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## Searches for rare Higgs boson processes with the CMS detector

The full set of data collected by CMS experiment at a centre of mass energy of 13 TeV allows searches for rare production modes of the Higgs boson, subdominant with respect to the ones already observed at the LHC, by using a variety of decay modes profiting of the ones with largest expected branching fractions. We also discuss rare Higgs boson decay channel searches with the CMS experiment. Searches of decays into quarkonia final states can help constrain Yukawa couplings to light and charm quarks. While the expected rate is still limited with the collected data, these modes become enhanced in several BSM theories and can be used to constrain such models. Other rare Higgs boson decay channels, such as  $H \rightarrow \mu\mu$  or  $H \rightarrow Z\gamma$ , will also be discussed.

### Secondary track

**Author:** COLLABORATION, CMS

**Presenter:** COLLABORATION, CMS

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