

**FAKULTÄT für PHYSIK  
LUDWIG-MAXIMILIANS-UNIVERSITÄT  
MÜNCHEN/GARCHING**

**PHYSIK-DEPARTMENT  
TECHNISCHE UNIVERSITÄT MÜNCHEN  
MÜNCHEN/GARCHING**

## **MLL-KOLLOQUIUM**

**Donnerstag, 07.05.2015, 16<sup>15</sup> Uhr**

**Seminarraum 127, TUM, Physik II, Erdgeschoss/Nord  
Treffen zum gemeinsamen Kaffee 16 Uhr**

**Prof. Thomas Kuhr**

**(LMU München)**

### **The Next Generation B-Factor Experiment Belle II**

The standard model of particle physics describes the measurements so far remarkably well, but it is known that physics beyond the standard model must exist, for example to explain the asymmetry between matter and antimatter in the universe today. A promising way to search for new particles or forces are high-precision measurements. New physics particles could enter in quantum loops and lead to a deviation from the standard model prediction. Currently, the Belle II experiment at the SuperKEKB accelerator at KEK in Tsukuba, Japan, is under construction and will collect a data sample that is 50 times larger than the one of its predecessor, Belle, which recorded the world's largest dataset of  $Y(4S)$  events so far. This will allow to search for new physics in many processes with unprecedented precision. The physics potential of Belle II and the status of the detector construction will be presented.

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