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Zero bias and HF-based minimum bias triggering for pp collisions at 14 TeV in CMS[1] JEREMY CALLNER, University of Illinois at Chicago, CMS COLLABORATION — The start of LHC running and the corresponding initial low luminosities during ramp-up to full luminosity represent a unique, and possible one time, opportunity to obtain a significant amount of usable minimum bias pp data without the added complications and potential biases associated with data containing multiple collisions per bunch crossing. Important considerations need to be taken into account in the design of the trigger system to enable the effective recording of relevant minimum bias events. A description of two possible triggering schemes for minimum bias collisions will be presented. One based on a zero bias crossing-time trigger for specific luminosity situations and the second, a detector trigger based on HF, the forward calorimeters in CMS. Possible biases imposed on the data at the triggering level and ways to reject (or accept) beam gas collisions will also be discussed.

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