JIVE Newsletter number -2-

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NEWS NEWS NEWS NEWS NEWS

1) Progress on the EVN MkIV data-processor at JIVE

In the JIVE basement a two week period of intensive testing has been concluded. These tests focused in getting all software and hardware to work in an integrated fashion. Progress is measured by meeting certain milestones. After finding a couple of problems here and there during the previous week, it turned out that we entered this week only a single minus sign away from success.

As reported on the "evntech" exploder earlier, we got our first fringes from a MkIV mode on Monday June 15. FR002 is a test experiment conducted on June 4, with 7 EVN stations participating. The experiment includes observations of 3C84 and DA193 using 6 different MkIV modes with increasing complexity (1 to 2 bit mode, 1:1 to 1:4 fan-out, normal and double speed). Using the first tapes that arrived (Westerbork and Jodrell), we found strong fringes on the simplest mode (1:1 1 bit) on 3C84 at L-band.

On the next day we were able to obtain fringes to Noto as well. This is important progress as Noto produces VLBA data with modulation applied. The processing of different experiments in different observing modes is now automated, with the Central Correlator Computer software reading the experiment schedule in VEX format. In fact this also allowed us to decode the 2 bit mode that was on the tape and produce fringes. It is "a bit" early to claim we did see the enhancement in signal to noise expected for a 2 bit mode.

By the end of the week we also found fringes to Effelsberg, Onsala and Medicina; completing fringe searches for the entire experiment. Most of the clock values were consistent with the ones obtained for C98L2 just before FR002, as measured at the Bonn correlator.

The people involved in the testing are also proud of three other steps. Firstly it is now possible to configure, start and stop the correlator from the central software. Secondly we now have had fringes with the tapes spinning in the reverse direction. Finally, we have had many months in which it was only possible to operate the correlator with many (> 6) people watching it; it simply refused to run below a certain attention threshold. That stage has now passed, proven by a test in which a single, simple-minded astronomer sent off a batch job and left the room to have coffee. Fringes were detectable one cup of coffee later.

The results were obtained on a prototype setup with 2 of 16 Data Playback Units equipped with Station Units (these decode the tapes and format the data for the correlator). The correlator has 1/8 of its final capacity. Hardware for the correlator is building up in the mean time. Next week we are switching to a 4 station setup.

2)

The fourth EVN/JIVE Symposium and EVN Users Meeting will be held at JIVE, Dwingeloo, The Netherlands. The Symposium is expected to be held on 23-24th October 1998. The Symposium will coincide with the formal opening of the new EVN MkIV Data Processor at JIVE. For more details consult http://www.nfra.nl/jive/symp/ann.html.

The EVN WWW Home page http://www.evlbi.org/evn.html has recently been updated. Several new pages have been added, including a web based "EVN User Guide".

This newsletter was prepared by Harro Verkouter, offline software scientist at JIVE, Dwingeloo.

I would appreciate your suggestions, comments, additions and any other form of feedback, especially if you plan to have a symposium (or the like). Please mailto:verkouter@jive.nfra.nl.

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