Contribution ID: **64** Type: **Poster**

Search for the Standard Model Higgs boson decaying to di-tau channel in the fully hadronic channel in the ATLAS experiment

Wednesday, 11 April 2012 19:00 (20 minutes)

A search for the SM Higgs boson decaying into a pair of tau leptons performed with the ATLAS detector at the LHC is presented. The analysis is based on proton-proton collisions at a center-of-mass energy of 7 TeV. The data sample corresponds to an integrated luminosity of 4.7 fb-1, and focuses on final states where both tau leptons decay hadronically. The analysis searches a SM Higgs boson with a mass in the range $100 \leq mH \leq 150$ GeV. After signal selection, the observed number of events is consistent with the total background estimate, which is evaluated using a combination of Monte Carlo and data-driven techniques. An exclusion limit for the SM Higgs boson production is derived as a function of its mass.
No significant excess of events is observed over the expected background in the mass range of this study.

Primary author: ZINONOS, Zinonas (PI)

Presenter: ZINONOS, Zinonas (PI)

Session Classification: Sessione poster

Track Classification: Fisica del Modello Standard e oltre