

The Physical Tourist

Physics in Berlin: A Walk Through the Historical City Center*

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A guided tour of significant sites pertaining to the history of physics is conducted around the area of the University of Berlin, now Humboldt University, on Unter den Linden.

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Hans-Jürgen Treder has written that, “During the nearly 60 years that spanned the call of Hermann Helmholtz to become professor of physics in the Berlin University ... in 1871, and Erwin Schrödinger’s call to the chair of theoretical physics [in 1927] ..., the general history of physics was closely connected to the history of physics in Berlin.”¹ Besides Helmholtz and Schrödinger, the list of famous physicists who worked in Berlin during those six decades includes Albert Einstein, Max Planck, Max von Laue, Walther Nernst, Gustav Hertz, James Franck, and Lise Meitner, to name but some of them.² But the heyday of physics in Berlin arose neither by chance nor out of the blue: It resulted from a long historical process that began with the foundation of the Brandenburg Academy of Science in 1700 by Gottfried Wilhelm Leibniz; the present Academy of Science in Berlin is the direct descendent of that society. With the founding of the Academy in the capital of Prussia, science established itself in Berlin as a constituent part of its social life. It was predominantly in the context of mathematical research and the fields of mechanics and astronomy that physics was practiced at first. The names of such renowned scientists as Leonhard Euler, Joseph Louis Lagrange, Johann Heinrich Lambert, and Franz Ulrich Theodosius Aepinus bear witness to the remarkably high level that mathematical and physical research had reached in Berlin as early as the 18th century. There was no other city in Germany at that time where there was such a large and extraordinary community of mathematicians, physicists, and chemists teaching and carrying out research. You will find a reminder of this early period in the history of physics in Berlin at Behrenstrasse 21 (a street parallel to the western part of Unter den Linden), where Leonhard Euler lived during his Berlin

* A map of this section of Berlin may be found at <http://www.stadtplandienst.de/query>.

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period from 1743 to 1766. Of course, this is not Euler's original house, since large parts of Berlin were totally destroyed by reconstructing or bombing during the following two centuries.

The beginning of a genuine and continuous development of physics in Berlin came in 1810 with the foundation of the University of Berlin, today Humboldt University. But the reputation of its first professors did not extend much beyond the city's borders, and conditions for research and teaching also were very modest. This changed in the middle of the century when Gustav Magnus began to teach physics and gathered about him young and talented scientists in a private laboratory that he had established—basically as his own expense—in his pleasant and spacious house, the so-called Magnus Haus (Fig. 1) located at Am Kupfergraben 7,³ just opposite the famous Pergamon Museum. It soon became the center of one of the most important schools of physics in the 19th century in Germany. Furthermore, the colloquium founded by Magnus in 1843 developed into the world-famous Berlin Physical Colloquium, and the idea of establishing a Physical Society in Berlin also emerged in 1845,⁴ as Werner von Siemens said, from this “stimulating circle of gifted young scientists.”⁵ Since 1958, which was the centenary of the birth of Max Planck,⁶ the Physical Society has occupied the Magnus Haus—first the Physical Society of the German Democratic Republic and since 1990 the reunited German Physical Society. Following a total renovation in 1993–94, the Magnus Haus is being used by the German Physical Society as a center of communication between physicists and the public through the sponsorship of



Fig. 1. The Magnus Haus, Am Kupfergraben 7. Courtesy of the German Physical Society.