PAUL SCHERRER INSTITUT

Invitation

LMU-Seminar

Title: **Slow muon study of solar cell materials: Single layers and p-n junctions**

Speaker: **Dr. Helena Alberto - Department of Physics, University of Coimbra, Portugal**

Time: **Thursday, June 16th 2016, 14:00**

Place: **WBGB/019**

Abstract:

Solar cells based on CuZnSnS (CZTS) and CuInGaSe (CIGS) belong to one of the most important families of solar cell technologies. The Low Energy Muon Facility at PSI was used to investigate two films (CZTS and CIGS) and three n-p junction produced with those films: CdS/CZTS , CdS/CIGS and ZnSnO/CIGS. The LEM data reveals that the formation probability of the different muonium states changes significantly with depth, both in the films and in the junctions, indicating that the muon probe carries information that goes beyond its common use as a light isotope of hydrogen. The LEM results will be discussed as well as possible interpretation models aiming at unravelling the information provided by the low energy muon probe in the solar cell materials.