

1839 - 2014

# Central Astronomical Observatory at Pulkovo



# Николай I Павлович

## OUKAZE

DONNÉ AU SÉNAT DIRIGEANT.

DANS le désir de favoriser les progrès de l'Astronomie dans Notre empire, Nous avons ordonné de construire, dans les environs de St.-Petersbourg, sur la montagne de Poulkova, l'Observatoire astronomique central et de le munir d'un appareil complet des instruments les plus parfaits.

Aujourd'hui, que la construction des édifices destinés à cet établissement approche de sa fin, en sorte qu'il pourra être ouvert et que les observations pourront y commencer dès 1839, Nous avons sanctionné les règlements et l'état de l'Observatoire rédigés par le Ministre de l'instruction publique et examinés au Conseil d'état et Nous ordonnons de les mettre à exécution à dater du 1 de janvier de l'année prochaine.

L'original est signé de la propre main de SA MAJESTÉ IMPÉRIALE.

Varsovie,

19 juin 1838.  
1 juillet

NICOLAS.



L'original est apostillé de la propre main de SA MAJESTÉ IMPÉRIALE:

„Ainsi soit-il“.

Varsovie,  
ce 19 juin 1838.

## RÈGLEMENTS

DE L'OBSERVATOIRE ASTRONOMIQUE CENTRAL.

### § 1.

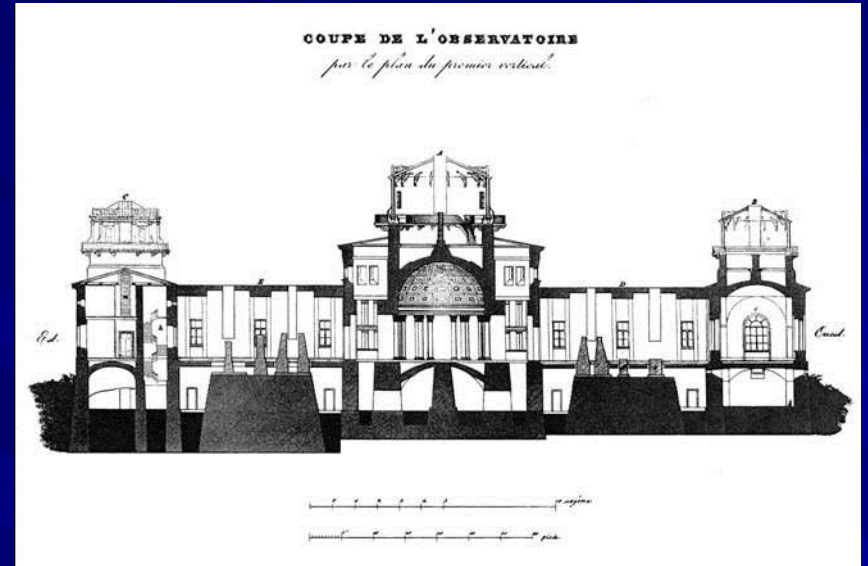
L'OBSERVATOIRE astronomique construit sur la montagne de Poulkova, à 17 verstes de St.-Petersbourg, est confié à l'administration immédiate de l'Académie Impériale des sciences, et tenant le premier rang parmi les établissements de ce genre en Russie, il porte le nom d'*Observatoire astronomique central* (Imperialis primaria Rossiae Specula Academica).

### § 2.

L'Observatoire central a pour but: a) de fournir des observations suivies et aussi parfaites que possible, tendant à perfectionner l'Astronomie comme science; b) de livrer les observations correspondantes, indispensables aux entreprises géographiques dans l'empire et aux voyages scientifiques en général; enfin c) de coopérer, par tous les moyens, au perfectionnement de l'astronomie pratique dans ses applications à la géographie et à la navigation, et d'offrir aux personnes qui désirent en profiter, l'occasion de s'exercer dans la détermination géographique des lieux.

The Russian Emperor Nicholas the First  
(Nikolai Pavlovich Romanov)





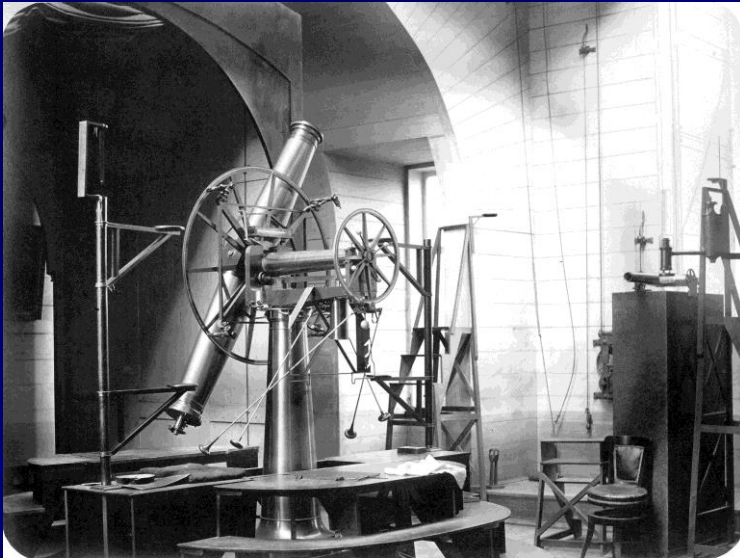
Architect  
Alexander Brüllow (1798-1877)  
with designs of the Observatory

