

Physikalisches Kolloquium

Masa Yamauchi, KEK/Belle Tsukuba
»Probing new physics with BELLE II at SuperKEKB«

Einführung: Th. Müller

The two experimental facilities called Beauty factories, one constructed at KEK, Japan and another at SLAC, USA, have played an essential role in understanding CP asymmetry (breakdown on matter- antimatter symmetry) by providing experimental proof to the Kobayashi- Maskawa theory. Also, more interestingly, both experiments noticed that some observations may not be understood in the framework of the theory. In other words, we may be seeing the first signals of new physics beyond our present knowledge of elementary particles. To confirm this, the B factory at KEK will be upgraded to SuperKEKB that enables much more precise studies of those signals. In this talk, I will cover the accomplishment of the B factories and the future experimental program to test P, CP and CPT symmetries. In the last part of my colloquium I will introduce KEK's physics roadmap that includes neutrino physics and new accelerator R&D programs.

Freitag, 06.11.2009, 17 Uhr c.t.,

**KIT, Campus Süd,
Otto-Lehmann-Hörsaal, Physik-Flachbau (Geb. 30.22).
Anschließend Nachsitzung im Gastdozentenhaus „Heinrich Hertz“**