

LYSO modules for the JEDI polarimeter: production, laboratory tests and results of first measurements

Dito Shergelashvili, Tbilisi State University, SMART|EDM_LAB, Tbilisi, Georgia, 0131

The JEDI collaboration aims to search for the electric dipole moment (EDM) for the protons and deuterons in the storage ring (srEDM). One of the main components of the srEDM scientific set-up is the polarimeter to observe the slow buildup of vertical polarization. In our concept, the polarimeter is based on inorganic novel LYSO crystals and low voltage silicon photosensors (SiPM). Up to now, more than 30 modules have been assembled in different configurations. They have first been tested in the laboratory with internal and external radiation sources and subsequently, they have been exposed to the experimental environment with accelerator beams. We have performed three test beam times at several different beam energies. The results of the measurements and accumulated experience of the module production will be presented.