



High-resolution effective atmosphere angular momentum functions and Earth rotation parameters for continuous VLBI campaigns

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We determine axial and equatorial effective atmospheric angular momentum functions (EAAMF) from data of the European Centre for Medium-Range Weather Forecasts (ECMWF) with different spatial and temporal resolution. The horizontal resolution is decreased down to 0.5 degrees, and 3-hours steps from forecasting data are used to reduce the 6-hours temporal resolution from analysis data. In terms of the ocean response to pressure variations, we compare both, IB and non-IB approaches. We derive these sets of EAAMF for the time period of continuous VLBI campaigns (CONT02 in October 2002 and CONT05 in September 2005), and we compare the geophysical EAAMF to the geodetic ones which are obtained from time series of polar motion and dUT1 with a temporal resolution of 3 hours or shorter. The characteristic frequencies in both types of functions are investigated. Special emphasis is put on the spectral analysis of the geophysical EAAMF, in particular on the diurnal and semidiurnal atmospheric tides and on the atmospheric normal modes.