Худ. А.И.Клиндер, бумага, акв., 1840. Гос.  
музей А.С.Пушкина



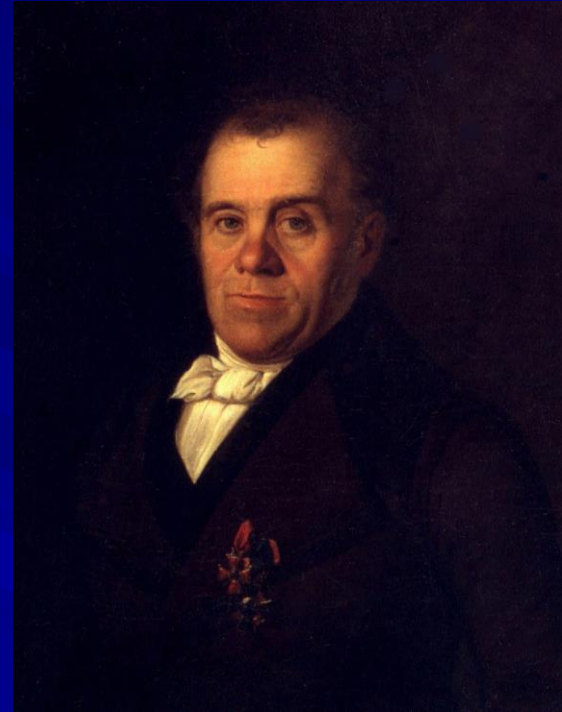
**The first director of the  
Pulkovo Observatory  
Friedrich Georg Wilhelm  
(Vassily Yakovlevich) Struve  
(1793-1864)**

Artist Jensen, 1841  
Pulkovo Astronomical Museum



**The Large transit instrument of Ertel-Struve  
( $D = 150$  mm,  $F = 2590$  mm)  
and the Large vertical circle of Ertel-Struve  
( $D = 150$  mm,  $F = 1960$  mm)**

## **The main transit instruments of the Pulkovo Observatory**

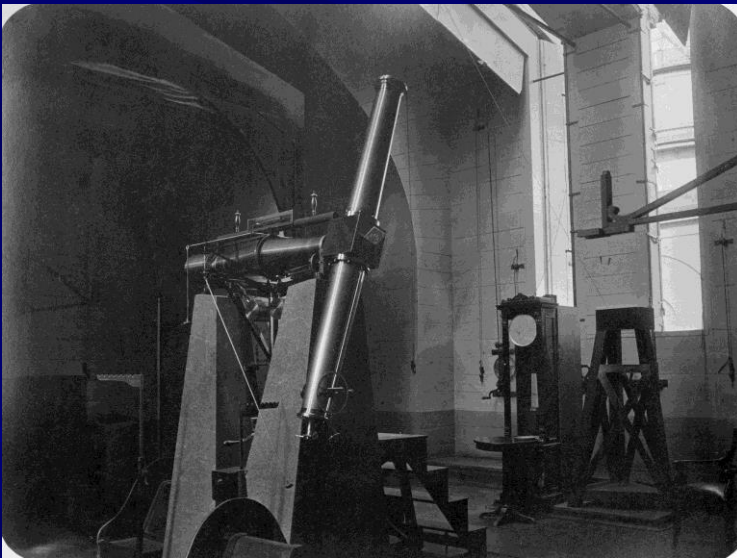
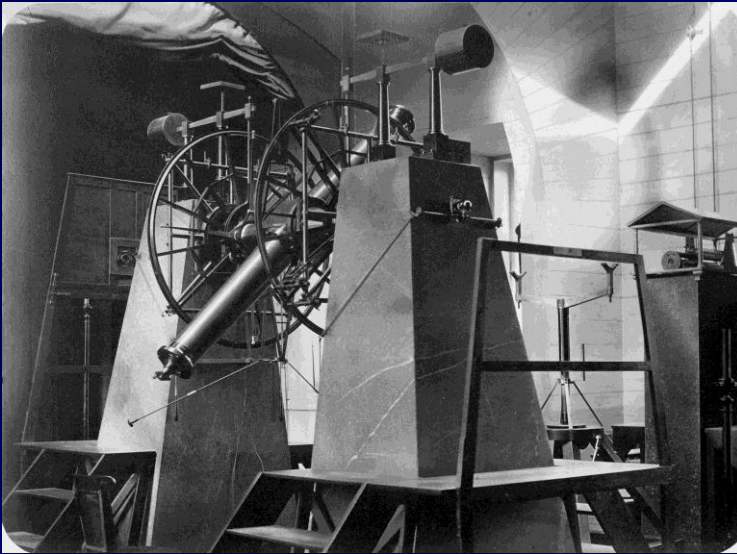


