

A vector polarimeter at MAMI

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Atomic bremsstrahlung-polarisation correlation between incoming electrons and outgoing photons may allow to design a polarimeter capable of measuring all components of beam polarisation simultaneously. This device can be called a vector polarimeter. It might allow to test theoretical predictions of correlation coefficients between 1 and 3.5 MeV as well as work as a beam diagnostics device. As a first step we have set up a measurement of the helicity transfer to the photon as a function of electron energy which is based on the Compton absorption method. Experimental developments in order to measure photon emission asymmetries caused by transverse electron polarisation are presented.

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