Torun (Tr) Station Report

(Jun 23th, 2015)

Brief Report of Recent EVN Session Problems

The Feb/Mar 2015 session passed without any major problems. All of its 24 experiments scheduled in L, C and methanol (6.7GHz) bands were observed. During two experiments, EC047B and ES076, the antenna control system was not executing commands from the FS for 20min and 1.5h, respectively. Only one source was tracked during this failure.

In the last session, May/Jun 2015, Tr participated in 22 experiments scheduled in L and C bands. Because of our L band receiver does not cover frequencies below 1365 MHz we could not carry out the GN002B experiment. Major failures of the session were recording errors noticed during N15C2, EP091B, ER040, and EO013 experiments. The problems occurred while recording on HART-041, MED-0007, MED-0003, NTO-0024 disk-packs. Partial data loss is possible.

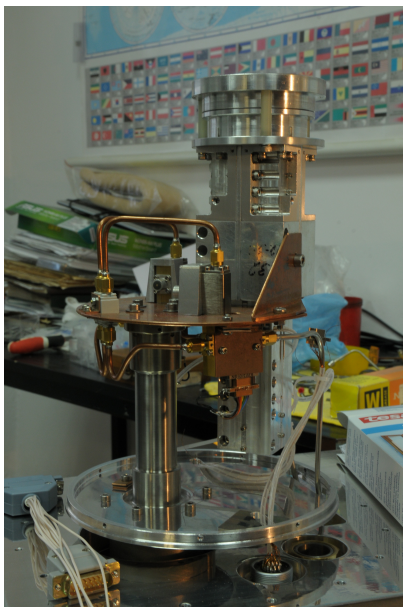
During the conditioning of disc-packs before the May/Jun 2015 session there was a problem detected with one of the disks in NTO-0020. We removed a pair of disks and downgraded the capacity of that disk-pack. Current status is NTO-0020/2400/768. We have not noticed any problems with recording on that disk-pack during the EVN observations.

Outside these regular EVN sessions, in the period November 2014 - May 2015 Tr took part in 562 short-duration (of about one hour each) RadioAstron (RA) experiments and 27 other experiments (e-VLBI, ToO and global RA), all totalling to about 755 hours of observing time. Thirty-six RA one-hour experiments were not observed for various reasons. One third of bs242a and the whole bs2423b, both global RA experiments, were lost due to wrong LO setting resulting from a human error. To avoid such mistakes in the future, we automated setting LO frequency in the SNAP procedure file.

Personnel Changes

Marcin Gawroński joined the technical team as of 1 October 2014.
As of 1 January 2015, Andrzej Marecki is a new head of TRAO replacing Krzysztof Katarzyński who became a Vice Director of the Centre for Astronomy of N. Copernicus University.
Kaz Borkowski, Friend of VLBI at TRAO for many years, retired at the end of February 2015. As of 1 March 2015, Paweł Wolak is a new Friend.

Changes/Upgrades Made to Hardware/Software



A new C band (4-8 GHz) receiver has been installed on the antenna on May 21 2015. Currently it co-operates with an old methanol band converter. The new wide band converter is almost complete and will replace the substitute soon. The first measurements shows a significant improvement of sensitivity indicating the system equivalent flux density of about 170 Jy (T_{sys} ~27K).

Current software versions

- Mark5A OS is Debian "Etch" version 4.0 with the package mark5a_1.0.7-i386.deb
- Mark5A application code is Mark5A2007y.225d
- The StreamStor driver library version is 10.31 (SDK 9.2), with API version 11.25 and firmware version 13.04
- FS 9.10.4 version is used for Mark5A, and 9.11.07 for Mark5B/DBBC.
- Mark5B jive5ab version is 2.5.1-SDK9.2
- The software version of DBBC in the 'tunable' mode is 1.04.2. (During 2-Gbps tests:1.05E.)

Problems with the frequency standard

On 9 January 2015, our maser suddenly accelerated after the ambient temperature near the maser fell below 18 °C. A few days later, our maser returned to its previous rate of about 1.6 μs/day.

Paweł Wolak