DESY
Physics Seminar

Status of the Karlsruhe Tritium Neutrino experiment KATRIN and commissioning of the spectrometer and detector section.

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Tuesday, 25 June 2013, 16:45 h, Auditorium

Neutrino properties and expecially the determination of the neutrino mass play an important role at the intersections of cosmology, particle physics and astroparticle physics. The KArlsruhe TRItium Neutrino experiment (KATRIN) investigates single beta decay electrons close to their kinematic endpoint in order to determine the neutrino mass by a model-independent method. Applying an ultra-luminous molecular windowless gaseous tritium source and an integrating high-resolution spectrometer of MAC-E filter type, KATRIN allows beta spectroscopy close to the kinematic end point with unprecedented precision and will reach a sensitivity of 200 meV/c2 (90% C.L.) on the neutrino mass.This talk will give an overview about the present status and the recent progress at the major components. Since the commissioning of the main spectrometer has been started end of 2012, the main focus will be on first measurements with the combined spectrometer and detector section.

- **Coffee, tea and cookies will be served at 16:30h**

- **After the seminar there is a chance for private discussions with the speaker over wine and pretzels**