

NEW SLR STATION RUNNING IN SAN JUAN OF ARGENTINA

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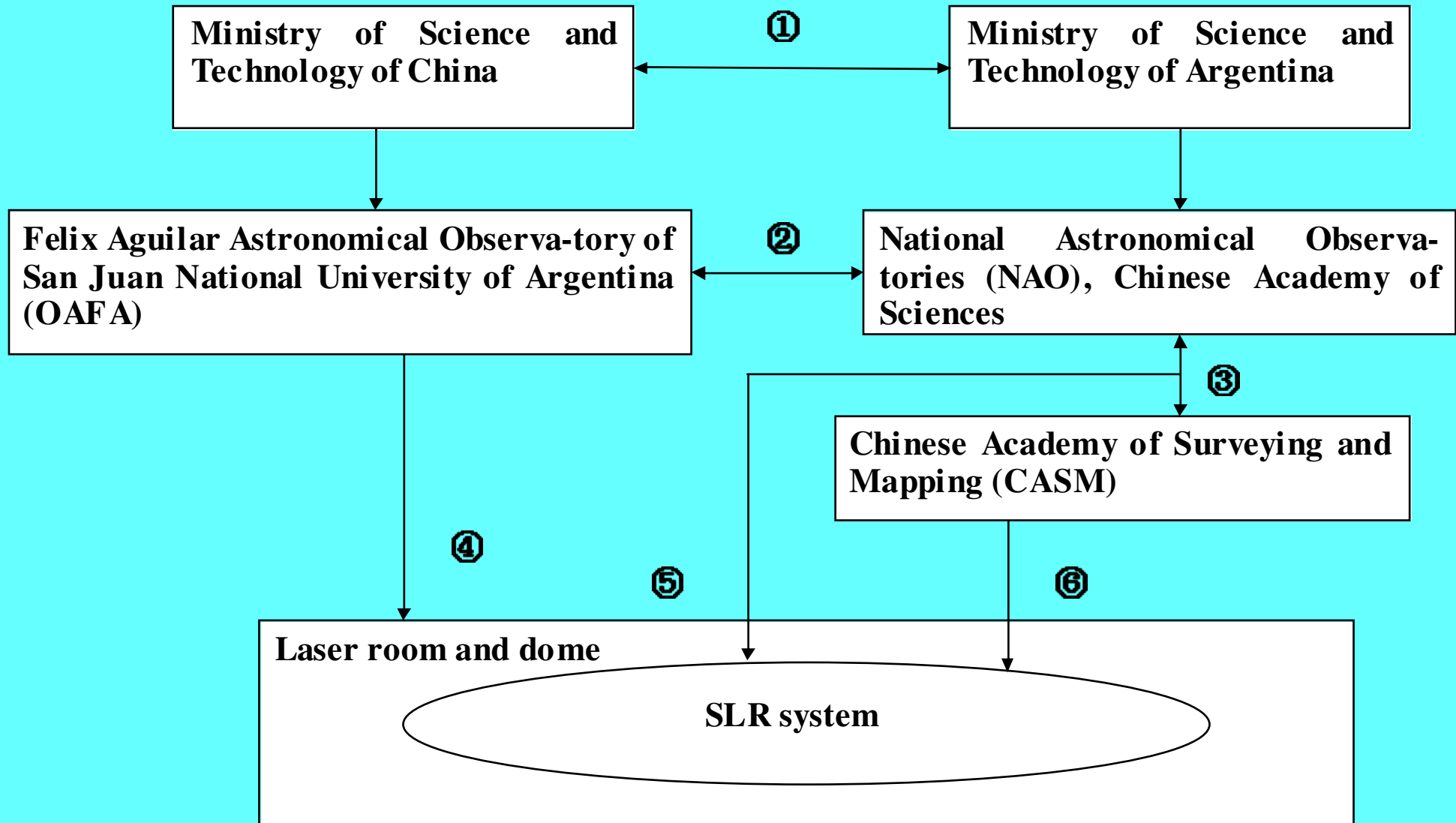
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(2) National Astronomical Observatories, Chinese Academy of Sciences (NAOC)

