

Small basis of Struve, Pulkovo Observatory

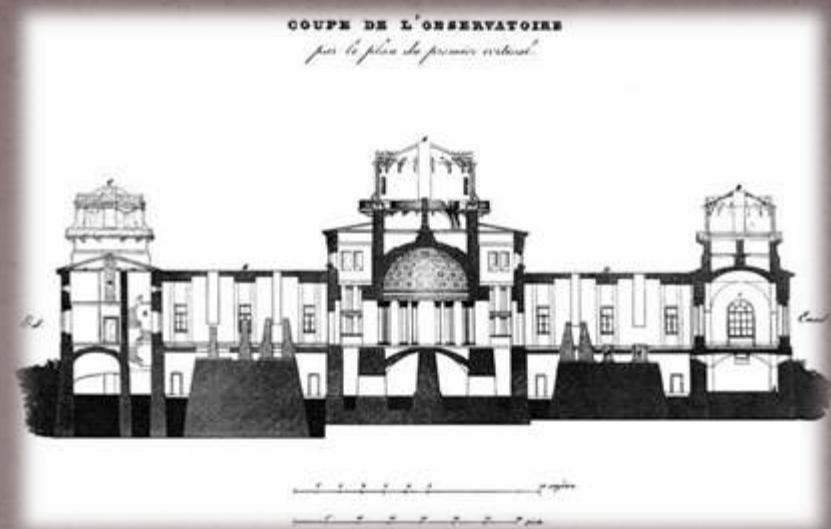
Deputy head of Department
Rosreestr
St.Petersburg society
geodesy and kartography

N. Kazeev

A. Bogdanov



Architect
Alexander Brullov
(1798-1877)



A. P. Bryullov depicted in the portrait with the project of the most significant buildings of Pulkovo Observatory, become a major event in the cultural life of Russia in those years



Observatory at Pulkovo hill, engraving Gobert, XIX century



V.Y. Struve

Director Pulkovsky observatory

1839 - 1862

In 1839, V. Y. Struve founded
PULKOV GEODETIC SCHOOL.

Almost 90 years (1839 - 1929) it was the leading scientific-research, educational-methodological and organizational center on the basis of which was carried out:

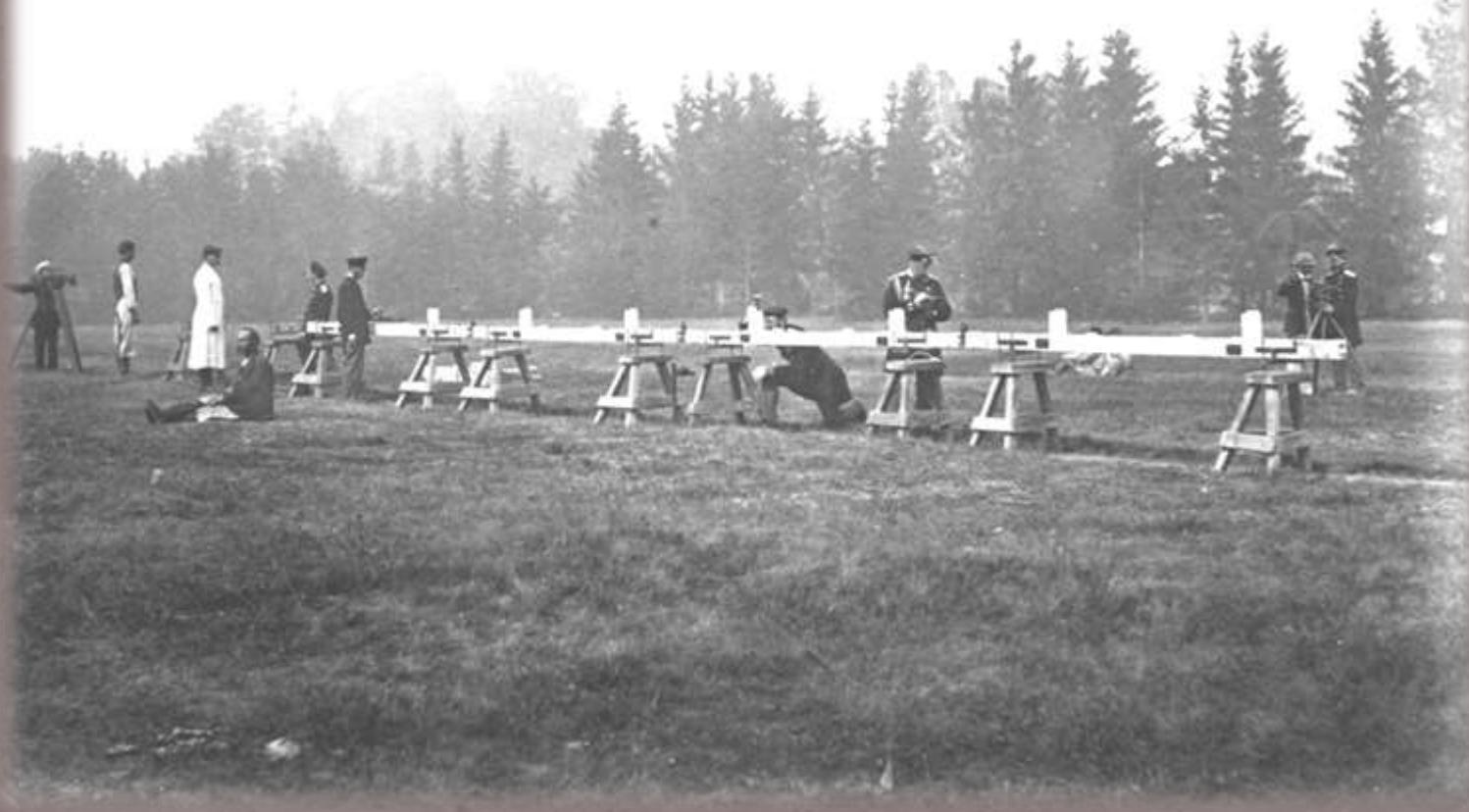
- ❖ the definition of the exact coordinates of points of astronomic-geodetic network of Russia;
- ❖ manual of geodetic works and expeditions, including international;
- ❖ practical training of future surveyors and hydrographers.

