



Earth Orientation Parameters by GNSS & VLBI COMBINATION at Normal Equation Level

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The Earth orientation parameters (EOP), the regular products of IERS Earth Orientation Center, are computed at daily bases by combination of EOP solutions by different astro-geodetic techniques. At SYRTE we have developed a new strategy of combination using the Global Navigation Satellite Systems (GNSS) and Very Long Baseline Interferometry (VLBI) techniques at normal equation level. This approach allows to produce the EOP at the daily bases, polar coordinates (x,y) and rates (\dot{x},\dot{y}) , universal time UT1 and rate LOD, and corrections from IAU200A/2006 precession-nutation mode (dX,dY) , simultaneously with station coordinates constituting the terrestrial frame (TRF) and possibly the quasar coordinates constituting the celestial frame (CRF).

For studying these EOP solutions continuously with respect to the IERS EOP products, we have developed an operational process which take the recently solution files produced respectively by IGS and IVS services which are converted at normal equation level. The recorded solutions obtained from GNSS and VLBI combination at weekly bases is recently maintained by SYRTE. The process of this combination are presented and results are analysed.