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**Fragmentation photons in p+p collisions at 200GeV with PHENIX** ALI HANKS, PHENIX COLLABORATION — Direct photons produced in relativistic heavy ion collisions are often viewed as insensitive to the final state effects leading to jet quenching, and are thus considered powerful penetrating probes. However, there is a contribution to direct photon production that is sensitive to jet quenching in the QGP. pQCD predict that up to 30% of direct photons are produced through parton fragmentation. In A+A this contribution is expected to be modified due to stimulated photon emission as the parton propagates through the medium. Detection of these photons would provide a direct observation of the energy loss of jets in the medium. Measurements of fragmentation photon properties in p+p serve both as an important test for pQCD descriptions and as a baseline for A+A. A natural way of selecting fragmentation photons is with intra jet correlations of photons and high-pT hadrons. This method also allows for further study of the jet properties of fragmentation photons such as  $p_{out}$ , the component of the photon pT perpendicular to the trigger hadron, providing further constraint on the details of parton fragmentation. We present results from p+p data and discuss the potential for measurements in d+Au and Au+Au collisions.

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