

Metsähovi station report Q1/2011
EVN TOG meeting – Dwingeloo 2011

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1) Receiver status

The new 86 GHz receiver was used for the first time for the session c101a in May 2010.

The 43 GHz receiver has been out of order for the last years and it is still waiting to be repaired.

The 22 GHz receiver is working fine.

There have been some problems with the S-band of the geodetic S/X receiver since 2007. At the moment we are trying to solve these. We changed the semi rigid coaxial cables of the receiver which were broken and will do more tests in the upcoming months.

2) BBC/dBBC status

Status of our VLBI hardware has gotten even worse than last time: some of rack BBCs are broken and beyond worthwhile repair. Only 9 BBCs are being used in the experiments. We already have a quote and open order for one DBBC unit for geodetic purposes. Payment and escrow is an open issue. For the time being we will use an iBOB 1xVSI => 10G workaround design.

3) Metsähovi Data Processing Site

We have continued the processing of VLBI data using programs developed by Jan Wagner.

We have also an opportunity to use two Finnish supercomputer clusters, one has 2100 cores and the other has 2880 cores. There are some differences in Unix versions and connectivity. The computers rank at roughly number 100 in the world top-500 supercomputer list.

This is a rare opportunity to test the scalability of VLBI software correlators. So far the scalability tests have been done with maximum of 12 computers with four processor cores each, so moving to really powerful system is unknown territory. Scalability of high-speed data streams is also an interesting topic.

We have also been encouraged to apply for the computing grand challenge program in Finland and/or request resources in the world's top-5 supercomputer in Jülich, Germany. Because of lack of personnel resources and the migration to the new Aalto University we did not do these yet.

4) Metsähovi Data Analysis Site

Geodetic VLBI data from the ultra-rapid dUT1 sessions with baselines Metsähovi-Tsukuba and Onsala-Kashima is being analyzed with the Vienna VLBI Software (VieVS). Metsähovi is investigating its possibilities of becoming an IVS Associate Analysis Center together with the Finnish Geodetic Institute in 2011.

5) Personnel

Esa Turtiainen is now working for the NEXPreS project in Metsähovi.

We are seeking a computer specialist who is interested in Radio Astronomy, anyone can apply.