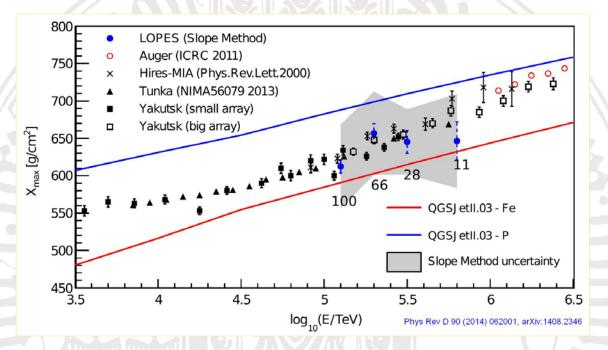


Fakultät für Mathematik und Physik Albert-Ludwigs-Universität Freiburg

## SONDERKOLLOQUIUM

AM 4. NOVEMBER 2014 UM 15:30 UHR

IM SEMINARRAUM DES GUSTAV-MIE-HAUSES



## **Radio Detection of High-Energy Cosmic Rays**

**DR. TIM HUEGE** 

## INSTITUT FÜR EXPERIMENTELLE KERNPHYSIK,

KARLSRUHER INSTITUT FÜR TECHNOLOGIE

Over the past decade, digital radio detection of cosmic rays has matured from small prototype installations to experiments covering detection areas of several km<sup>2</sup>. We have understood the physics of the radio emission in detail, have successfully developed sophisticated experimental approaches, and have demonstrated that the arrival direction, the energy and mass-sensitive parameters of primary cosmic rays can be reconstructed from radio measurements with high precision. In my talk, I will review the successes achieved to date and give an outlook on future uses of radio detection techniques, in particular to study the transition from galactic to extragalactic cosmic rays as well as hadronic interactions at energies beyond the reach of the LHC.