Contribution ID: **61** Type: **not specified**

Storage Ring EDM Search and Polarimeter Concept Development for Electron EDM Measurements

Monday 15 May 2017 11:00 (20 minutes)

The storage ring EDM method can be used to study the electron EDM at the 10^-29 e.cm level provided there is a high sensitivity electron spin polarimeter available at 15 MeV/c, the electron magic momentum. In this study, we present the feasibility results on a polarimeter concept we developed specifically for the storage ring electron EDM measurement. The idea of using Compton backscattering method as an electron spin analyzing tool is described. The cross section and analyzing power is calculated for both transverse and longitudinal electron spins. The requirements of 8.9 keV high intensity light source as the analyzing tool for the electron spin measurement are also discussed.
This work was supported by IBS-R017-D1-2017-a00.

Primary author: Dr PARK, Seongtae (CAPP/IBS)

Co-author: Prof. SEMERTZIDIS, Yannis (CAPP/IBS, KAIST)

Presenter: Dr PARK, Seongtae (CAPP/IBS)

Session Classification: Session 2