

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

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

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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.

## [MGI22-P03]Numerical Weather Prediction Experiments using a Coupled Atmosphere-Ocean Data Assimilation System in JMA/MRI (2)

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An atmosphere-ocean coupled data assimilation system (CDAS) has been developed at the JMA/MRI to investigate feasibility of a CDAS as a future DAS for seamless numerical prediction including both numerical weather prediction (NWP) and numerical seasonal climate prediction (NCP), and for reanalysis of the atmosphere-ocean. Our CDAS (**MRI-CDA1**) has two features. 1) It composed of the JMA operational systems, the global atmospheric DAS (MRI-NAPEX) based on 4D-Var, the global ocean DAS (MOVE-G2) based on 3D-Var, and the atmosphere- ocean coupled global forecast model (CGCM: JMA/MRI-CGCM2). 2) Coupling strategy is “weak coupling” with two different data assimilation window lengths for the atmosphere and ocean. Here, “weak coupling” denotes the approximation that ignores correlations of atmosphere and ocean background forecast errors. Following the previous report in JpGU-AGU joint meeting 2017 (Ishibashi et al. 2017), we will report basic property of MRI-CDA1 in NWP.