STATE OF THE SLR IN RUSSIA
During a long period, the Russian SLR stations were unable to deliver measurement data to the ILRS. Currently, in accordance with a recent decision of the State Administration, it is permitted to deliver measurement data from two Russian stations (Altay and Baikonur) to the ILRS, as well as to resume data delivery from the Komsomolsk station.
The Altay SLR station has been recently upgraded: a new laser has been installed with a pulse repetition rate of 300 Hz (instead of 5 Hz), and a higher average output power (0.75 W instead of 0.25 W).

The measurement data delivery to the ILRS has started Oct. 10, 2008.
Basic functions of the Data Collection and Analysis Center:

- Provision of ephemeris data for the SLR stations
- Collection and storage of measurement data from all stations
- Monitoring of measurement data accuracy, completeness, and correctness of data delivery
- Calculation of normal point data and their delivery to the ILRS Data Centers (during the first phase of operation)
- «Feedback» to SLR stations and ILRS concerning measurement data quality and completeness
## Correction of Altay Station Coordinates

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Raw measurement data deviations from the smoothed orbit (Altay SLR station, LAGEOS-1, 08.10.2008)
Normal point data deviation from the smoothed orbit
(Altay SLR station, LAGEOS-1, 08.10.2008)
Raw measurement data deviations from the smoothed orbit (Altay SLR stations, LAGEOS-2, 08.10.2008)
Normal point data deviations from smoothed orbit
(Altay SLR station, LAGEOS-2, 08.10.2008)
Normal point data deviations from the smoothed orbit
(Altay SLR station, LAGEOS-2, 09.10.2008)
Correction of Komsomolsk SLR station coordinates

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Coordinates: X=-2948.545480; Y=2774.313007; Z=4912.302412
The SLR station Altay is housed in the Altay Optical-Laser Center (AOLC), 300 km to South-West from city Barnaul, 20 km to North from town Zmeinogorsk.
Current SLR station Altay
Altay station telescope

- Receive aperture  60 cm
- Transmit aperture  20cm
- Tracking camera: ICCD, FOV 10’x12’
- Laser 2.5 mJ  150 ps  300 Hz
- Photometry: up to 15 m
- Angle measurements ± 2”
Purpose:
GEO SC search and angle measurement

BASIC PARAMETERS:
- aperture – 0,35 m;
- CCD format – 4096x4096;
- angular FOW  6.25 sq. deg
- exposition time up to 2.5 sec.
- minimum brightness for HEO spacecraft 16m
- SC position measurement accuracy ≤ 0,4″;
- GEO area scanning rate 600 sq. deg/h
ISS images (with use of adaptive optic system)

26. 10. 2006
Culmination range
450 km
Elevation 45°

03. 04. 2008.
Culmination range
416 km
Elevation 55°
AOLC view across the Kolyvan Lake
Baikonur SLR Station
SLR stations currently in operation

SLR stations to be provided by IPIE for RAS

SLR stations to be provided by IPIE for other State services