
Summary

Telescopes, Systems and Upgrades

-
- Impressed with the extent of upgrades, new networks in development and plans for new SLR systems.
 - The SLR community is strong and expanding.
 - The fundamental nature of the science is being recognized globally.



Russian laser tracking network:



Russian laser tracking network:



5. Baikonour (Kazachstan)



6. Maidanak



NASA not to be outdone -revitalizes its SLR activities



NASA Satellite Laser Ranging Network: Current Status & Future Plans

Papers by
David Carter
Scott Wetzell
Bud Donovan
Chris Clarke



TLRS-4 Post Installation



TLRS-4 (Hawaii) Summit View



TLRS-3 (Arequipa)



But now it's a three horse race.

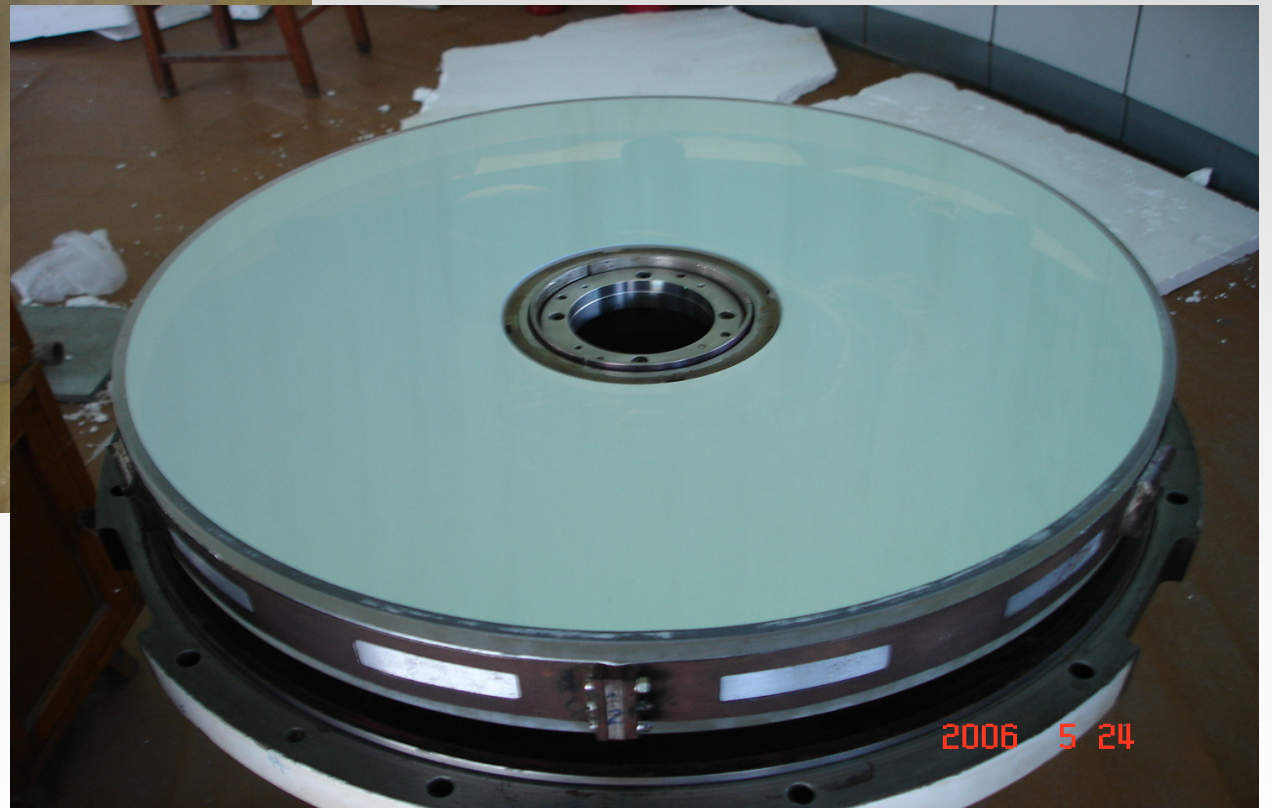
Chinese Station in San Juan Argentina



Upgrades in Changchun



A slight optical problem

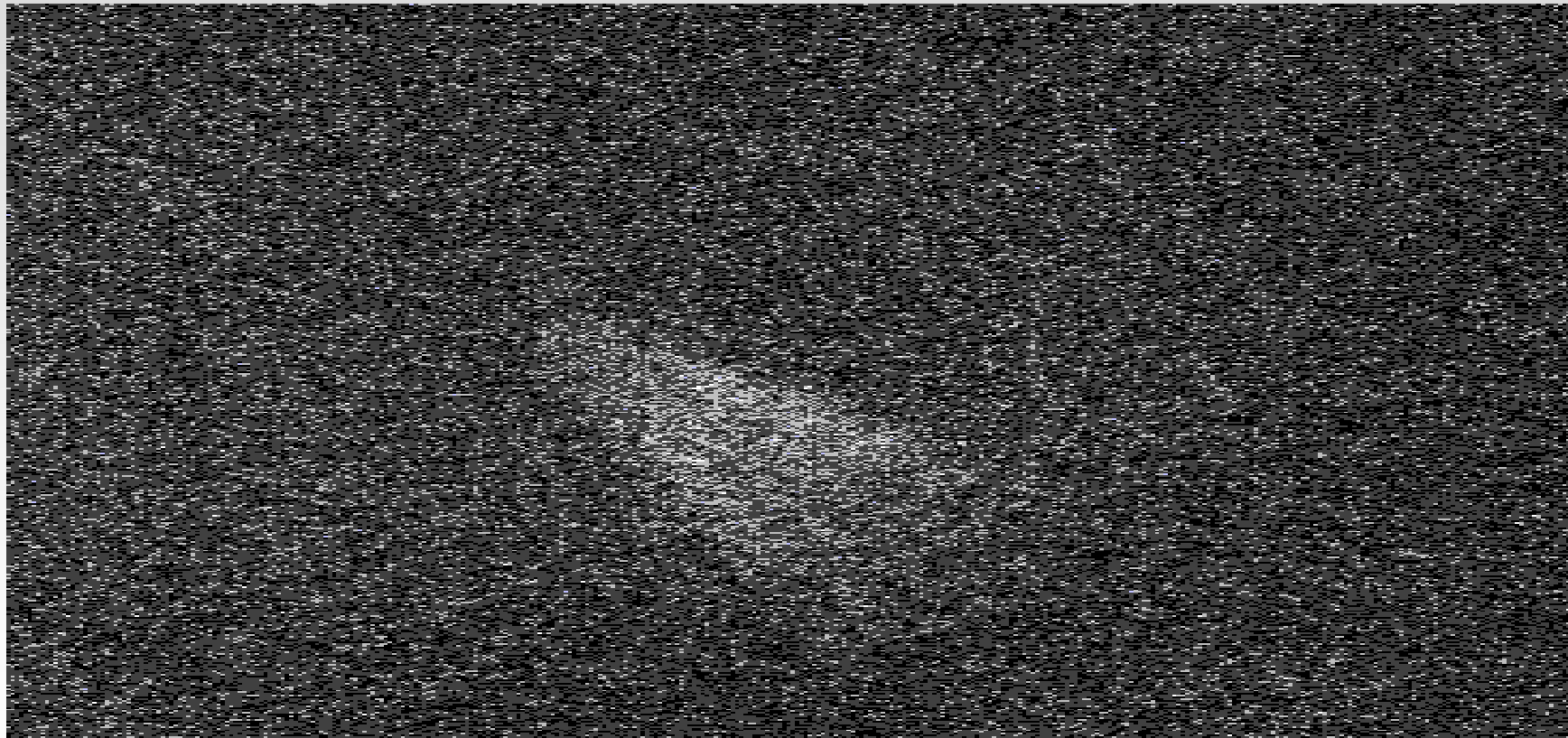


Dedication in difficult environment





Image of Daylight Laser Beam -Changchun



Study on Servo-Control System of SLR/LLR Telescopes

Li zhulian,Zheng xiangming,Xiong yaoheng

Yunnan Observatory of
Chinese Academy of
Sciences,Kunming,China

*We say goodbye to an old friend
and workhorse*

**Thanks a lot to all the observers
and engineers for :**

