

Abstract Submitted
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Angular Distribution of Photons in γ +Jet Events VANESSA GAULTNEY, Florida International University, CMS COLLABORATION — The angular distribution of prompt photons in events with at least one jet in the center-of-mass frame for pp collisions at $\sqrt{s}=7$ TeV is presented. A template method is used to distinguish between signal and the dominant background from jets fragmenting into neutral mesons. Measuring the angular distribution is a direct probe of the partonic cross section for prompt photon production and is free of the parton distribution functions that are normally associated with an inclusive cross section measurement typically used for next-to-leading order predictions. The $|\hat{\eta}|$ distribution in the center-of-mass frame ranging from 0-2.1 ($|\cos\hat{\theta}|$ 0-0.97) is examined and compared to next-to-leading order QCD predictions, the highest angular limit reached since the last measurement of angular distributions nearly a decade ago.

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