

3.6.2 Combination Research Centres

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The Combination Research Centre in Prague works principally in two different directions. The first direction, concerning only the combination of some of the Earth Orientation Parameters, led to the proposal of a 'combined smoothing' algorithm that takes into consideration different accuracy of different techniques in different frequencies. The method brought qualitatively new results based on the combination of VLBI and GPS observations, namely in combining UT1 with LOD in the interval 1993.5–2001.0 and celestial pole offsets with their rates in the interval 1997.0–2000.0. It was demonstrated that the GPS-based rates suffer from long-periodic systematic errors that must be removed before the combination, and that using these data improves the solution in the short-periodic part.

Another direction of research is combining particular solutions of different techniques for the simultaneous determination of EOP and station coordinates. From the individual techniques and epochs, the position vectors of the stations are restored in the celestial reference frame and combined to obtain corrected EOP. Transformation parameters to the station coordinates are then derived for each input solution.

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