

# DIESE WOCHE

## PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik  
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 29.05.2013, 16 Uhr c.t.  
Großer Hörsaal, Raum \_0.111,  
Max-von-Laue-Str. 1

**Dr. Tilman Sauer**  
Einstein Papers Project,  
Caltech & Institute for Theoretical Physics,  
University of Bern

*„Einstein, the Stern-Gerlach Experiment,  
and the Foundations of Quantum Mechanics “*

Albert Einstein and Paul Ehrenfest were among the first to realize the profound difficulties which the experiment on space quantization by Walther Gerlach and Otto Stern of 1922 implied for a theoretical understanding of quantum measurements. Drawing on publications and correspondence published recently in volume 13 of the *Collected Papers of Albert Einstein* I will review early attempts at understanding the results of the Stern-Gerlach experiment. I will also discuss some later manuscripts by Einstein in which the Einstein-Podolsky-Rosen (EPR) paradox is discussed in terms of spin variables, i.e. in terms of a Stern-Gerlach experimental setup. Einstein's later manuscript poses some problems of interpretation which, I will argue, indicate that Einstein may have had a somewhat different understanding of the fundamental significance of the EPR paradox than commonly assumed.

Die Dozenten der Physik

# Kolloquium

<http://www.uni-frankfurt.de/fb/fb13/Termine/index.html>