

## **MINUTES**

### **of the RadioAstron Teleconference on March 16, 2011**

N. Kardashev chaired the teleconference.

The agenda of the teleconference and the list of participants are attached to the Minutes.

#### **N. Kardashev informed the participants on the progress in mission development.**

- He confirmed the priority status of the mission with the launch date scheduled for late June 2011. He also explained the time-line of current events: important tests of SRT functioning in the large vacuum chamber in the Peresvet town near Moscow were completed, and the equipment will be returned to LA in a week for final tests on EMC and control zero baseline interferometric measurements.
- N. Kardashev expressed his gratitude to the observatory directors who have provided formal letters of intention to support RadioAstron fringe search program.

#### **V. Stepanyants make short presentation on tracking and orbit determination.**

- He described radio system of orbit measurements and mentioned also the laser range measurements. The later technique will utilize 100-element retroreflector installed on-board of the spacecraft. Laser measurements will be carried out in cooperation with the international service.
- Range-rate measurements accumulated at the TS via VIRK communication line also will be utilized in orbit determination and reconstruction process.
- Detailed telemetry information on executed sequence of events (such as unloading gyroscopes) will be carefully examined to take into account non-gravitational effects.
- Optical measurements of the SC trajectory on the sky are also planned to be conducted in Russia and abroad.
- The following accuracy in SC position along the orbit may be achieved with the above mentioned techniques: one month prediction: 1000 m; one week prediction 300 m; reconstructed orbit 50 m.
- Some discussions on the necessary accuracy took place (L. Gurvits, K. Kellermann, E. Fomalont, V. Stepanyants, L. Kogan).

#### **Tracking Station in South Africa and in New Zeland.**

- **S. Gulyaev** informed the participants about the status of 12-m antenna which is fully operational now and is ready to be used as a TS for RadioAstron. He also reported on the continuing talks with TELECOM representatives about getting permission for transmission at 7.2 GHz with positive trends.
- He also said that he has support from the administration of Auckland University and from the New Zealand Ministry of Science and Technology to start formal contacts with the RSA.
- **S. Likhachev** informed the participants about the status of TS in South Africa; the question is still in negotiation state, but now technical details are to be discussed.

**Correlation of data outside of Russia** was discussed by S. Likhachev, J. Romney, A. Lobanov and others. S. Likhachev informed the participants that at present the ASC correlator team is busy with the development of the software to treat simulated space-ground VLBI data by the ASC correlator; the task is expected to be solved during the month, and then



Chairman: N. Kardashev

**List of participants:**

Bartel N.	York Univ., Canada
Finkelshtein A.	IAA, Russia
Fomalont E.	NRAO USA
Giovannini G.	IRA/INAF, Italy
Gulyaev S.	Auckland Univ., New Zeland
Gurvits L.	JIVE, The Netherlands
Kardashev N.	ASC, Russia
Kellermann K.	NRAO, USA
Kogan L.	NRAO, USA
Kovalev Y.Y.	ASC, Russia
Langston G.	NRAO, USA
Likhahev S.F.	ASC, Russia
Lobanov A.	MPIfR, Germany
Popov M.	ASC, Russia
Romney J.	NRAO, USA