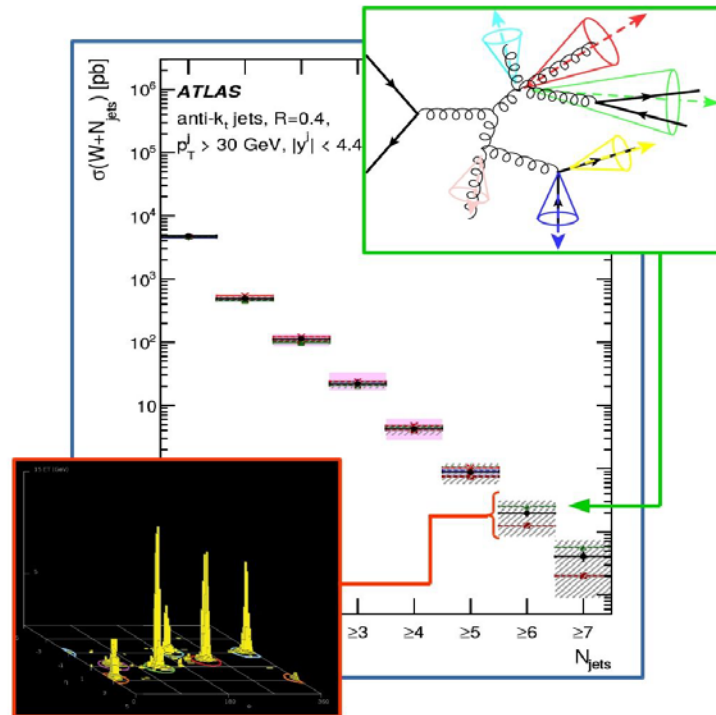


PHYSIKALISCHES KOLLOQUIUM

AM 29. JUNI 2015 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



COMPLEX SIGNALS IN PARTICLE PHYSICS

PROF. DR. FERNANDO FEBRES CORDERO

*INSTITUTE OF PHYSICS
UNIVERSITY OF FREIBURG*

The Large Hadron Collider (LHC) has just started collecting data at a record energy of 13 TeV. In this new window of the energy spectrum new measurements of properties of known particles will be performed, in particular of the recently found Higgs Boson. Also searches for new physics will continue, exploring many models that propose Dark Matter candidates and other phenomena. Given the success of the Standard Model of Particle Physics, these searches are pushed towards complex signatures, which can include many leptons, many jets of hadrons and missing transverse energy. We will present a brief account of how these searches are carried out and how we can produce precise theoretical predictions to fully exploit the LHC physics potential.