

## The Treasure from the Attic – Letters from Einstein, Planck, Born, Nernst, Debye, Sommerfeld, Courant, Weyl, Ehrenfest and Althoff to David Hilbert discovered in an Attic in Göttingen

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Abraham Pais described the discovery of Albert Einstein's letters to Hilbert as "Helen's most important single contribution to the archives" (in: "Helen Dukas, in memoriam"). Helen Dukas, of the Einstein Archive, had in fact received only photocopies. The location of the originals was unknown. The author first came across Hilbert's correspondence with Einstein as well as with Max Planck, Walther Nernst, Peter Debye, Max Born, Arnold Sommerfeld, Paul Ehrenfest, Hermann Weyl, Richard Courant, Friedrich Althoff and many others, in the 1980s and then once again in early 2000 in an attic in Göttingen (see table below).

Thanks to the mathematician and organizer Felix Klein, the benevolent state patron Friedrich Althoff and the charismatic mathematical genius David Hilbert, Göttingen had developed into a "Mecca" of mathematics and physics between the beginning of the 20th century and 1933 Hilbert's papers are thus a central source of research into this period. The 131 essential rediscovered letters shed new light not only on the "heyday" of physics since the beginning of the last century but also on the political views of Hilbert and his pupils, Courant and Born. These letters are described in this lecture along with their rediscovery – which is almost a detective story.

Furthermore, we report on new developments arising from the letters concerning the famous priority dispute between Einstein and Hilbert on the discovery of the gravitational equations of general relativity. The astronomers Walter Baade and Erwin Freundlich also play a part in this context. On November 23, 1915, two days before Einstein submitted his final version of the gravitational equations with the Prussian Academy of Science at Berlin, Born had written to Hilbert: "*I heard from Einstein and Freundlich that you [i.e., Hilbert] have fixed gravitation; furthermore, I was able to look at a brief excerpt of your lecture at the mathematical society that was sent to Freundlich by Dr. Baade. [...] Einstein himself says he has also solved this problem; yet his reflections (which are only known to me from conversations) seem to me to be a special case of yours.*" (Niedersächsische Staats- und Universitätsbibliothek Göttingen, Abteilung für Handschriften und seltene Drucke, Nachlass Hilbert, Nr. 40a).

The letters by Courant and Born clearly reveal their and Hilbert's attitude towards the German empire and the revolution of 1918. Unlike most other German intellectuals they don't have "the blues", but are rather looking forward to a democratic Germany already in mid-October 1918. At the same time they keep Hilbert updated on Einstein. Some of this is new and will be introduced in the last part of my talk.

Writer	Recipient	Amount	Period
Born, Max	Hilbert	21	1909–1925
Courant, Richard	Hilbert	5	1918–1926
Debye, Peter	Hilbert	7	1912–1914
Ehrenfest, Paul	Hilbert	1	11.3.1918
Einstein, Albert	Hilbert	17	1912–1932
Einstein, Albert	Sommerfeld	1	29.10.1912
Prussian Ministry	Hilbert + v.v.	39	1892–1920
Nernst, Walther	Hilbert	2	26./29.9.1915
Planck, Max	Hilbert	11	1912–1918
Sommerfeld, Arnold	Hilbert	21	1898–1919
Weyl, Hermann	Hilbert	6	1908–1919