

# TBILISI OBSERVATORY. NATIONAL AMBITIONS IN INTERNATIONAL SCIENTIFIC PROGRAMS

MAIA MANIA  
TBILISI GE

The 19th century was an era of building observations. It is the time when terrestrial magnetism, meteorology and other earth sciences began to be studied on a large scale. The prominent German scientist and naturalist Alexander von Humboldt (1769-1859) stimulated the idea of establishing a large chain of magnetic observatories founded by Great Britain, the Russian Empire and the countries of North America.

The engagement of Russia and Great Britain, in the program of international exploration, furthered the process of establishing magnetic observatories across the Russian Empire, including in Tbilisi. In order to engage in parallel observations, in the 1840s the Russian government set up nine observatories across the Empire, including in St Petersburg, Ekaterinburg, Barnaul, Nemchinsk, Kazan, Nikolaev, Helsingfors, Tiflis and on the island of Sitka.



Main building of the former Tbilisi Geophysical Observatory. The tower designed in Classicistic style by Leopold Bielfeld. Photo by Maia Mania, 2006

Founded in the 1830s, the Tbilisi observatory was engaged in the common system of terrestrial studies and in 1844 was integrated into an international net of observatories together with the launch of regular absolute magnetic and meteorological observations.

The Tbilisi Magnetic and Meteorological observatory forming part of the chain of magnetic-meteorological observatories is one of the earliest scientific center in the South Caucasus.



Main building of the Kukia observatory with the moveable timber tower. It was designed by the architect Otto Jacob Simonson and the engineer F. Lehmkul. 1860s. It started functioning in a newly constructed building at 0 o'clock astronomical time, 1 May, 1862. © The archives of the Museum of the History of Geophysics of Georgia.

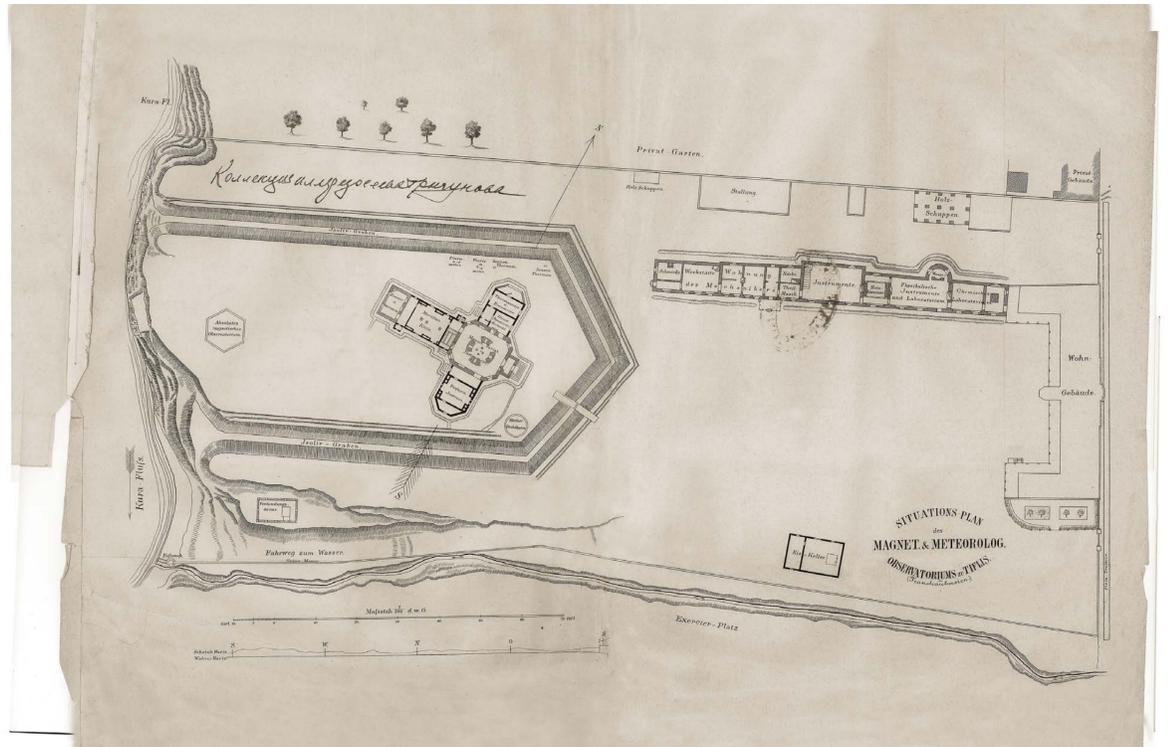
## BUILDING TBILISI OBSERVATORY

Of German origin, Paul Heinrich Arnold Moritz (1821-1902) was responsible for the construction of the fourth Tbilisi Magnetic-Meteorological Observatory (from 1867 Physical and from 1924 Geophysical Observatory) in the cultural and administrative center of the Caucasus. The main building of the complex was the observatory. It followed the plans and space structures of typology of European observatories.

The fundamental reconstruction of the main building was done in early 1880s by the architect Leopold Bielfeld.

The moveable timber tower of the main building of the observatory constructed by F. Lehmkul was replaced by the brick one. The new tower of the main building was designed also in the Classicistic style.

The reconstruction was planned for the participation of the Tbilisi observatory in the first International Polar Year held between 1882 and 1883, which involved fifteen countries. In addition to several Russian observatories, the Tbilisi observatory was engaged in the International Polar Year.



Layout plan of the Kukia observatory instrumentally surveyed and drawn by Heinrich Kiefer. 1866. The land taken up by Moritz what was then the district of Kukia, in Tifliser Kolonie, on the territory founded by German Colonists who settled in Tiflis from 1817 onwards. From the publication of Arnold Moritz.

## EUROPEAN PROTOTYPES

The main buildings of the Tbilisi and Russian observatories, inspite of different scale, display structural and architectural similarities. Most apparent is the resemblance in terms of planning and the space structure.

By the time the main building of the Kukia observatory was erected, the canonical designs of the 'magnetic houses' (Dorpat, Turku, Helsingfors, Berlin and Pulkovo among others) had already been adopted. In creating the Dorpat observatory, Johann Krause drew on a design of the oldest observatory that is the one in Gotha. Designed and built by Carl Christoph Besser between 1787 and 1791, it was destroyed by the fire in the early 19th century.

According to many European scientists Radcliffe Royal Observatory built at Oxford between 1773 and 1779 must be considered as prototype for the majority of European observatories.

Being the earliest classicist monument of British architecture, Radcliffe Observatory at Oxford is believed to be a prototype of many European observatories. The Tbilisi Observatory from the early 19th century became part of the system of the world terrestrial studies and the main building of the Observatory designed in early 1860s in Classicistic manner was inspired by architectural styles and special patterns created in Europe throughout the 19th century.