

# Search for rare processes and lepton-flavor-violating decays of Higgs boson at the ATLAS experiment

*Thursday 18 July 2024 11:02 (17 minutes)*

The Standard Model predicts several rare Higgs boson processes, among which are the production in association with c-quarks, the decays to a Z boson and a photon, to a low-mass lepton pair and a photon, and to a meson and photon. The observation of some of these processes could open the possibility of studying the coupling properties of the Higgs boson in a complementary way to other analyses. In addition, lepton-flavor-violating decays of the observed Higgs boson are searched for, where on observation would be a clear sign of physics effects beyond the Standard Model. Several results for decays based on pp collision data collected at 13 TeV will be presented.

## Alternate track

1. Beyond the Standard Model

## I read the instructions above

Yes

**Primary authors:** ZHOU, Bing (University of Michigan (US)); DELIOT, Frederic (Université Paris-Saclay (FR))

**Presenter:** ZHOU, Bing (University of Michigan (US))

**Session Classification:** Higgs Physics

**Track Classification:** 01. Higgs Physics