**Traugott Leberecht Ertel  
(1778-1858)**

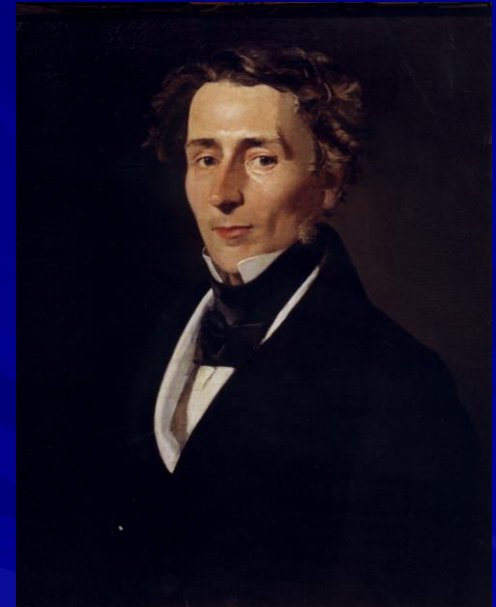
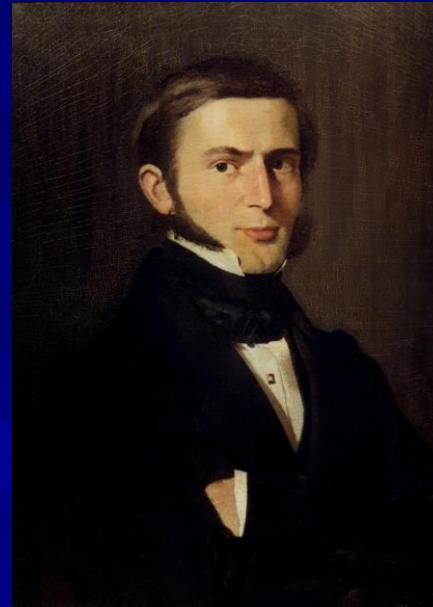
Artist M.Echter, 1838



## The main transit instruments of the Pulkovo Observatory

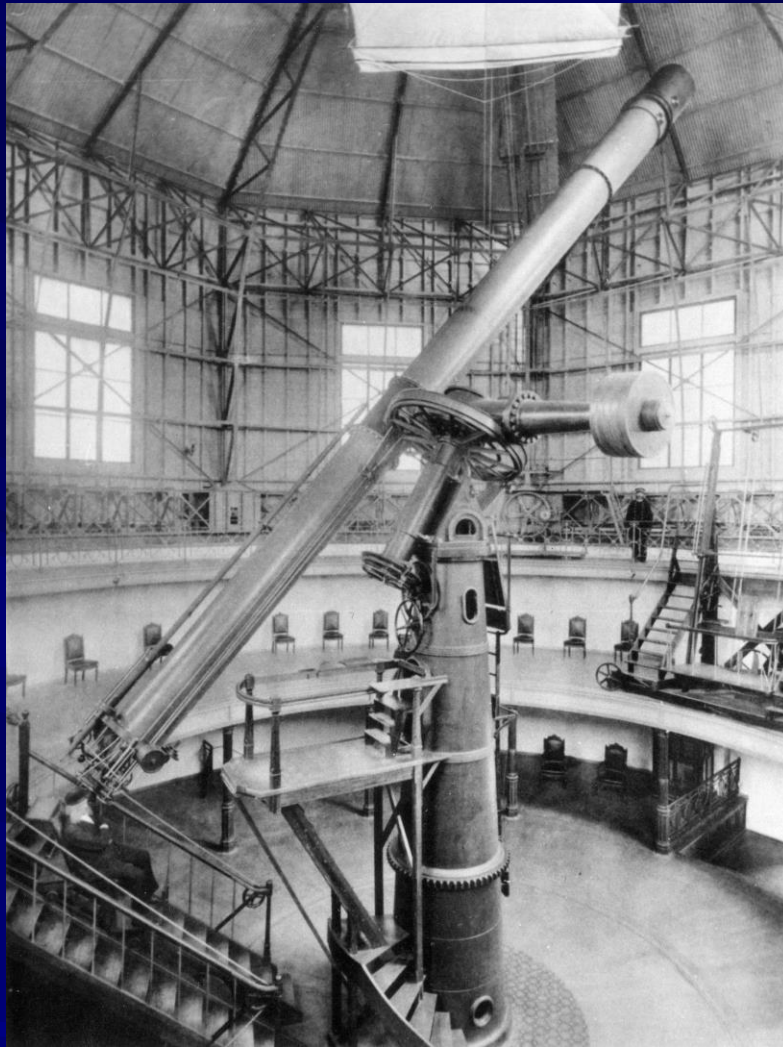


The Repsold Meridian Circle  
and the Repsold Vertical Circle



The Repsold Brothers  
Adolf (1806-1871)  
and Georg (1804-1885)

Artist Jensen, 1840  
Pulkovo Astronomical Museum



The world largest (at that time) 30-inch Refractor manufactured by the Clarks

The outstanding Russian astrophysicist  
Acad. Aristarchos Belopolsky







The general view of the Main Building of the Pulkovo Observatory from the balcony of the 30-inch Great Refractor Pavilion (end of XIX cy.)





**The Main Building of the Pulkovo Observatory  
Second half of the XIX cy.**



## Two southern branches of Pulkovo Observatory

Simeiz Observatory was found by N.S. Mal'tsov in 1900. In 1908 he donated it to the Pulkovo Observatory

Since 1912 it was one of the Southern departments of Pulkovo Observatory



Nikolaev Astronomical Observatory is the oldest naval observatory in the South-Eastern Europe, founded in 1821 by admiral A.S. Greig for needs of the Black Sea Navy. The first director was K. Knorre. From 1912 up to 1991, NAO was one of the Southern departments of Pulkovo Observatory.





