

# YSF: Search for Lepton-Flavour-Violating Decays of the Higgs Boson

*Wednesday, November 9, 2022 6:05 PM (12 minutes)*

This talk presents the results of a direct search for lepton-flavour-violating decays of the Higgs boson to  $e\tau$  and  $\mu\tau$  final states with the ATLAS detector at the LHC. Both leptonically and hadronically decaying tau leptons are included and two different background estimation techniques are employed: A direct estimation of the background using MC, and a data-driven approach exploiting the electron-muon symmetry of the Standard Model. Both methods use data-derived estimations of misidentified background contributions, and MVA techniques to separate signal events from background.

## Type of talk

Experimental measurements

**Presenter:** AMOS, Kieran Robert (Univ. of Valencia and CSIC (ES))

**Session Classification:** Wednesday Session A

**Track Classification:** Physics Topics: Beyond the Standard Model