Basis Struve was used:

- for training.
- for carrying out geodetic researches.
 - for the control of geodetic standards of length of different departments.
 - to perform the communication functions of the triangulations with the Observatory as the beginning of coordinates.



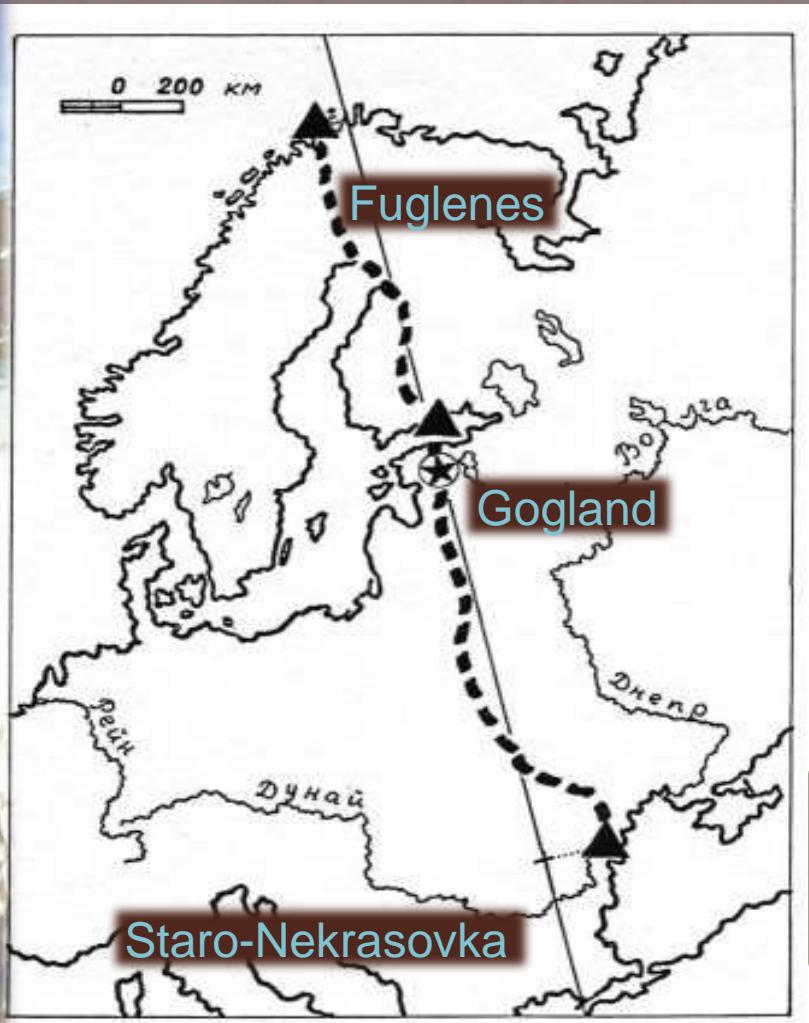
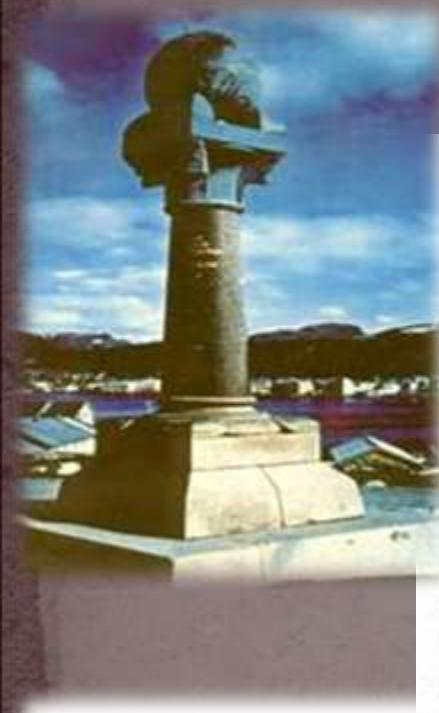
Location of Small basis “ $\mathcal{A}\mathcal{B}$ “.
Pulkovo plan.



