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TANGOO: A ground-based tilting-filter spectrometer for deriving the temperature in the mesopause region

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TANGOO (Tilting-filter spectrometer for Atmospheric Nocturnal Ground-based Oxygen & hydrOxyl emission measurements) is a passive, ground-based optical instrument for the purpose of a simultanously automatic long-term monitoring of OH(6-2) and O2 atm. Band (0-1) emissions (called “airglow”), yielding rotational temperatures in about 87 and 95 km, respectively.
TANGOO, being a transportable and comparatively easy-to-use instrument, is the enhancement of the Argentine Airglow Spectrometer (Scheer, 1987) and shows significant improvements in the temporal resolution and throughput.
It will be located on the German Enviromental Research Station “Schneefernerhaus”, Zugspitze (47°,4 N, 11° E) and will start measurements in 2009.
Objectives of TANGOO cover the analysis of dynamical processes such as gravity waves as well as the identification of climate signals.
The observation method will be presented.