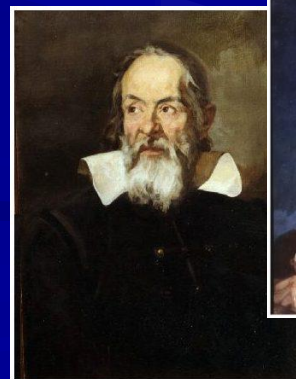
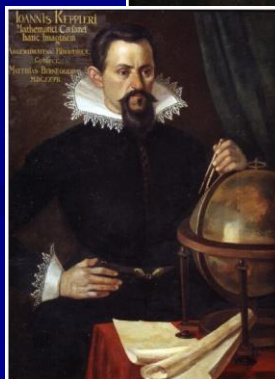
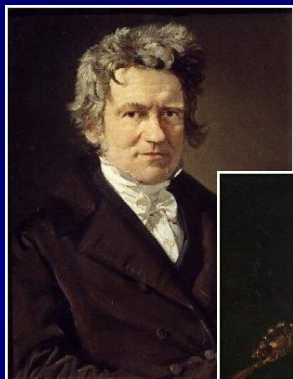
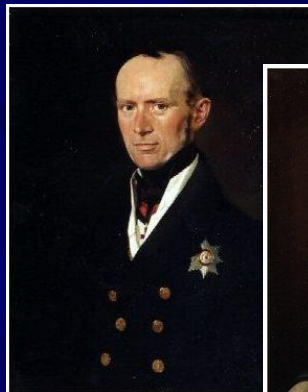
**Ruins of the Pulkovo Observatory  
1941-1944**





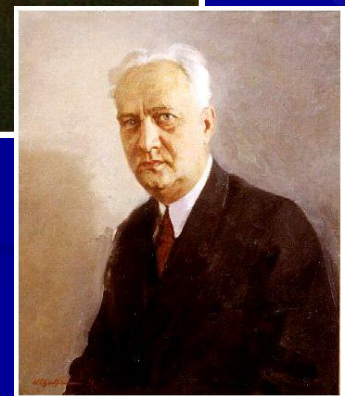
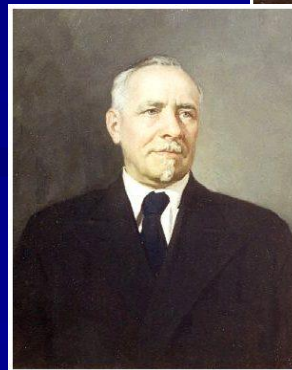
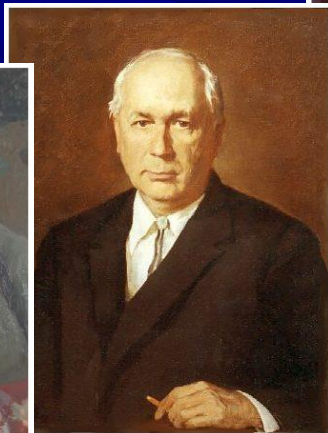
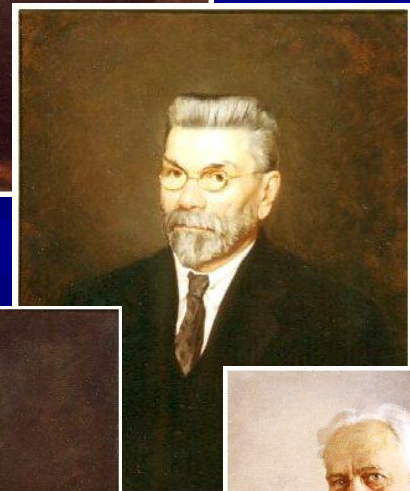
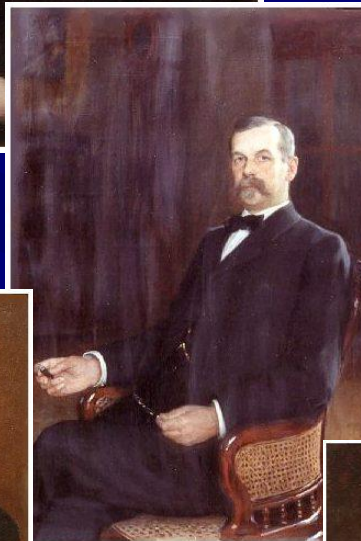
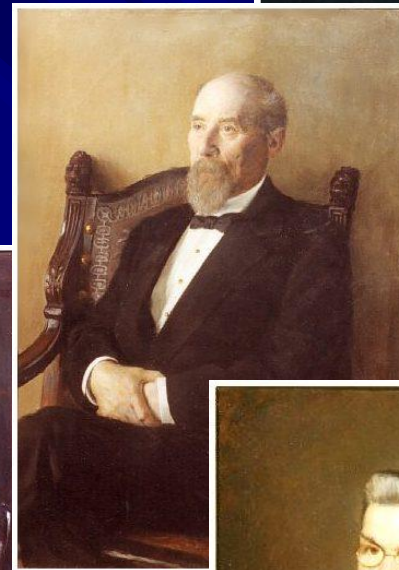
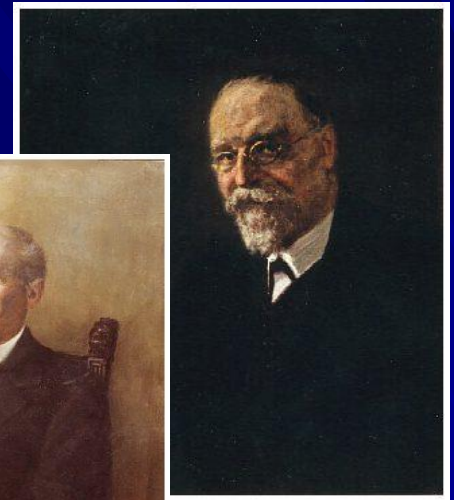
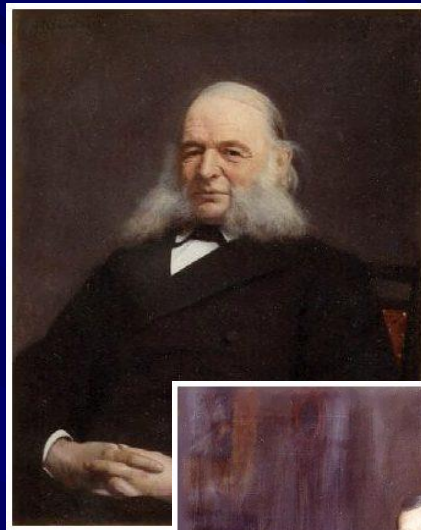
The Meeting in Celebration of the Inauguration of the  
Restored Pulkovo Observatory, May 1954





