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Evidence of prompt isolated photons with the ATLAS detector

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Photon identification is important for many physics signatures at the LHC, as well as for detector calibration purposes. Prompt photon identification in ATLAS relies on the fine granularity of the electromagnetic calorimeter, which provides event by event rejection of the dominant background from photons from piˆ0 decays, and on the inner detector, which allows us to reconstruct photon conversions to electron-positron pairs. The cross-section of prompt photon production at LHC is large enough that only a small integrated luminosity is required to produce a significant number of signal events. This contribution describes the extraction of the prompt photon signal above the background in the early LHC data with the ATLAS detector collected at a center of mass energy of 7 TeV.

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