

Abstract Submitted  
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**Structure Studies of  $^{13}\text{Be}$** <sup>1</sup> JEROME MATHEW KOVOOR, MAR-  
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S1506 COLLABORATION — A variety of structure phenomena such as alpha clus-  
tering, neutron halos, and the breakdown of the N=8 shell gap, are observed in the  
beryllium nuclei marking them attractive for nuclear structure studies. The struc-  
ture of  $^{13}\text{Be}$  offers insights into the N=8 shell gap, nature of the Borromean  $^{14}\text{Be}$   
nucleus, the influence of the continuum and the nature of neutron-drip line nuclei.  
We performed the  $^{12}\text{Be}(d,p)^{13}\text{Be}$  transfer reaction in inverse kinematics at ISAC II  
at TRIUMF. The  $^{12}\text{Be}$  beam at 9.5 MeV/u interacted with the novel IRIS solid D<sub>2</sub>  
target, and ejectiles and recoils were detected in an annular silicon detector array  
and two  $\Delta E$ -E telescopes. A Q-value plot showing the resonances in the  $^{13}\text{Be}$  con-  
tinuum, and preliminary results from fitting the plot with a fixed-line shape and the  
response function obtained from GEANT4 simulations will be presented here.

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