EVIDENCE FOR DECAYS OF THE HIGGS BOSON TO TAU LEPTONS AT ATLAS

Alexander Tuna

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H.H. Williams, Professor, Physics
Supervisor of Dissertation

Marija Drndic, Professor, Physics
Graduate Group Chairperson

Dissertation Committee
I. Joseph Kroll, Professor, Physics
Elliot Lipeles, Associate Professor, Physics
Philip Nelson, Professor, Physics
Burt Ovrut, Professor, Physics
H.H. Williams, Professor, Physics

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ABSTRACT

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This thesis presents evidence for Higgs decays to tau leptons with the ATLAS experiment at the Large Hadron Collider. Special emphasis is given to the VBF $H \to \tau_\ell \tau_{\text{had}}$ category of the analysis. The data correspond to 25 fb^{-1} of proton collisions with $\sqrt{s} = 7$ or 8 TeV. The $H \to \tau\tau$ search strategy, predictions, and results are described. Prospects for the $H \to \tau\tau$ analysis, both in the near- and long-term, are also discussed.

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Preface

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Alexander Tuna
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