RadioAstron Monthly Notices
March 2005

I. Tasks and developments completed in the ASC in the period October 2004 March 2005.

1. Engineering model of the SRT feed system was isolated from the focal container, and it was carefully tested in the laboratory. Mechanical deformations were found in the feed construction, which may be responsible for high values of system temperatures measured in Pushchino radio astronomical tests. Necessary improvements were introduced into the feed construction. New engineering model of the feed system is under development now.
2. Noise temperatures of the engineering models of all receivers were tested in the laboratory. The measured values correspond to the specifications.
3. Technical specifications on the on-board hydrogen frequency standard were formulated and agreed with the Russian firm "Vremya-Ch" (Nizhnii Novgorod) which will be responsible for development of this frequency standard for RadioAstron project.
4. Technical specifications on the on-board 6-cm receiver were formulated and agreed with SKB IRE (the same institution which is responsible for the development of 22 GHz on-board receiver).
5. Flight model of 18-cm receiver has successfully passed operational tests which resulted in formal prolongation of its exploitability term covering launch date in 2007 year.
6. The Amendment to the Technical Specifications (TTZ) on the "Spectr-R" mission is being prepared in LA and in ASC in response to the request from RSA. The Amendment will be issued in April 2005. It will reflect all corrections and innovations for the Mission accumulated during last years.
7. Hard-disk recording system RDR developed in the ASC was successfully tested in observations of OH masers with 64-m radio telescope in Kalyazin. RDR recording systems uses S2 format and provides all RadioAstron recording modes

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Appendix
(The list of used acronyms)

ASC	Astro Space Center of Lebedev Physical Instutute
Cold Plate	cooled LNAs and antenna feed
DC	hermetic device container (part of payload); it contains Formatter, Rb oscillators, synthesizer, control unit and is placed under dish
DM	Device Module = DC + H-maser
EGSE	Electronic Ground Support Equipment
Electronic Complex – all SRT electronics	
EM	Engineering Model
FC	Focal Container – hermetic package with the scientific payload; it contains receivers, microwave synthesizer, control unit and is placed in focal site of dish
FM	Focal Module = Focal Container+Cold Plate
LA	Lavochkin Association
OHCFS-SRT	Space Radio Telescope On-board Heterodyne and Clock Frequency Synthesizer set
OHFS-SRT	Space Radio Telescope On-board Hydrogen Frequency Standard
ORFS-SRT	Space Radio Telescope On-board Rubidium Frequency Standard
RSA	Russian Space Agency
Service Module, Spacecraft bus – spacecraft itself (without payload).	
SRT	Space Radio Telescope (all scientific payload including 10-m dish)
TMS	Spacecraft Telemetry System (technical)
TVT	Thermo-Vacuum Tests
VIRK	Scientific high rate (up to 2x72 Mbit/s) radio complex, including transponder
ZBIT	Zero Baseline Interferometer Tests (ZBIT)