

# Diffraction at CMS

Ann-Karin Sanchez

## **Abstract**

The observation of the production of  $W$  and  $Z$  bosons at the LHC in pp collision events with a large rapidity gap is presented. Using data collected by the CMS experiment in 2010, corresponding to an integrated luminosity of  $36 \text{ pb}^{-1}$ , a detailed study of the event structure and the energy distribution in the forward region of  $W$  and  $Z$  events is presented. These contain also event samples which are dominated by diffractive interactions.