(3) Observatorio Astronomico Felix Aguilar (FELIX)

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The background-1/4



The background-2/4

About San Juan city

- The capital city of San Juan province
- 1300 km Northwest from Buenos Aires
- Population 20,000 in downtown
- No.12 of biggest city in Argentina
- Climate- desert ,up to 50°C in summer, very dry, lowest 5 °C in winter
- Plenty of fruits and melons, wine is very cheap, roast beef

The background-3/4

Observatorio Astronomico Felix Aguilar

2 parts:

- Headquarter near San Juan city, same place with SLR station
- leonato, 200km from San Juan ,near Andies mountain, 5 astronomical instruments from Germany ,America, spain in use for cooperations

The background-4/4

San Juan SLR station

- 15 km from city center of San Juan
- 300 days clear per year
- $31^{\circ} 30' 31''.050\text{S}$, $68^{\circ} 37' 23''.377\text{W}$ and 727.22m.
- 2 Chinese instruments, SLR and photoelectric astrolabe MARK II (PA II)
- Groundwork- scree and sand, no base stone in 100m deep



28 5:22PM



28 5:22PM

SLR system Installing-1/2

Time table

2005/08/06 device reach to San Juan

2005/09/24 open the container checking

2005/09/24-2005/11/ waiting, doing.....

