# Long Term Mesopause Temperature Variations resolved by SD-WACCM, MSISE-00,TIMED SABER and Local Observations in Irkutsk (52.29o, 104.29o), Russia

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Measurements of mesopause temperature are quite challenging and must rely on remote sensing methods. As part of the Taiwan-Russia joint research cooperation program, we carry out an analysis comparing mesopause temperature measurements made by the Irkutsk spectrophotometer between 2008 - 2018 and those resolved by the SD-WACCM data assimilation model, the empirical MSISE-00 model, and TIMED SABER satellite measurements. Spectral decomposition is performed on the datasets to determine the differences between the different observed and modelled seasonal and inter-annual variability, as well as to resolve long term trends.

Keywords: Mesopause, Temperature variability

 