**Technology and evolutions
maintenance
observing thousand of hours**



- **More than**
 - **30 years of fruitful operations**
 - **35 000 passes**

LLR Station renamed to MEO and completely rebuilt

A new generation of Laser Ranging station

- From 400 km to the Moon
- One Way Interplanetary mission
- Highly Automatic



But say hello to a new and more capable friend

Most innovative design



Telescope view

- 1 meters diameter
- 3 grad/sec speed
- Have electro optical multiplayer
- Have two CCD camera on main guide and on a additional too.
- On a board have two new box of engine carrying system

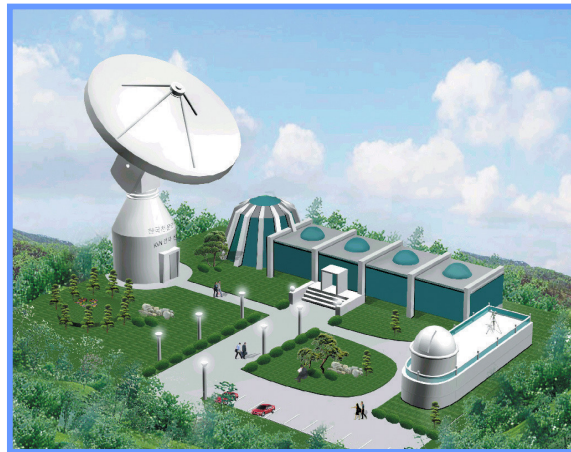
Korean SLR Plans

- No Fundamental Station in Korea
 - ITRF and ICRF Coordinate, EOP, Polar Motion, LOD, etc.
- GPS Station (about 80) and VLBI Station (3) in Korea
 - Crustal movement, Geodetic survey, mapping
- KASI wants to construct the Fundamental Station



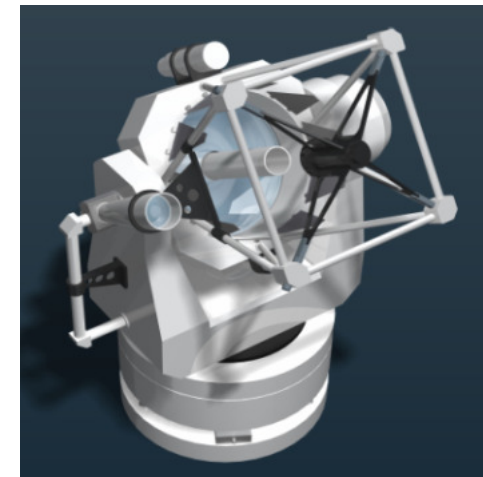
GPS

+



VLBI

+



SLR

Now for the really hard stuff.

- Non-cooperative tracking



Simultaneous Optical and Laser Space Objects Tracking

High Precision 2D solution

Laser beam reflected from satellite

