**MINUTES**
**of the RadioAstron Teleconference on November 16, 2011**

**Yu.Yu. Kovalev** chaired the teleconference.

1. **N. Kardashev and M. Popov** informed the participants on the current IOC results. Observations by the SRT of the the Crab nebulae and 3C84 (that is point-like as in contrast to the Crab nebula) have been done in all frequency ranges and gave us accurate estimates of SEFDs at all frequencies. They exceed expected values at highest frequencies by factor 2-3. The measurements are not over yet – we are trying to understand high frequency mismatches. We are also planning more precise beam shape measurements at 22GHz. The beam is elliptical with 6'x12' size. Thus antenna surface have some deformation because of the temperature gradient or transportation/unfolding artifact. Single-dish observations are made with transmission of scientific data to Pushchino TS with our high data-rate link. Three masers are observed at 18 cm and the pulsar 0329 at 92 cm. Also first interferometric observations are made – giant pulses and 2 extragalactic sources. Data is copied to Moscow

2. **V. Kostenko** reported about quick check of yesterday data. We have all the data in Moscow now besides of the data from Quasar network that is coming soon. Autocorrelation spectra of W3OH & Ori KL at 18 cm and proper pulsar profiles at 82 cm are nice. Baselines: 40 000 -120 000 km

   **Glen Langston:** was interferometric observations were done with up-link tone or on-board maser as the time reference?

   **Yu. Kovalev:** The interferometric observations were made in an “open loop” mode (on-board H-maser was used)

   **Glen Langston:** Was the data link stable during observations?

   **Yu. Kovalev:** The first quick tests have shown that the data link was stable during the observations yesterday however we did not finish all tests of the data from yesterday. It is happening right now.

3. **Gurvits** reported about RadioAstron tracking with EVN antennas - Onsala & Metsahovi, at X – band. The detection of RA was excellent. Averaged distance was 70000 km. The data is in the processing now and it will be possible to measure the topocentric Doppler shift. It will be made available to orbit determination group in Keldish institute of applied mathematics as soon as possible.

   **Norbert Bartel:** RA at some part of it orbit will be at near field – did you correct for that?

   **L.Gurvits:** At X band the entire Solar System is in near field, so yes, we corrected for that.

4. **Y. Kovalev** summarized the results of VLBA survey (~30 sources) of the RadioAstron fringe-finders. Observations were made at October 1 and correlated quickly after. We obtained correlated flux densities versus uv-distance. The best target was BL Lacertae itself at all 3 frequency bands. Also we selected few other targets for fringe-searching to deliver at least or about 1 Jy correlated flux-density at RadioAstron baselines . We also have results on spectral line data, that is processing right now.

5. **M.Popov** - Fringe search plan. Plan for nearest 1 month is already composed and 11 experiments are planned till the end of January. First of them is already done. Japan radio observatory in Usuda is joining us (but currently only at 18 cm).

6. **Yu.Yu.Kovalev** informed the participants on the results of the submitted proposals at ground radio telescopes in support of the RadioAstron ESP. There are no results on the proposals with deadline at October yet. We expect them to begin arriving soon. We are going soon to start working on the proposals on the Australian (LBA) radio telescope with deadline in the middle of December.

7. **N. Kardashev** reported that 10 days ago he met with the director of the ROSCOSMOS (Popovkin). Popovkin promised to very carefully and seriously look for money from sources inside Russia to support and cover TS in GB. He was very serious about that and expect that this search for money will be successful. Also we have formal agreement with South Africa 30 m antenna. We have electronic equipment but actually no activity because of the people busyness here. We hope in December we start the real activity with South Africa. **Yu. Kovalev:** We have 2 equipment for TS ready to use.

8. **Review of action items**

   **M. Popov:** To compose a tentative time-table of possible observations, and inform the observatories on the specific time slots that might be requested for fringe search program in October-November (closed).

   **Yu.Yu. Kovalev**: to test communication lines for raw data transfer to the ASC correlator (continued to Yu.Yu. Kovalev).

   **ASC administration**: to prepare necessary agreements with Russian Custom Service for hard disks shipment (in progress).

9. **N.S. Kardashev** There was a suggestion by Kardashev for RISC meeting to be held in June 2012 in Pushchino. However, as participants noticed there is an arrangement for June 12-15 AAS meeting in Alaska. Thus, Y.Y. Kovalev proposed to e-mail potential conflicting meetings.

10. **Yu.Yu. Kovalev** proposed the time for next teleconference.

**Agenda of the RadioAstron teleconference**
**November 16, 2011**

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| | Corrections to the Agenda | N.Kardashev |
| 1 | IOC status and results | N. Kardashev/M.Popov |
| 2 | Single Dish observation with RA | V. Kostenko |
| 3 | VLBA observations to find best fringe search candidates | E.Fomalont |
| 4 | Fringe search plan | M.Popov |
| 5 | Early science program plan | Y.Y.Kovalev/M.Popov/A.Alakoz |
| 6 | Tracking stations outside Russia | N.Kardashev |

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| 7 | List of action items | I.Pashchenko |
| 8 | Radioastron meeting in Pushchino in 2012 | N.Kardashev |
| 9 | Next teleconfperence | N.Kardashev |