

## Abstract DNP 2021

### **$N \rightarrow N^*$ transition GPD measurements with CLAS12 at JLAB**

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The measurement of transition GPDs is a unique tool to understand the 3 dimensional structure and the mechanical properties of nucleon resonances for the first time. To extract transition GPDs, the non-diagonal DVCS process can be used. In this process a pion-nucleon system, originating from the decay of an  $N^*$  resonance, is produced in addition to a real photon. Because the factorisation of this process amplitude requires the constraints on Mandelstam variable  $t$  and photon virtuality  $Q^2$  ( $-t/Q^2 \ll 1$ ) and several final state particles have to be detected for a clean identification, CLAS12 in combination with the upgraded CEBAF accelerator at JLAB provides a unique opportunity to study this process. The talk will introduce the topic and present an on-going analysis effort on the recently collected CLAS12 data. The analysis will be discussed in the context of theoretical predictions for the  $p \rightarrow$  transition GPDs.