



Comparison of surface energy fluxes since 1985

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Surface fluxes are calculated using a novel approach based upon measured radiative fluxes at the top of atmosphere and lateral atmospheric energy transports computed from the ERA-Interim reanalysis. Radiative fluxes are based upon CERES satellite observations since 2000 and extended back in time to 1985 by combining CERES climatological fluxes with interannual anomalies from the ERBS satellite, the ERA Interim reanalysis and a high resolution atmospheric model.

Accounting for energy sinks, the surface fluxes are computed as the residual of the energy balance. These fluxes are compared to observationally-based estimates, reanalyses and climate model simulations. The robustness of the product and its potential use will be discussed.