

Abstract Submitted  
for the SES21 Meeting of  
The American Physical Society

**Probing  $^{11}\text{B}$  for a hypothesized resonance via neutron transfer reaction**<sup>1</sup> DUNCAN SNIDER, SAM ANDERSON, ANTHONY KUCHERA, Davidson College — Recent results from the pAT-TPC at TRIUMF showed direct observation of the rare beta-minus delayed proton emission from  $^{11}\text{Be}$ . A discrepancy in the theoretical branching ratio differed from the experimental value obtained, which prompted their proposition of a previously unknown excited state of the  $^{11}\text{B}$  nucleus. Motivated by the potential observation of a previously unobserved resonance in  $^{11}\text{B}$  at 11.425 MeV, we are presenting our data of two transfer reactions and our preliminary analysis of the predicted excited state. A Tandem accelerator and the Super-Enge Split-Pole Spectrograph at Florida State University were used to conduct the experiment on  $^{10}\text{B}$  and  $^{11}\text{B}$  targets. Neutron transfer reactions of  $^{10}\text{B}(\text{d,p})^{11}\text{B}$  and  $^{11}\text{B}(\text{d,p})^{12}\text{B}$  populated excited states of  $^{11}\text{B}$  and  $^{12}\text{B}$ . Focal plane detectors were used to measure the positions of proton ejectiles from the reactions at scattering angles of 10 to 50 degrees at five-degree increments. Angular distributions for observed states are constructed.

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Date submitted: 11 Oct 2021

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