

Observations and Data Assimilation

Coupled data assimilation and reanalyses

The session is concerned with all aspects of coupled data assimilation and reanalyses, especially development of methods for assimilating observations in coupled models and production of reanalyses of the coupled climate system. A good deal of progress has been made over the years in improving the quality of separately computed reanalyses of the atmosphere, ocean, land-surface and cryosphere. To achieve consistent global transport of mass, water, and energy on time scales relevant for climate, however, will require use of coupled models and new approaches to data assimilation. Topics for this session may include, for example: methods for constraining biases in coupled models; representations of error covariances in coupled data assimilation systems; issues related to assimilation of satellite data in reanalyses; and performance in sparsely observed situations.