

# The Bonn Geodetic VLBI Operation Center

A. Nothnagel, D. Fischer, A. Mückens

## Abstract

In 2002 the GIUB Operation Center has added a new observing programme to its activities. On the Tsukuba - Wettzell baseline a series of short duration observations for monitoring UT1-UTC has been organized and scheduled.

## 1. Center Activities

The GIUB VLBI Operation Center is located at the Geodetic Institute of the University of Bonn, Nussallee 17, D-53115 Bonn, Germany. It has been organizing and scheduling VLBI observing sessions for almost twenty years. As a consequence of a general re-organization of the IVS observing programme, the GIUB VLBI Operation Center has slightly changed its responsibilities for observing series in 2002. The following series have been scheduled:

- **Tsukuba - Wettzell UT1-UTC Intensive Series:**

The Tsukuba - Wettzell Intensive series for monitoring UT1-UTC was added to the list of responsibilities of the GIUB Operation Center in early 2002. It is a joint project of the Bundesamt für Kartographie und Geodäsie (BKG, Germany), the Geographic Survey Institute (GSI, Japan) and the Geodetic Institute of the University of Bonn (GIUB, Germany).

UT1-UTC from Intensives relative to quadratic Interpolation of C04

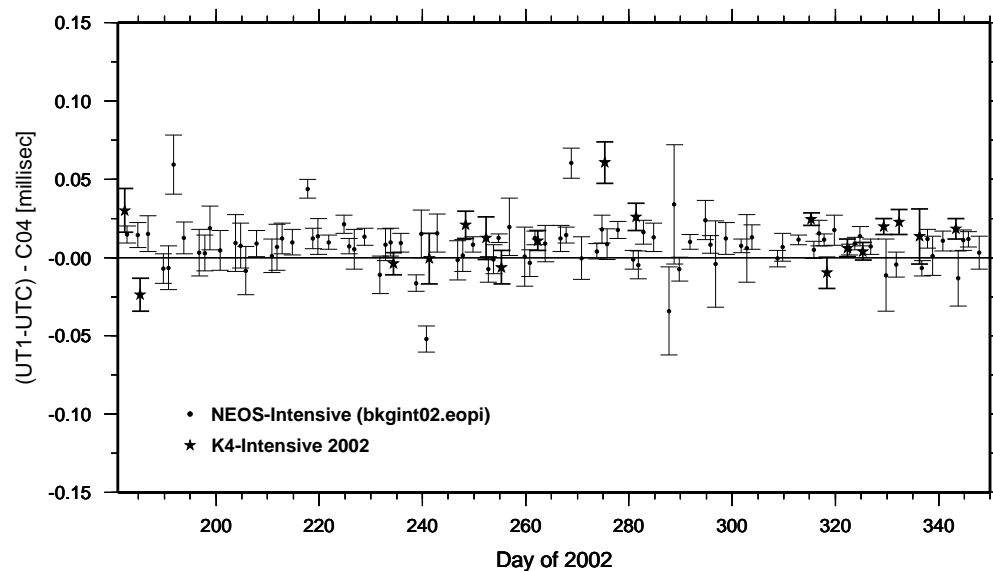


Figure 1.

Twenty single baseline sessions of about 90 minute duration were scheduled between July 1st and December 19th, 2002. Each one was carried out between 7.30 and 9.00 UT and was composed of 20 scans. The K4 system was employed for recording the data. Due to limited resources the sessions could only be scheduled in a nearly weekly sequence. In the scheduling of the individual sessions special emphasis was given to the use of equatorial sources. The correlation was carried out with the GSI K4 correlator at Tsukuba.

First results are very promising as can be seen in figure 1. The stability and standard deviations of the K4 UT1 series fit well in the Wettzell - Kokee Park Intensives. In the long run this series will be expanded in order to provide control as well as backup for the current Wettzell - Kokee Park UT1-UTC intensive observations.

- **IVS-T2 series**

This series is observed once per month primarily for maintenance and stabilisation of the VLBI terrestrial reference frame as well as for Earth rotation monitoring as a by-product. This series is the follow-on of the International Radio Interferometric Surveying - South (IRIS-S) campaign with varying network configurations.

- **Measurement of Vertical Crustal Motion in Europe by VLBI (EUROPE)**

Four sessions with Ny-Ålesund, Onsala, Wettzell, Simeiz, Madrid (DSS65), Yebes, Medicina, Matera, Noto and Effelsberg (participated once) have been scheduled for precise station coordinate determination.

- **Southern Hemisphere and Antarctica Series (OHIG):**

Six sessions with the Antarctic stations Syowa (Japanese) and O'Higgins (German) plus Fortaleza, Hobart, Kokee, HartRAO and DSS45 have been organized for maintenance of the VLBI TRF and Earth rotation monitoring.

## 2. Staff

Arno Müskens took care of the T2 and the OHIG sessions, Dorothee Fischer organized the Tsukuba - Wettzell series while Axel Nothnagel was responsible for the EUROPE project.