## Picture Gallery of the Pulkovo Observatory





**Directors of the Pulkova**



# Scientific activity of the Pulkovo Observatory

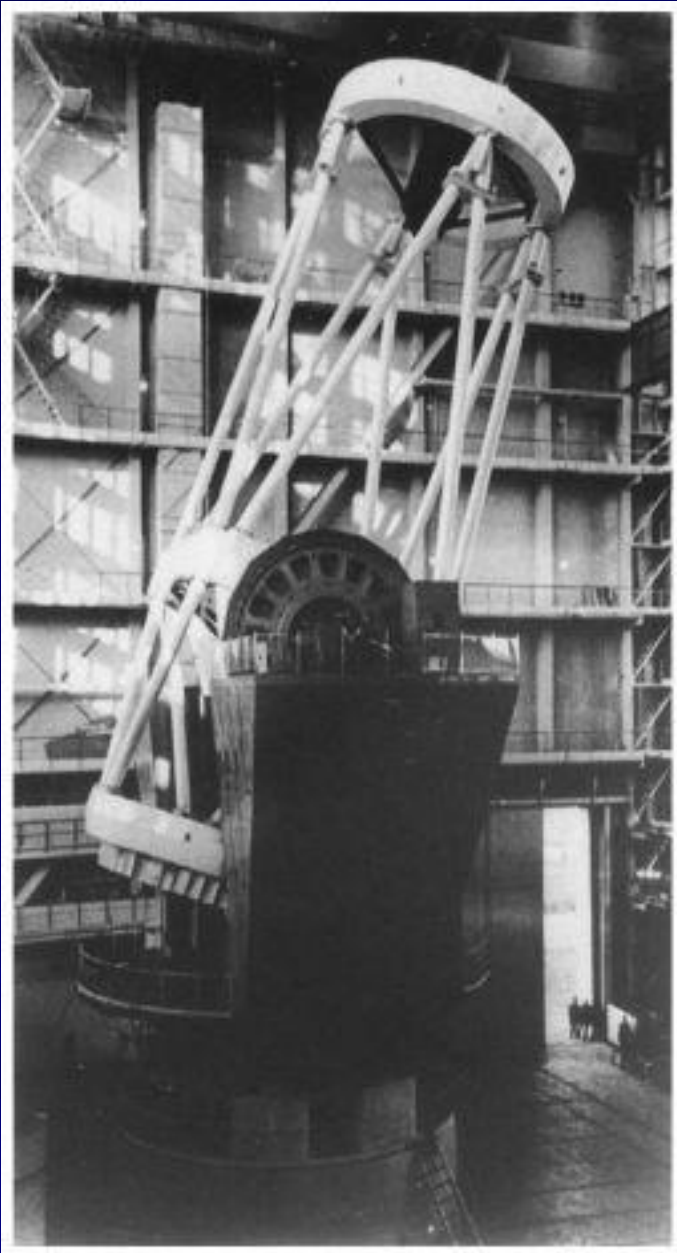
- Astrophysics
- Solar Physics
- Radio Astronomy
- Celestial Mechanics and Stellar Dynamics
- Positional Astronomy
- Geodynamics, Time and the Earth Rotation
- Astronomical Instrument-Making

*Cooperation with astronomers from the Great Britain, Spain, the USA, Denmark, Italy, France, Germany, Belgium, Finland, India, China, Japan, Greece and other countries*



Prof Dmitry Maksutov, Vladimir Schreiber, and Yuriy Shkol'nikov  
in the Observatory Optical Shop, 1970





