

Global determination of Earth orientation and reference frame from the combination of geodetic techniques

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The project concerns the determination, on an operational basis, of both Earth orientation parameters and a set of stations coordinates obtained from the stacking of normal matrixes. These matrixes are derived from the processing of individual astro-geodetic techniques (i.e. SLR, LLR, VLBI, GPS and DORIS) at various locations and using an unique software package, i.e. the GINS. In this analysis EOPs and the reference frame are forced to be mutually consistent. A weekly combination is then performed using the DYNAMO software at Paris Observatory and made available to IERS in SINEX files in the framework of the Combination Pilot Project. The presentation gives the results so far obtained over 5 months: EOPs and station coordinates are globally consistent at one centimetre level. Different approaches have been used in order to ensure stability of the various times series by introducing ties between stations and by considering constraints between successive weekly solutions.