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Hard Photo-disintegration of proton pairs in ${}^3\text{He}$ ISHAY POMERANTZ, ELI PIASETZKY, Tel Aviv University, RONALD GILMAN, Rutgers University — Hard deuteron photo-disintegration has been investigated for 20 years, as its cross sections follow the constituent counting rules and it provides insight into the interplay between hadronic and quark-gluon degrees of freedom in high-momentum transfer exclusive reactions. During the summer of 2007, at Jefferson lab, Hall A, we measured for the first time hard pp -pair disintegration in the reaction $\gamma {}^3\text{He} \rightarrow pp + n$, using kinematics corresponding to a spectator neutron. The current state of the analysis and preliminary results will be shown. Clues to the underlying physics can be found in the comparison of our measurements with deuteron photo-disintegration, the energy dependence of the cross sections at 90° c.m., and the α_n distribution.

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