## **The 6-meter Reflecting Telescope (1977)**

The Pastukhov Mountain, North Caucasus  
The Special Astrophysical Observatory

Designed by D. Maksutov and B. Ioannisiani





**Khaikin-Kaidanovsky  
Large Pulkovo  
Radio Telescope**  
(110 m, 1956)



**Prof Semen Khaikin**  
(1901 – 1968)

**RATAN-600**  
D = 600 m, 1975  
(the North Caucasus, Special  
Astrophysical Observatory)







Big Pulkovo Radio Telescope



# The High Altitude Astronomical Station of the Pulkovo Observatory near Kislovodsk (North Caucasus, 2100 m)



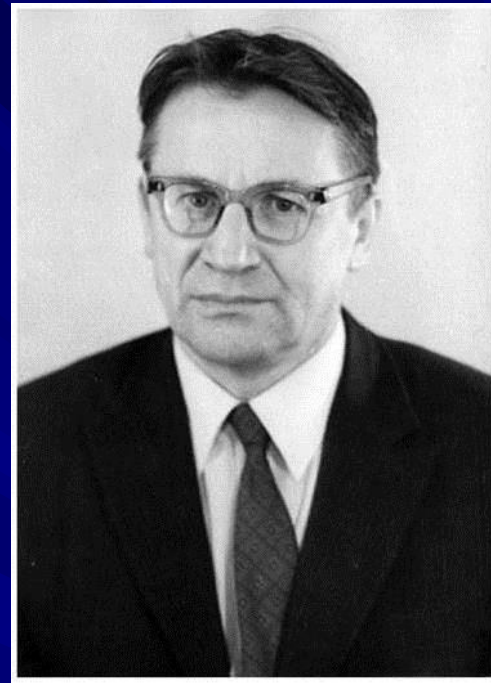
Prof. Mstislav Gnevyshev  
(1914 – 1992)







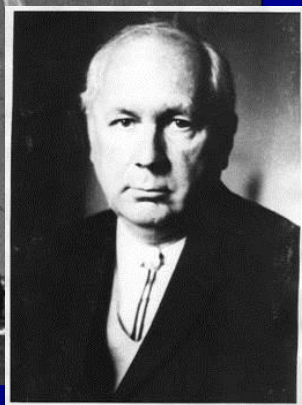
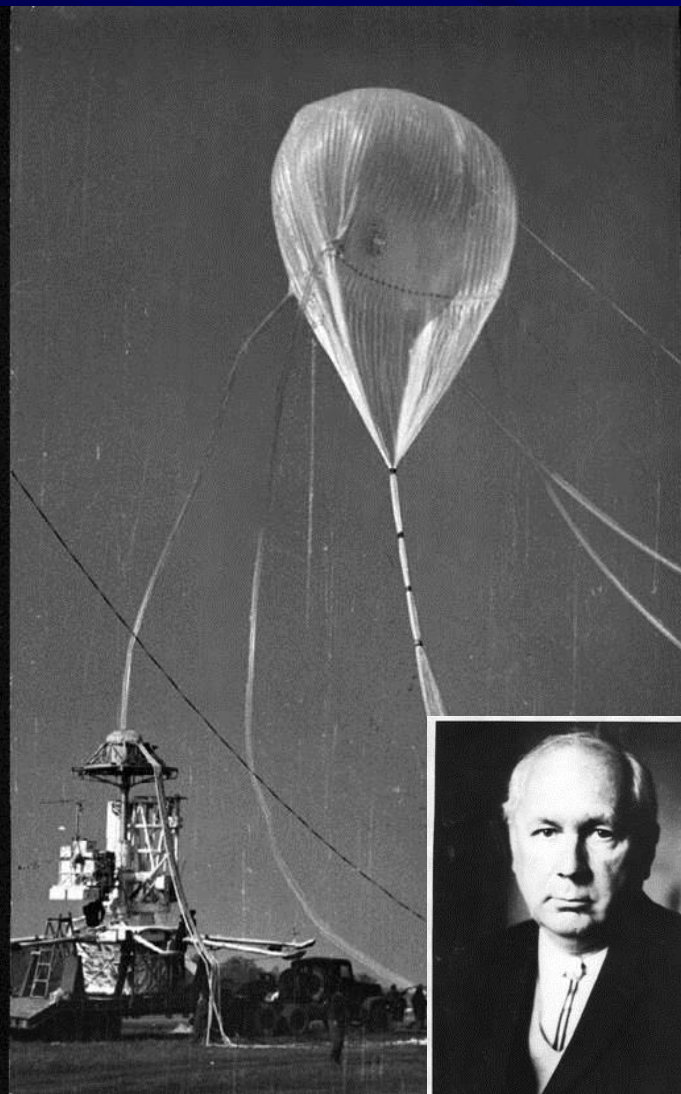




