Radio optical observations of lower and middle atmosphere around Shigaraki MU observatory

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The MU radar of RASC, Kyoto University at Shigaraki has been clarifying the dynamics in the troposphere and middle atmosphere, especially the characteristics of mean winds and atmospheric waves such as gravity waves and their role in the global dynamics. Recently, various optical instruments such as FPI, airglow imagers and photometers, sodium lidar, SATI have been installed by RASC and cooperative researchers and observations around the mesopause region has been intensively carried out. In this paper, the new topics in the observatory such as new lidar system, new radar technique and multi-station airglow imaging are reviewed.