiles for approximately 140 nights (more than 1000 hours). In this study, seasonal variations of the temperature and Na density profiles obtained at Uji are reported.