INAF- Institute for Radioastronomy - Italy

Medicina Station Report

Technical Working Group meeting
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Medicina Grueff telescope Period Jannuary-June 2024

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Overview:
The Medicina Grueff 32m parabolic antenna is participating from far 1986 to all EVN observation sessions.
It is equipped with L,S,C,M,X,K band receivers, most of them cooled and all with dual circular polarizations, and last to be installed soon a three-band (K,Q,W) simultaneous receiver .
The backends are composed by DBBC2 with four core2 connected to a flexbuffer with 360TB storage size and a DBBC3/6 cores connected to another 512TB flexbuffer.
The telescope, backends and data recording are managed by NASA Field System through a observation control and scheduling system.

From September 2024 the telescope will be stopped for a refurbishment, the installation of a new active surface showing main dish panels with ≤ 65 microns accuracy and 44 microns subreflector accuracy, to be able to operate up to 116GHz. Scheduled restart of activity is planned for March 2025.

VLBI backend:
DBBC3 is ready for activity, with its own flexbuffer and controlling Field System 10.2.0.
The old production system (DBBC + FB) is still going on without problems.

Field System:
We are running FS-10.2.0 onto the production system and new DBBC3 backend.
Both can be controlled remotely from Jive through the new developed dbbc_proxy application.

VLBI sessions:

EVN 2024-1: all done except:

- 4h16m lost on 27 Feb from 23:30 to 03:46, for a unexpected control pc reboot. Affected experiment: EB100E and ES109
- 30m lost on 1st Mar: 14:30-15 for a net switch fault. Affected experiment: N24L1
- 20m lost on 5th Mar: 11:44-12:03, for unexpected ACU reboot. Affected experiment: EL065E

EVN 2024-2: All went fine except 1h lost on N24x2 for schedules overlap error.