

**Westerbork VLBI station report for the EVN T0G
Meeting, Bonn, Jan 24, 2023**

Overview:

Westerbork is contributing to VLBI projects with a single dish, equipped with a modified MFFE providing circular polarization and a DBBC backend. Two radio telescopes are available for VLBI operations, one equipped with the MFFE receiver, and the other with the 5cm receiver, currently sharing the DBBC/Mark5B/FlexBuff backend.

DBBC:

Our DBBC (used operationally since Session 2015-3), has four Core2 boards and eight BBC's and an internal Fila10G card and its running on Windows 7 and firmware version 1.07.

The WSRT DBBC is capable of delivering 2Gbps setups to a FlexBuff (though the relatively narrow MFFE IF, limits the data rate to >~1Gbps).

FlexBuff:

WSRT's FlexBuff is equipped with 36 8TB disks (nominal capacity 244TB). This Flexbuff is now installed in the WSRT. We bought a new flexbuff 400TB and that is installed at Jive.

Fieldsystem:

Fieldsystem version 9.13.2.

Session Participation:

Westerbork participated in the X, C, M and L-band experiments of sessions 2022-1,2022-2 and 2022-3

Operational problems during recent sessions:

EVN 2022-1

No fringe during 6 cm/C band fringe test, low signal, bad bandpass. Replaced: power supply, RF module, LO module. Just a slight improvement in bandpass. Spare MFFE was cold, but it had bigger problems. There is no bandpass for one of the polarization's we tried replacing a few modules but with no luck. I assume all 6 cm / C band observations to be lost.

EVN 2022-2

This session went without any problems.

EVN 2022-3

One observation had the wrong LO setup in the vex file.

Richard Blaauw
Technical VLBI friend