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Latest results from the aSPECT experiment

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The aSPECT retardation spectrometer measures the electron antineutrino angular correlation coefficient a in free neutron beta decay. This measurement can be used to determine the ratio of g_A/g_V of the weak coupling constants, as well as to search for physics beyond the Standard Model.
In spring/summer 2013 aSPECT had a successful beamtime at the Institut Laue-Langevin/Grenoble (France). The goal of this beamtime is to improve the current uncertainty of a from Δaáa≈5% to about 1%. To achieve this goal the systematics of aSPECT have to be understood accordingly. This is achieved via systematic tests, measurements of a with different systematic parameter settings during the beamtime and measurements afterwards, like the work-function fluctuations of electrodes or the magnetic field ratio of our MAC-E filter. Sophisticated simulations of our spectrometer are used to understand and reduce further the systematic uncertainties of our spectrometer.
In this talk we will present an overview of the current status of the data analysis for the beamtime 2013.
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