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Optimizing the HH->bbtautau analysis to measure the strength of the tri-linear Higgs self-coupling MARK SAMUEL ABBOTT, Cal State Univ - Sacramento, ATLAS COLLABORATION — Analysis of HH->bbtautau provides one of the strongest sensitivities for measurement of the Higgs self-coupling. Di-Higgs production has two contributing diagrams which interfere destructively, one involving a top-quark loop and one involving the Higgs self-coupling. The studies presented here use a Boosted Decision Tree to optimize the HH->bbtautau analysis for di-Higgs events produced via the Higgs self-coupling.

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