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Search for Generic Heavy Higgs Boson Using 13 TeV pp Collision Data at ATLAS YUE XU, Tsinghua University, ATLAS COLLABORATION — We present an indirect search for a fermi-phobic heavy Higgs boson, through potential dimension-6 effects in an effective field theory context, which can cause significant kinematic deviations from those predicted within the Standard Model. The $pp \to W^{\pm}H \to W^{\pm}W^{\pm}W^{\mp}$ process is considered with 139 fb^{-1} of pp collision data at $\sqrt{s} = 13\ TeV$ collected by the ATLAS detector. Events with two same-sign leptons (e or μ) in association with one large-R jet or two small-R jets with an invariant mass consistent with a hadronically decaying W-boson are analyzed to test for the presence of effects from new physics.

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