**The measurements of the Small basis using Struve device
(1863)**

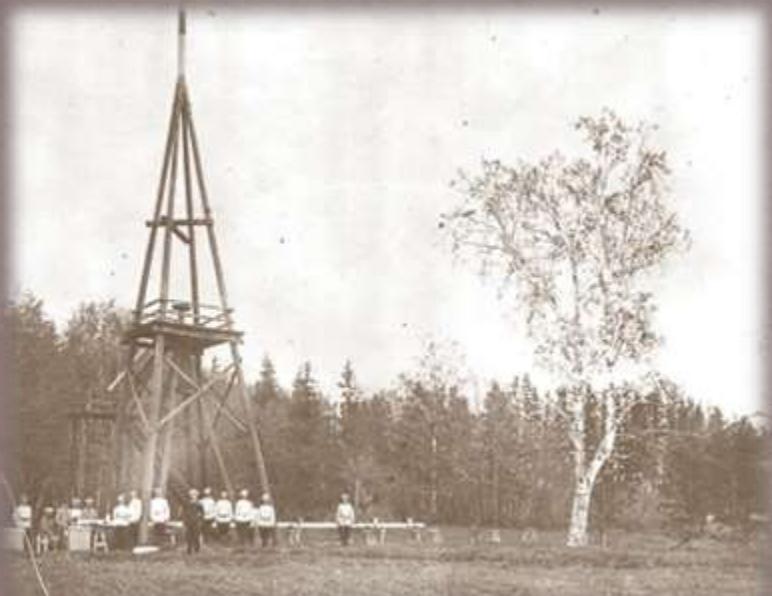


Round hall of the Main building
Pulkovo Observatory



Memorial obelisk
"Gogland Z"
island of Gogland

In 1887 the educational trigonometric network of Pulkovo geodetic school was a part of the extensive triangulation laid by surveyors of the General staff in the Russian part of Finland, St. Petersburg province and later in Livonia, to the junction with the old triangles, degree measure V. Y. Struve along the Derpt Meridian.

