

Medien:

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Passwort: studentSS13; Passwort: solidstateSS13

Prüfung: 25.07.2013

# PHYSIKALISCHES KOLLOQUIUM

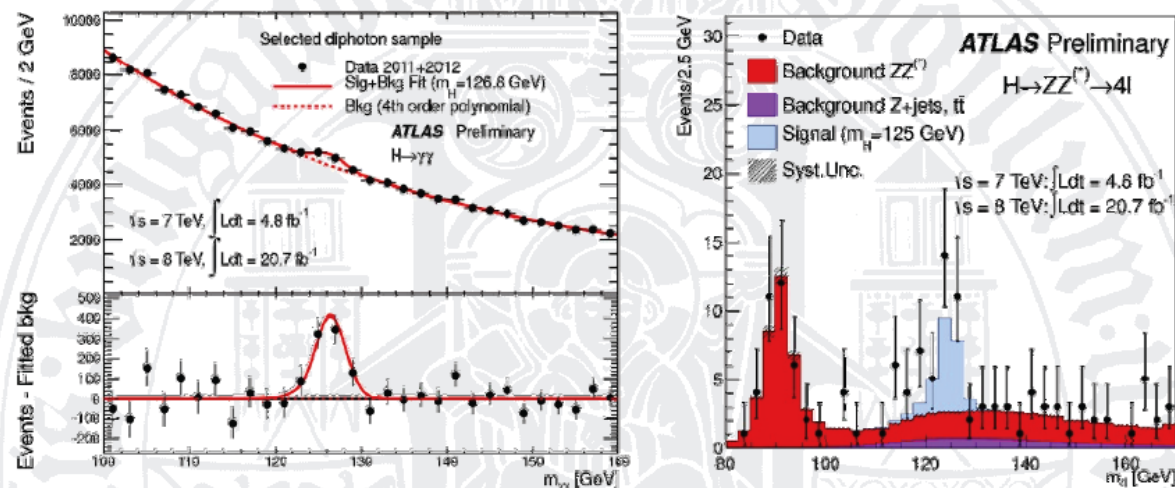
AM 29. APRIL 2013 UM 17 UHR C.T.

IM GROßEN HÖRSAAL

## Special Fundamental Physics Prize 2013

**Peter Jenni, Fabiola Gianotti (ATLAS), Michel Della Negra, Tejinder Singh Virdee, Guido Tonelli, Joe Incandela (CMS) and Lyn Evans (LHC)** for their leadership role in the scientific endeavour that led to the discovery of the new Higgs-like particle by the ATLAS and CMS collaborations at CERN's Large Hadron Collider.

Peter Jenni will be guest scientist at the university of Freiburg starting 1<sup>st</sup> May 2013.



## THE LONG JOURNEY TO THE HIGGS BOSON AND BEYOND AT THE LHC

DR. PETER JENNI

EUROPEAN ORGANIZATION FOR  
NUCLEAR RESEARCH (CERN), GENÈVE

Since three years the experiments at the Large Hadron Collider (LHC), in particular ATLAS, investigate particle physics at the highest collision energies ever achieved in a laboratory. Following a rich harvest of results for Standard Model (SM) Physics came in 2012 the first spectacular discovery of a new, heavy particle, most likely the long-awaited Higgs boson. However, with this discovery the exciting journey into new physics, also beyond the SM, has only just begun at the LHC. Besides first results the talk will also cover briefly the history and the challenges of the whole LHC project.

## Austrittsarbeitdaten

| Element  | $\phi$ (eV) | Element          | $\phi$ (eV) | Element  | $\phi$ (eV) |
|----------|-------------|------------------|-------------|----------|-------------|
| Ag       | 4.26        | Cu               | 4.65        | Si       | 4.85        |
| Ag (100) | 4.64        | Cu(100)          | 4.59        | Ru       | 4.71        |
| Ag (110) | 4.52        | Cu(110)          | 4.48        | Ta       | 4.25        |
| Ag (111) | 4.74        | Cu(111)          | 4.98        | Ta (100) | 4.15        |
| Ba       | 2.52        | Ir (110)         | 5.42        | Ta (110) | 4.80        |
| C        | 5.0         | Ir(111)          | 5.76        | Ta (111) | 4.00        |
| Ce       | 2.9         | K                | 2.30        | Ti       | 4.53        |
| Cr       | 4.5         | LaB <sub>6</sub> | 2.66        | W        | 4.55        |
| Cs       | 2.14        | Mo               | 4.60        | Zr       | 4.05        |

Units: eV electron Volts;

\*Reference: CRC handbook on Chemistry and Physics version 2008, p. 12-114.

### Leitfähigkeit von Quecksilber bei tiefen Temperaturen

