



Семинар

**Понедельник, 11 сентября,
11-00
Конференц-зал ЛЯП**

**Dr. Bernhard Schwingenheuer
(Max-Planck-Institut für Kernphysik, Heidelberg)**

**" Search of neutrinoless double beta decay with Ge-76:
latest results of GERDA experiment and a new
germanium detector type for
LEGEND project "**

The search for neutrinoless double beta decay is an important research topic and experiments using germanium detectors made from material enriched in the relevant isotope Ge-76 are currently among the most sensitive ones. GERDA has recently announced a new half-life limit of $8.0E25$ yr and continues to take data. The final sensitivity will be beyond $1E26$ yr. The main reason for the success is the low background which is an order of magnitude lower compared to other experiments in the field if normalized to the energy resolution. Further improvement rely on even lower background levels. One idea to achieve this goal is to increase the mass per detector. The amount of cables and support material can be reduced accordingly since these components are the source of important background contributions. The novel inverted-coax detector type is a promising candidate and first results concerning pulse shape discrimination of this detector are discussed in the talk. This detector type is therefore very promising for the future LEGEND experiment.