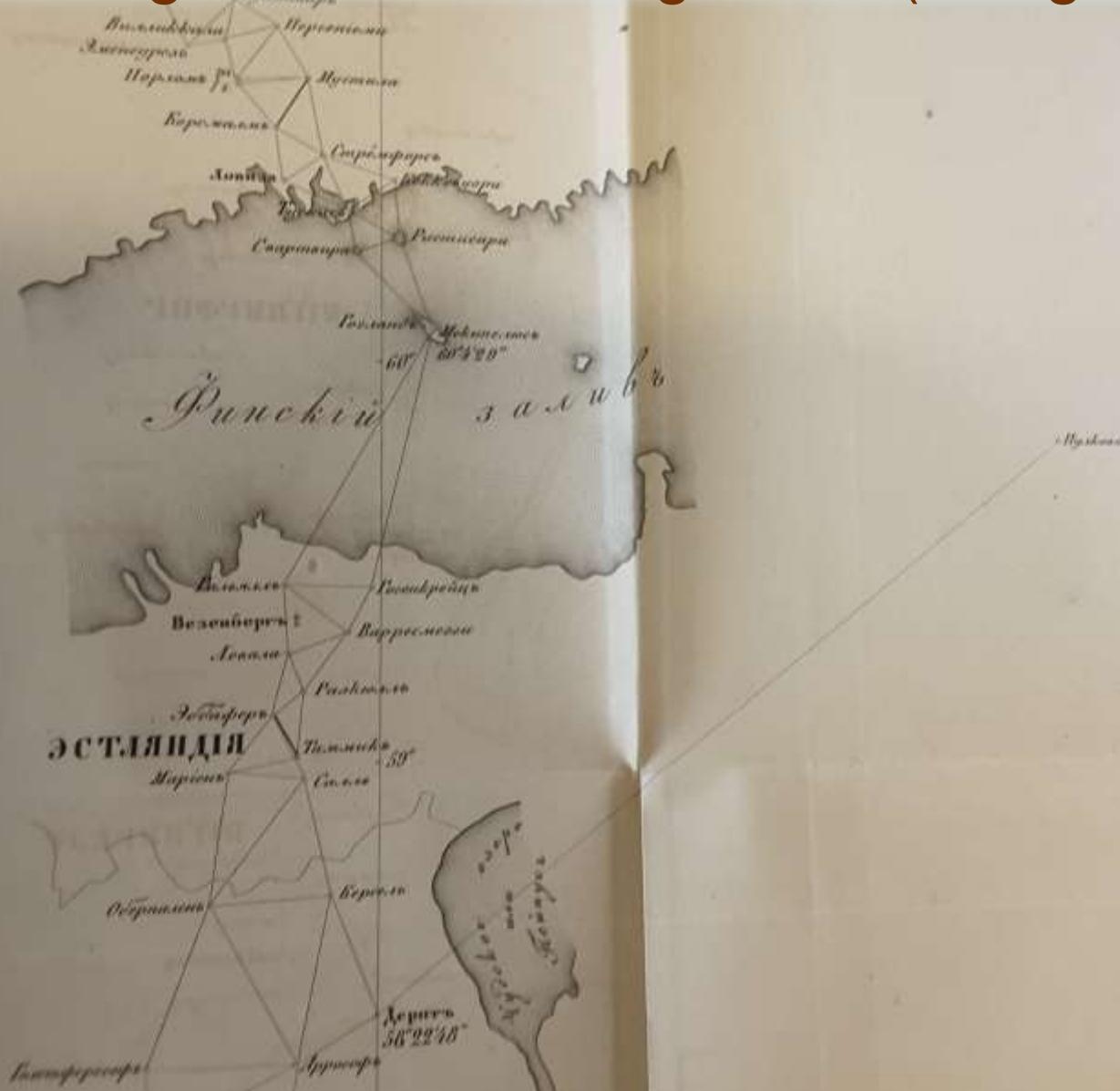


The tower above
the Western center
of the Small basis (1901)



The tower above
the Eastern center
of the Small basis (1901)

The connection of the Struve Arc from Pulkovo: first longitude, then triangulated (using Small basis)





The center of the point
«Kabosi»

In 1887 Vasiliy Vitkovsky observations were conducted «..from hand Pulkovo-Kabosi academic triangulation...» and the calculated values of geodesic distances from the Western point of the Small basis (the center point "Signal A") to the top, "octagonal" tower of the Vyborg castle and the centre of the Derpt Observatory.

This proves, that Small basis is associated with Arc Struve, geodetic and astronomical measurements.



*The original foundation of the East monument
of the Small basis*



Memorial reconstruction control point "Signal A"
Small basis (1986)

STRUVE MEDAL

Commemorative medal of a name of V. Y. Struve established by the scientific Council of the Pulkovo astronomical Observatory in 2006. Authors of the medal: sculptor Degtyarev A.V., medalist Romensky Y. Y.



The medal is awarded to Russian and foreign scientists and experts, state and public figures, academic institutions and organizations for significant contributions to the development of astronomical science and space research; for promoting the prosperity of astronomy; the strengthening of the international astronomical cooperation

Memorial reconstruction control point Signal A (West) Small basis (2011)



Memorial reconstruction Center B (East) Small basis (2011)



Thank you
for your attention!