

**Stony Brook University  
The Graduate School**

Doctoral Defense Announcement

**Abstract**

Search For Gravitons Decaying To Vector Bosons In Hadronic Final States  
in proton-proton Collisions at  $\sqrt{s} = 8TeV$  Collected With The ATLAS De-  
tector

By

**Angel Campoverde**

ATLAS data are used to search for narrow diboson resonances in a dijet final state where each jet is tagged as a boson using jet mass and substructure properties. The data are the  $20.3\text{fb}^{-1}$  of proton-proton collisions collected in 2012. A search for  $G \rightarrow WW/ZZ$  is performed over the diboson mass range  $1.2 < m_{VV} < 3.0TeV$ . The most significant excess is of approximately  $2.5\sigma$  at around  $2TeV$ . Limits on  $\sigma \cdot BR$  (the production cross section times branching ratio) for this process are reported as a function of the graviton mass.

**Date:** 08, 13, 2015

**Time:** 10 AM

**Place:** Physics Building, D 122

**Program:** Physics

**Dissertation Advisor:** Dr Robert McCarthy