

AGPhil 2: Experiment, Then and Now

Zeit: Dienstag 14:00–15:20

Raum: JUR G

Hauptvortrag AGPhil 2.1 Di 14:00 JUR G
Experiment, Then and Now — ●ALLAN FRANKLIN — Department of Physics, UCB 390, University of Colorado, Boulder, CO 80309-0390

In this paper I will discuss changes in the presentation of experimental results from the early 20th century to the present and their implications. Issues discussed will include: the use of statistics to justify an observation, the exclusion of data, the presentation of the history of previous measurements, the possibility of experimenter bias, and the inclusion of personal comments. Examples will include Edwin Hall's discussions of 'Do Falling Bodies Move South?', and the 'discovery' of the Pentaquark.

Hauptvortrag AGPhil 2.2 Di 14:40 JUR G

Gravity Waves and Neutrinos: The Later Work of Joseph Weber — ●ALLAN FRANKLIN — Department of Physics, UCB 390, University of Colorado, Boulder, CO 80309-0390

How does the physics community deal with the subsequent work of a scientist whose earlier work has been regarded as incorrect? An interesting case of this involves Joseph Weber whose claim to have observed gravitational waves was rejected by virtually all of the physics community, although Weber himself continued to defend his work until his death in 2000. In the course of this defense Weber made a startling suggestion regarding the scattering of neutrinos. I will summarize the history of gravity waves including the rejection of Weber's claim around 1975, his later work on gravity waves, and examine the reaction of the physics community to his neutrino hypothesis.