2005/11/28 installing started

2006/02/22 installing ended, first return got

2006/02/23 send data to ILRS, station running

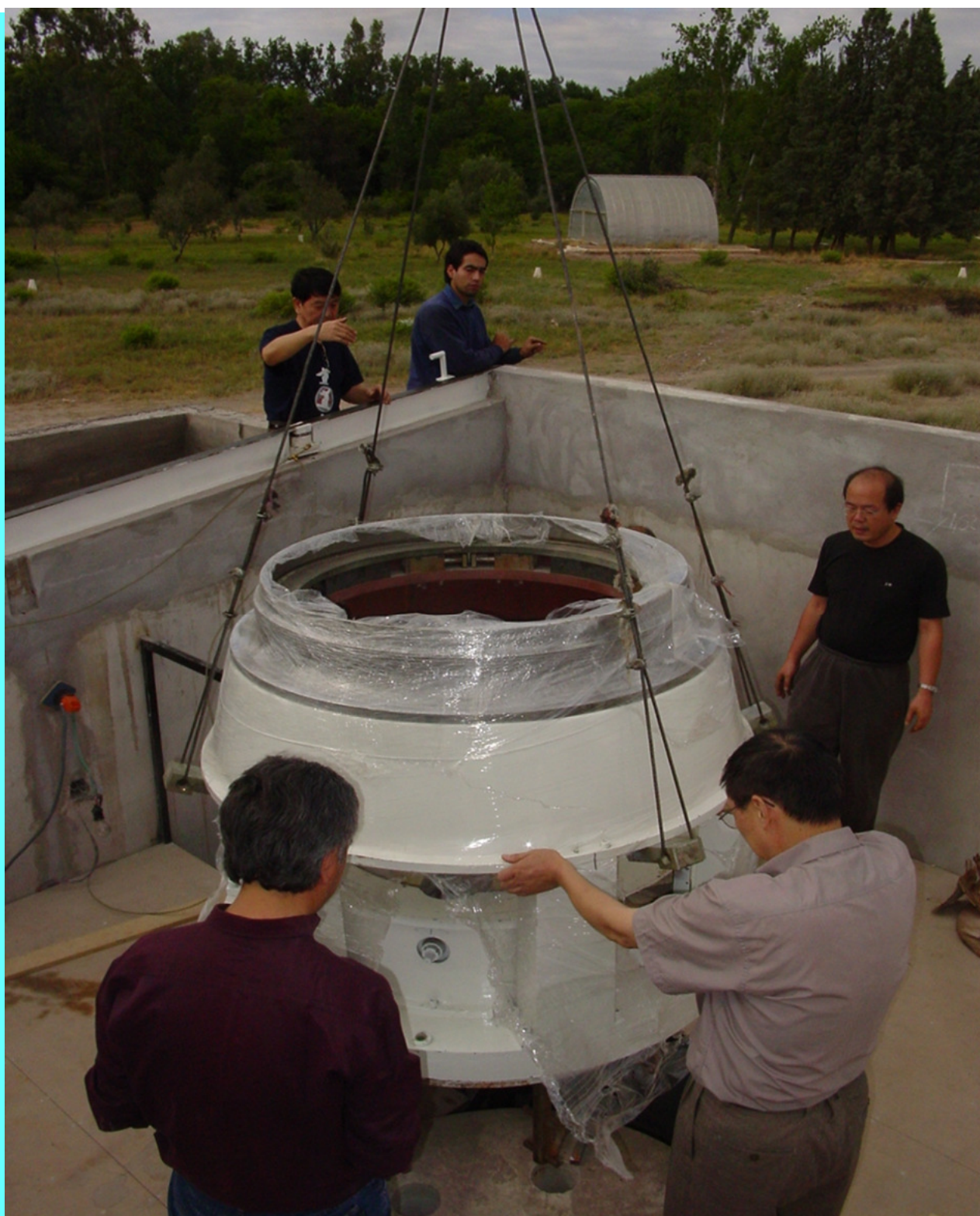
Difficulty in installing

- **Basement pillar is not fit the telescope in height and orientation**
- **Basement for laser is too high**
- **The facility for living ----very good; for work---nothing**
- **Decoration for whole laser room not ended**
- **No power line, no grounding cable, no light, no tables ,no chairs evenempty in the laser building**
- **installing and decorating at same time have to....**





