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Detecting diffraction at the LHC

Abstract
Photon bremsstrahlung is proposed to be used to identify elastic proton-proton interactions at the LHC. In addition to a measurement of the elastic pp cross section (assuming that the elastic slope is known), the bremsstrahlung photons will allow the evaluation of the total pp cross section, luminosity and to align the Zero Degree Calorimeters (ZDCs).

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