

## A new method to determine the beta asymmetry parameter for nuclei, in search for a tensor type weak interaction

*Monday 17 November 2008 17:10 (20 minutes)*

A new method to determine the beta asymmetry parameter in the decay of polarized nuclei was developed. The nuclei are polarized with the low temperature nuclear orientation method and beta particles are observed with Si and Ge detectors operating inside the 4 Kelvin part of the nuclear orientation set-up. Essential to the method is further the newly developed Geant4 based Monte Carlo code for beta particles that accounts for the determination of the solid angle as well as for scattering and magnetic field effects.

First measurements were performed with  $^{114}\text{In}$  and  $^{60}\text{Co}$ . These have provided the as yet most precise values for the beta asymmetry parameter in nuclear beta decay, yielding new information on a possible tensor type component in charged current weak interactions.

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**Session Classification:** Polarization