Search for rare and lepton flavor violating decays of the Higgs boson with the ATLAS detector

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The Standard Model predicts several rare Higgs boson decay channels, which have not yet been observed, but that could enhanced in theories beyond the Standard Model. Among these are decays to second-generation leptons and quarks, \( H\rightarrow \mu \mu \) and \( H\rightarrow c\bar{c} \), as well as decays to a Z boson and a photon, \( H\rightarrow Z\gamma \). In addition, theories beyond the Standard Model may predict lepton-flavor violating decays of the Higgs boson. Results for these searches based on pp collision data collected at 13 TeV will be presented.

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