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W and Z boson production at CMS in pp collisions at $\sqrt{s}=7$ TeV

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The production of W and Z bosons has been observed in pp collisions at a center-of-mass energy of 7 TeV using data collected in the CMS experiment. W events were selected containing an isolated, energetic electron or muon. The presence of an energetic neutrino is demonstrated using the distribution of missing transverse energy (MET), which is calculated from calorimetric and tracking information in three ways. Z events were selected containing a pair of isolated, energetic electrons or muons. Data-driven methods are used to estimate reconstruction and triggering efficiencies, and well as the main backgrounds. We present the W and Z signal yields and the extracted cross-sections at $\sqrt{s}=7$ TeV, as well as preliminary distributions of kinematic variables. Emphasis is put on the weak boson reconstruction performance.

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