

UT1 intensive VLBI experiments between Tsukuba and Wettzell baseline

Shinobu Kurihara[1], Kazuhiro Takashima[1], Kohhei Miyagawa[2]

[1] GSI, [2] Geodetic Department, GSI

<http://vlbldb.gsi.go.jp/sokuchi/vlbi/>

The Geographical Survey Institute (GSI) carries out geodetic VLBI experiments, both international and domestic, for the maintenance of fundamental geodetic network and the determination of the earth rotation angle that is necessary for precise positioning. From July 2002 until December 2002, 20 experiments named UT1 intensive series for determination UT1 with high time resolution were carried out between Tsukuba and Wettzell (BKG Germany).

While the duration of regular geodetic session is 24 hours, the duration of UT1 session is about 1.5 hours. Total of the scanning radio sources were 20. The only UT1 parameter is estimated except for clock and atmosphere. The purpose of the intensive series is doing short experiments with high frequency to improve time resolution of UT1.

We used K4 recording system, 1 cassette cartridge per 1 session. The correlation and bandwidth synthesizing were completed at the GSI Tsukuba correlator. The databases were already submitted to IVS data center and could be used by researchers in the world.

We analyzed all UT1 session data, and get good results. The UT1 parameter was estimated with a few microseconds uncertainly. In this presentation we'll report on the details of the result of the analysis and the future plans.