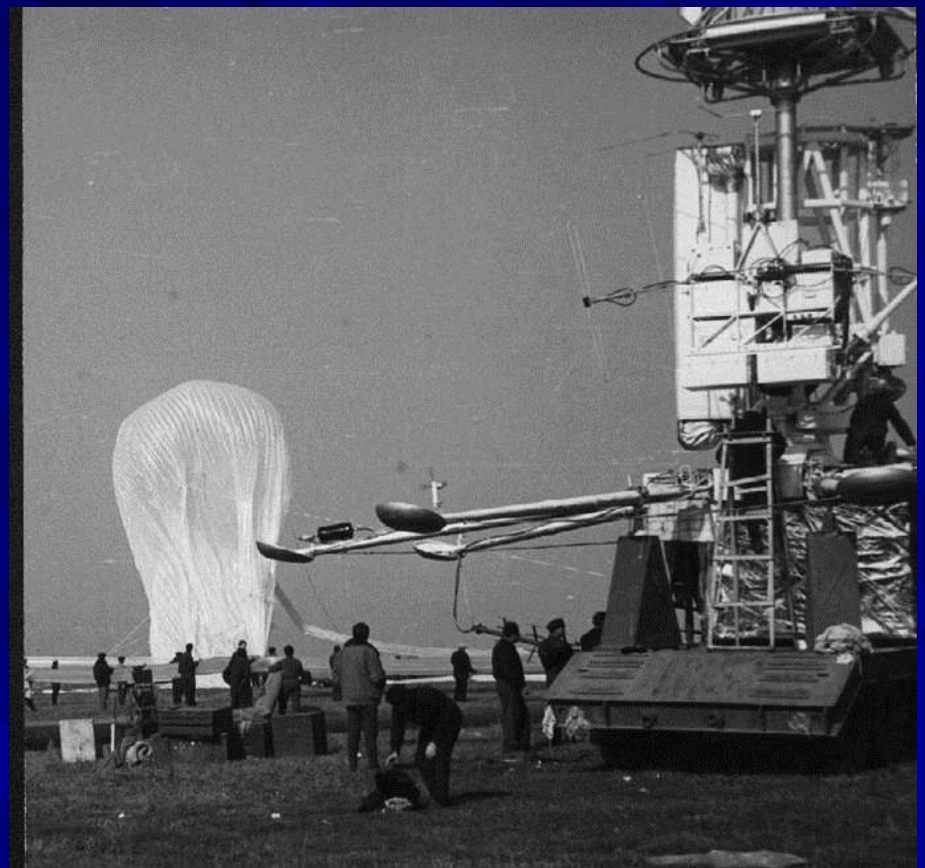
Prof Alexey Kiselyov

**26-inch Refractor (Carl-Zeiss-Jena)**





Prof Vladimir Krat  
(1911 – 1983)



Solar stratospheric observations,  $h \approx 20$  km  
(1963-1966), PI – V.Krat





Нил Олден Армстронг и директор пулковской обсерватории В.А.Крат на  
солнечном телескопе АЦУ-5 в мае 1970г., справа космонавт Г.Т. Береговой



After 1991 Pulkovo have lost 5 stations:

- Nikolaev Observatory (Ukraine)
- Station in Ordubad (Azerbaijan)
- Station at Ashtarak (Armenia)
- Observatory at Shar-Bulak (Tajikistan)
- Observatory at Cuba

Fortunately : El Roble (Chile) and Tariha (Bolivia)

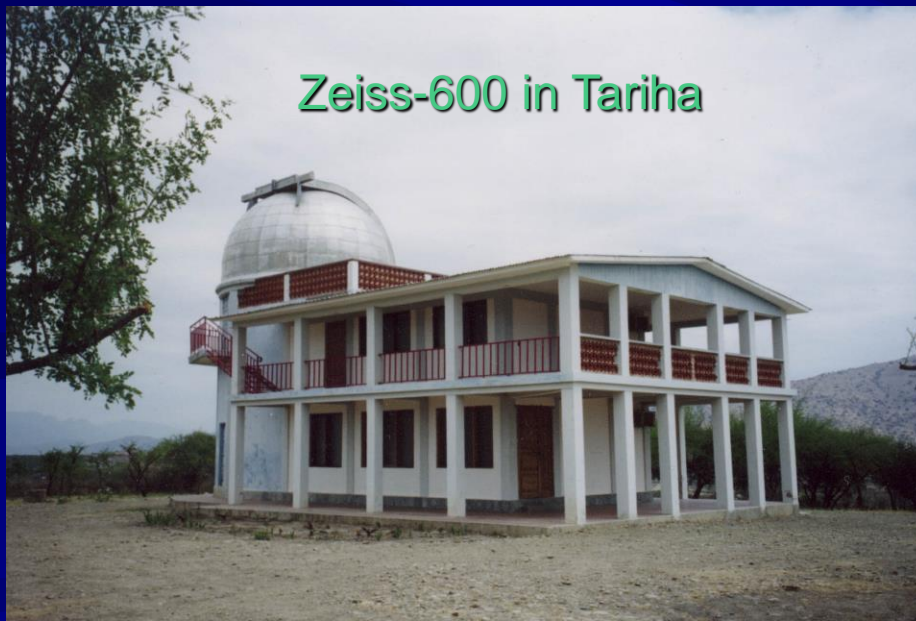
Campo Imperatore (Italy)  
IR observations with AZT-24



Astrograph and Zeiss-600  
in Tariha (Bolivia)

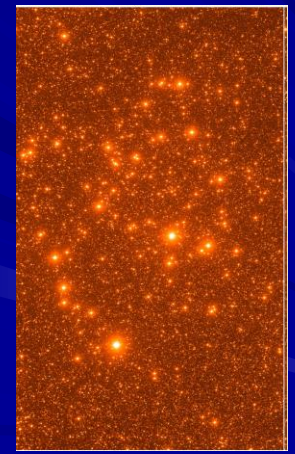
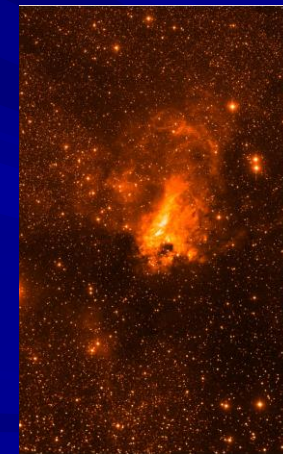
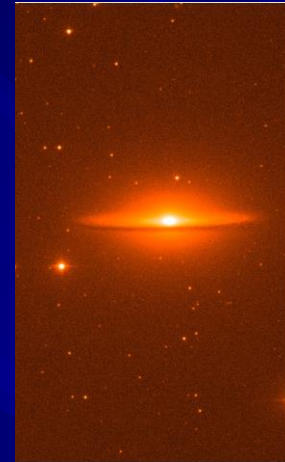


