

An Improved Extended Reconstruction of Global SST (1854-2001)  
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Abstract:

A monthly extended reconstruction of global SST (ERSST) is produced based on COADS observations beginning 1854. Improvements are from the use of updated COADS observations, improved quality-control procedures, and improved reconstruction methods. Using this method little SST variance can be reconstructed before 1870 due to sparse sampling, and the analysis is heavily damped towards zero anomaly in that period. Error estimates indicate that in most regions ERSST is of limited value before 1880. Large-scale variations in ERSST are similar to those in the new U.K. Met. Office analysis (HadISST), but the ERSST analysis is slightly less noisy than HadISST. A rotated EOF analysis of ERSST show that the dominant modes are associated with ENSO and trends.