2005/09/24 23:42









No. 5
Schwinger and Meier
Cylinder

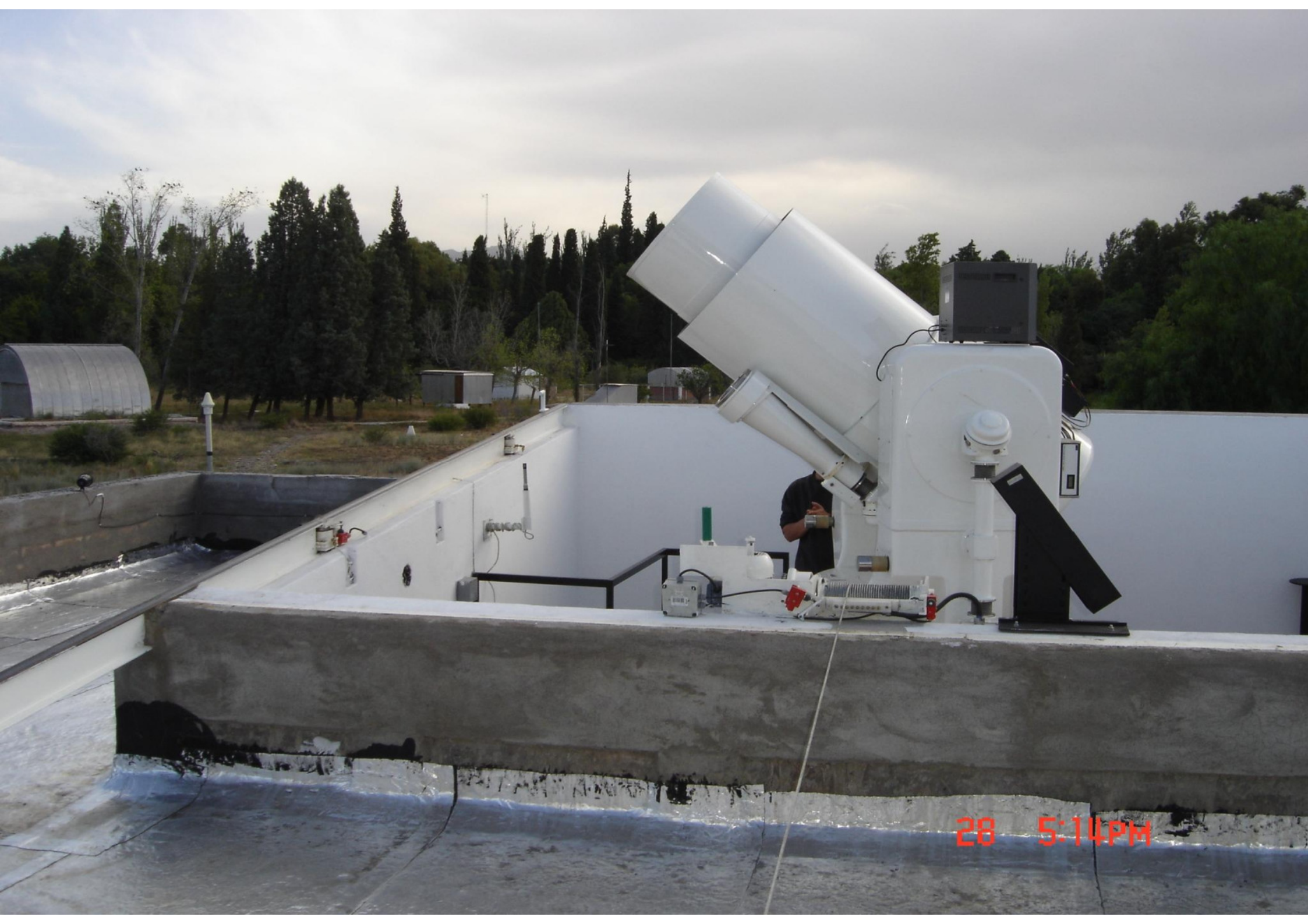
CN-001
MB-11
J.M.R.

No. 5
Schwinger and Meier
Cylinder





11 8:27AM





25 5:32AM



SLR system installing-2/2

Persons

T. Wang—CASM (responsible, optic,)

T. Guo—ISC,CEA (electronics design)

W. Liu—NAOC (electronics and laser maintain)

D. Huang—NAOC (daily observation)

Q. Xiang—CASM (daily observation)

G. tito—FELIX (electronics maintain)

The daily observation and maintain

- To Argentina: Monday through Wednesday 4 persons shift but every day a Chinese people must be present
- To China : Thursday to Sunday 3 persons shift on duty
- Every day the free person (china) in charge of cleaning, cooking and shopping

So the work is heavy for every one!!!



Hope

- 6000 passes for all satellite per year
- 1200passes for Lageos-1 and 2 each year
- Good quality for all data

Problems and questions

- **Day time ranging not available**
- **Laser not stable, spare parts damaged badly**
- **Some times different persons produce different quality for the data due to laser instability**
- **Dome moves difficulty, not safe**
- **At beginning the data have big RB due to the damaged chip in timing circuit board**
- **Laser room improvement needed**
- **Running is more difficult compare to in China**

The instrumentation

- **60cm caliber telescope, send and receive separated**
- **Passive mode-locked dye laser, 30ps, 1-10Hz, semi train**
- **C-SPAD**
- **SR-620**
- **PDM pulse distributor from Graz station**
- **Timing Hp58503A**
- **2 short distance ground targets**

Future plan

- Day time ranging
- Upgrading to KHz
- NAOC, FELIX and CASM will continue cooperate to the updating of SLR system in San Juan
- Not soon
 - time is needed for money
 - performance need more time also from China to Argentina



Thanks!