Zeiss-600 in Tariha





# MAKSUTOV AZT-16 at El Roble (Chile)



March 2013. First visit of Pulkovo astronomers to El Roble since 1973

The Ertel-Struve instruments  
in the Western Meridian Pavilion  
after reconstruction



The Round Hall of the Pulkovo Observatory  
(Astronomical Museum)





**Medal of F.G.W. Struve, 2006**

(Sculptor A. Degtyarev)

**The Struve Memorial Plate, 2009**

# The Pulkovo Memorial Astronomer's Cemetery



The Cenotaph to the memory  
of the Stalinist political terror victims

The tomb of F.G.W. Struve



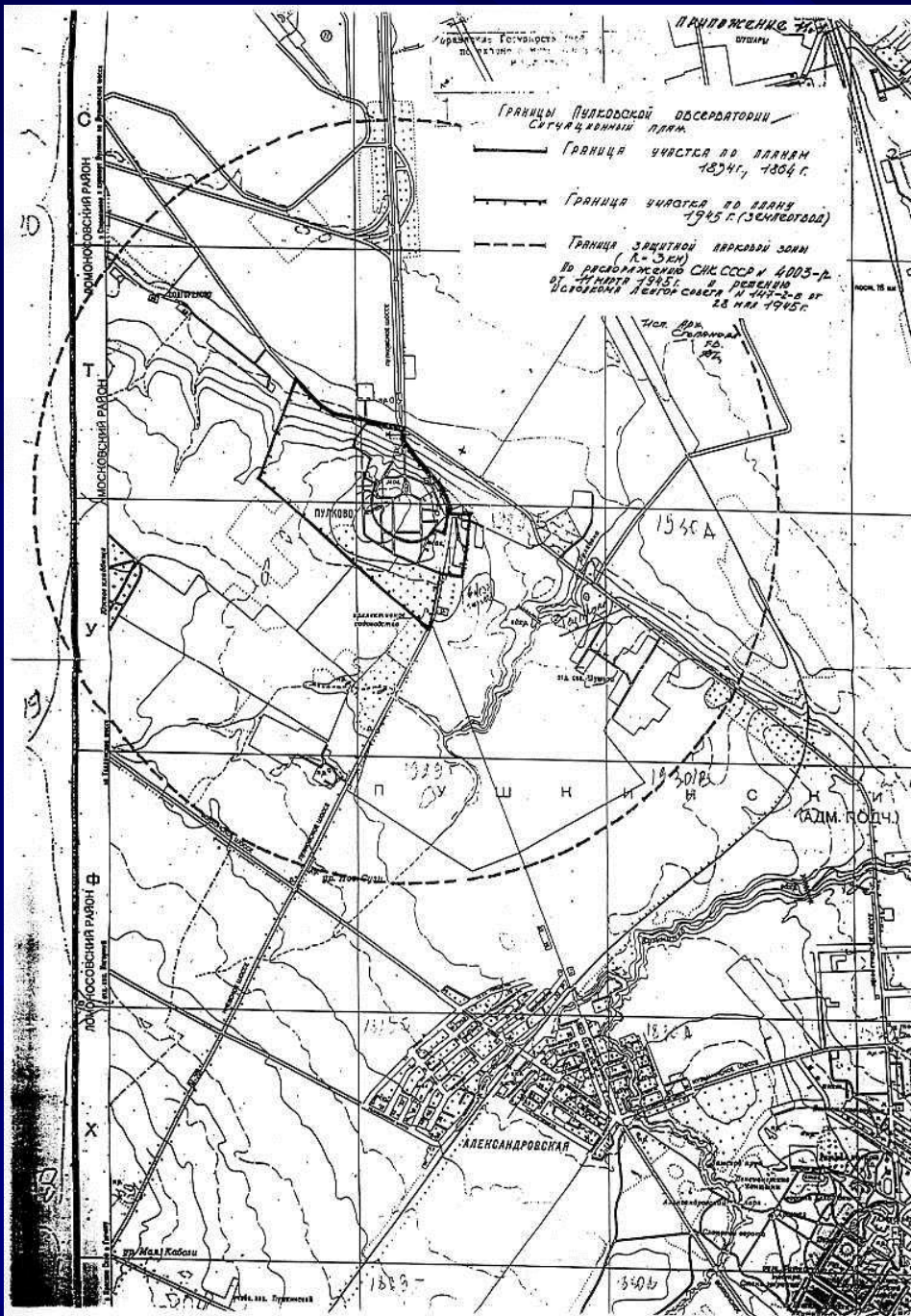


**The Monument on one of the  
triangulation chain points  
(Hoegland Island)**

The Struve Geodetic Arc  
Since 2005 included into the  
UNESCO List of the World Heritage

Pulkovo Observatory together with Nikolaev Astronomical Observatory and Crimean Astrophysical Observatory as the former Branches form a network, linked by the common theme of the UNESCO project "Route of European astronomical observatories"





## 3 km protection area of the Pulkovo Observatory

### THE LAW OF SAINT-PETERSBURG On the rules of land utilization and real estate development in Saint-Petersburg

4 February, 2009

**ARTICLE 71.** Restrictions on the use of land  
plots and major construction objects on the  
territory of the protected parkland area of the  
the Pulkovo Observatory.



Open door's day in Pulkovo, April 2009



Education: ~15000 school children visited Pulkovo Observatory per year.



Thank you