

Westerbork VLBI station report for the EVN TOG meeting,
St.Petersburg, Russia, September 19th, 2016

New hardware for the WSRT:

The WSRT is now equipped with the APERTIF receivers and backends. (12 telescopes) As of September 15 2015, Wb contributed to VLBI projects with a single dish, equipped with a modified MFFE and a DBBC backend. Tied array capability at L-band, using the Apertif frontends, will be added at a later stage.

DBBC:

Our DBBC, was delivered in Januari 2015. (8 BBC's, 2Cores and VSI input) One telescope (RT1 or RT0) is equipped with a modified MFFE that is connected to the IF1 inputs of the DBBC. We had to install an extra mixer, to meet the requirements of the DBBC IF inputs Our Mark5B (previously connected to the TADUmax) is now connected to the DBBC (VSI). After session 2016-2 we installed and tested firmware versions 105 and 105E.

Field System:

We installed FSL9 on our FS computer. FS version 9.11.6
After session 2016-2 we upgraded to 9.11.7
The site specific software for telescope and receiver steering was improved.
Also the web based monitoring software was upgraded and improved.
We used 'onoff' and 'gnplt' to update the rxg files with new noise sources values. (C and L-band)

Mark5B:

We used SDK8.2 + Firmware version 12.13
All sessions worked ok with this firmware. Both pata and sata disks were used. (packs ranging from 1.6TB - 16TB)
Linux : Etch 2.6.18-6-686:(Debian 2.6.18.dfsg.1-26etch2)
Current JIVE software : jive5ab-2.5.1-ETCH-SDK82-i386

Diskpack purchase:

In 2016 we purchased diskpacks that will be used for the a Flexbuf. We plan to buy a Flexbuff in 2016 and due to the availability of dedicated broadband fiber links between WSRT and Dwingeloo we are investigating a setup to stream the data through the fiber directly to the Flexbuff that will be installed at JIVE. This will require the necessary upgrade of our DBBC (FILA10G etc) and some other switch equipment.

Session Participation:

Westerbork participated in the M, C and L-band experiments of sessions 2016-1 and 2016-2

Furthermore the WSRT participated successfully in e-VLBI and Radio Astron projects.

Problems

During session 2016-2 we had a polarization problem in the C-band receiver(linear polarization i.s.o. circular). This was solved by installing the spare receiver.

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