



Fig. 1:  
Dome of the Great Refractor.

Fig. 2:  
Great Refractor.

Fig. 3:  
Former main building of the Potsdam Astrophysical Observatorium on the Telegrafenberg mountain.

Fig. 4:  
Einstein Tower.



The introduction of the so-called "Improved Calendar" in the Protestant states of Germany around 1700 marked the beginning of the history of astrophysics in Potsdam. In May 1700 the edict was granted for a calendar patent concerning the planned Berlin observatory. In the same month, *Gottfried Kirch* was appointed director of the observatory. Two months later, the Brandenburg Society was founded by the Elector Friedrich III on the proposal of *Gottfried Wilhelm Leibniz*, this later becoming the Prussian Academy of Sciences. The first observatory building was erected in 1711. In the years 1832 until 1835, the new Berlin Observatory was built by *Karl Friedrich Schinkel*. 1874 witnessed the foundation of the Institute of Astronomical Calculation (Astronomische Recheninstitut) and the Astrophysical Observatorium of Potsdam.

From 1876 until 1879 the main building of the Astrophysical Observatorium was built on the Potsdam Telegrafenberg. The Great Refractor of Potsdam was completed in 1899.

The period 1911-1913 saw construction of the observatory in Babelsberg, the Berlin Observatory later moving to this. The Babelsberg Great Refractor was completed in 1915. Construction of the Einstein Tower on the Telegrafenberg was undertaken between 1921 and 1924. In 1947 the Astrophysical Observatorium of Potsdam and the Babelsberg Observatory came under the auspices of the German Academy of Sciences.

1969 marked the foundation of the Central Institute for Astrophysics. In 1992 the Astrophysical Institute of Potsdam (AIP) was re-established as a foundation under private law and member of the Leibniz Community.

The first Michelson experiment in Potsdam began in 1881. *Eugen Goldstein* discovered canal rays in 1886. *Karl Friedrich Küstner* demonstrated the polar motion of the Earth in 1888. In the same year, *Hermann Carl Vogel* made the first photographic radial velocity measurement. *Johannes Wilsing* and *Julius Scheiner* commenced experiments for demonstrating the radio radiance of the sun

## Important Historical Develop



## ments in the Astrophysics of Potsdam

in 1896. In 1913 *Paul Guthnick* discovered photoelectric photometry in Babelsberg.

### The Tower Telescope of the Einstein Foundation

The Einstein Tower on the Telegrafenberg is one of the most popular attractions in the Sanssouci Park for visitors to Potsdam. The famous construction of *Erich Mendelsohn* is regarded as one of the most significant architectural achievements of German Expressionism. The Einstein Tower houses what was then a unique research facility for solar physics: Einstein's member of staff, *Erwin Finlay-Freundlich*, had designed the instrument and hence created the first tower telescope in Europe with one of the largest spectrographs of its age. In the 1920s, the Einstein Tower represented the first ever tower telescope in Europe. The telescope and spectrograph were the largest such instruments in the world for a long time. The Tower Telescope consists of

a dome of 4.2 meters inner diameter in a timber construction on the tower and serves to protect the 850 mm coelostat with secondary mirrors. The coelostat comprises two plane mirrors of 850 millimeters in diameter, an hour drive with electric motor and electric regulator.

### The Great Refractor of Babelsberg

The Potsdam Great Refractor which officially opened in 1899 represents the fourth largest lens telescope in the world, bearing important witness to the precision-mechanical optics of production and early astrophysical research at the turn of the nineteenth and twentieth centuries. Carl Zeiss Jena restored and modernized the instrument in 1953. The promotional association founded in 1997 pursues the objective of reviving the telescope closed down for over three decades and now classified as a historical monument, and making it accessible to a broad spectrum of the public.

Karl Friedrich Schinkel was a Prussian architect and painter, who played a leading role in shaping Classicism in Prussia. His most famous buildings can be found in and around Berlin: the Playhouse on the Gendarmenmarkt and the Old Museum on the Museum Island.



*Karl Friedrich Schinkel, 1781-1841*

Erich Mendelsohn was one of the most significant architects of the 20<sup>th</sup> century. Mendelsohn's most important legacy comprises his Expressionist works from the 1920s.



*Erich Mendelsohn, 1887-1953*