Svetloe Radio Astronomical Observatory

Sergey Smolentsev, Ismail Rahimov

Abstract

This report summarizes information on recent activities at the Svetloe Radio Astronomical Observatory (SvRAO). During the previous year a number of changes were carried out at the observatory to improve some technical parameters and upgrade some units to required status. The report provides also an overview of current geodetic VLBI activities and gives an outlook for the next year.

1. Introduction

Svetloe Radio Astronomical Observatory (SvRAO) was founded by the Institute of Applied Astronomy (IAA) as the first station of the Russian VLBI network QUASAR. VLBI network QUASAR was described in [1].

Sponsoring organization of the project is the Russian Academy of Sciences. SvRAO is located at the Karelian Neck, near Svetloe village, about 100 km north of St. Petersburg. The basic instruments of the observatory are the 32-m radio telescope RT-32 and technical systems provided for the realization of VLBI observations.

During last year, Svetloe observatory participated regularly in various radio astronomical programs including VLBI and single dish observations of quasars and planets.

2. Participation in IVS Observational Programs

Table 1 summarizes the sessions performed during 2006.

Table 1. The list of IVS sessions observed at SvRAO in 2006.

	IVS-R4	IVS-EURO	IVS-T2	IVS-E3	IVS-R& D	IVS-VLBA	IVS-Int
January	3	1		1			2
February	2						2
March	4	1					2
April	3						2
May	1						
June							
July							
August	4		1	2	1		2
September	4	1		2		1	2
October	4						2
November	5	1	1				2
December	2		1				2
Total	32	4	3	5	1	1	18

3. Radio Telescope

In 2006 at SvRAO the following problems were solved:

1. Large equipment cabin was dismantled. Refrigerators were remounted into the new small cabin on the azimuthal antenna platform. Electric drives were removed from the cabel loop cabin under the azimuthal antenna platform.
2. The antenna rail was reconstructed by adding a steel supporting construction and rebuilding the concrete under it.
3. Electronic part of the angle data unit was improved by using modern components.

Figure 1. Former view of RT.

Figure 2. Current view of RT without large equipment cabin.

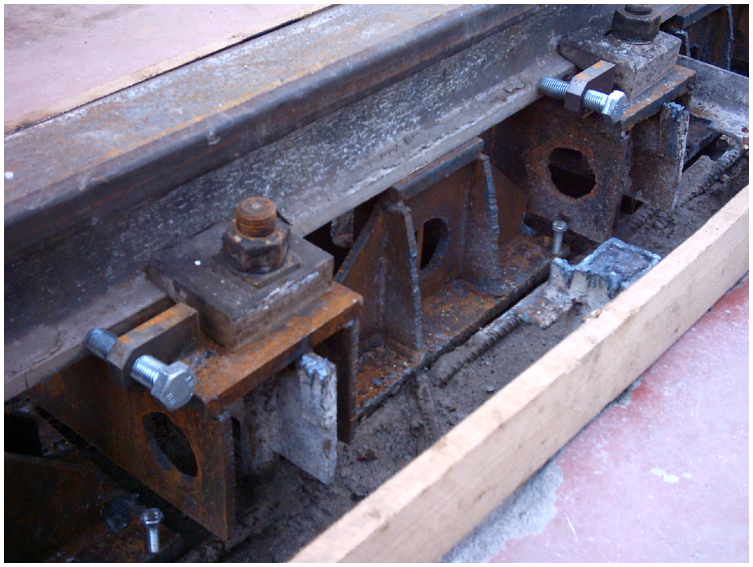

Figure 3. Steel supporting construction under the rail.

4. Outlook

Our plans for the coming year are the following:

- To participate in IVS R4, T2, EURO and RVD observational sessions.
- To participate in domestic observational programs for obtaining Earth orientation parameters.
- To continue geodetic control of the antenna parameters.

References

[1] Site http:www.ipa.nw.ru.