

Multi-year combination of UT1/Iod, based on VLBI and GPS observations

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We use the observations of UT1-UTC made by VLBI and the observations of length-of-day made by GPS to produce a combined solution, covering the interval 1996.5-2005.4. To this end, we use the method of "combined smoothing" proposed by Vondrak and Cepek (A&AS 2000). The combined solution of UT1-UTC is relatively smooth, it fits well to VLBI observations, and its time derivative fits well to GPS observations. Our previous solution, based on the same approach and covering a shorter interval (1997-2000), yielded the best 3-day correlation with the atmospheric and oceanic excitation, as recently demonstrated by Kouba and Vondrak (J. of Geodesy 2005).