

Search for invisible Higgs decay through VBF production with the ATLAS detector

I present a search for Higgs bosons produced via vector boson fusion and decaying into invisible particles. The search is performed with 36.1/fb of data recorded by the ATLAS detector. The mass and the cross section of the Higgs boson are assumed to be the SM values. The result is an upper limit on the Higgs boson branching ratio at 95% CL. For hypothetical scalars with masses in the range of 75 GeV–3TeV, an upper limit on the cross section times branching fraction is given. The result is also interpreted in the context of a scalar Higgs portal and a lower limit is set on the wimp-nucleon cross section below $mH/2$.

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