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[EE] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-GI General Geosciences, Information Geosciences & Simulations

## [M-GI22]Data assimilation: A fundamental approach in geosciences

convener:Shin'ya Nakano(The Institute of Statistical Mathematics), Yosuke Fujii(Meteorological Research Institute, Japan Meteorological Agency), SHINICHI MIYAZAKI(京都大学理学研究科, 共同), Takemasa Miyoshi(RIKEN Advanced Institute for Computational Science)

Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Data assimilation is an inversion approach to estimate the evolution of a system by utilizing a constraint given by a dynamical simulation model. Data assimilation is now widely used not only in meteorology and oceanography but also other fields of geosciences such as hydrology, solid earth science, and space science. This session aims at providing an opportunity for discussion on data assimilation studies among researchers of various field of geosciences. We encourage contributions addressing novel methods and theoretical developments of data assimilation. Contributions dealing with useful applications of data assimilation are also welcome.

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## [MGI22-P05]A new application of reanalysis dataset: investigation on the influence of a solar eclipse on the atmospheric temperature.

★ Invited Papers

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Keywords:ERA5, atmospheric reanalysis data

Atmospheric reanalysis datasets offer scientists a good opportunity to examine or re-examine topics which cannot be fully understood in the past years. In the present study, we will demonstrate a new application using high spatio-temporal resolution atmospheric reanalysis dataset. Temperature profiles retrieved from ERA5 are employed to investigate the influence of the 20 May 2012 annular solar eclipse on the tropospheric and stratospheric temperature. The result reveals that there is no significant change in the tropospheric and stratospheric temperature during the eclipse period. This conclusion is different from previous papers, which the latter are based on either spatially or temporally limited datasets.