



University of Crete
Department of Physics



FORTH
INSTITUTE OF ASTROPHYSICS



Joint Physics & IA/FORTH Colloquium

Thursday, 7 December 2023 | 17:00 – 18:00, Seminar Room 3rd Floor

Early light-bending tests of General Relativity

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ABSTRACT

Einstein became world famous on 7 November 1919, following press publication of a meeting held in London on 6 November 1919 where the results were announced of two British expeditions led by Eddington, Dyson and Davidson to measure how much background starlight is bent as it passes the Sun. At the time, the experimental result was accepted by the expert astronomical community. However, in 1980 a study by philosophers of science Earman and Glymour claimed that the data selection in the 1919 analysis was flawed and that the discarded data set was fully valid and was not consistent with the Einstein prediction, and that, therefore, the overall result did not verify General Relativity. This claim, and the resulting accusation of Eddington's bias, was repeated with exaggeration in later literature and has become ubiquitous.

The 1919 and 1980 analyses of the same data provide two discordant conclusions. We reanalyse the 1919 data, and identify the error that undermines the conclusions of Earman and Glymour. We also comment on some "interesting" statistical outcomes of other eclipse light-bending experiments of the 1920s.