Anomalous HMP RO behavior with collisions and cosmic runs
HMP local run with beam collisions ~150 MB/s ~18KHz 500 KHz of collision rate

HMP global run with cosmic rays ~150 MB/s ~18KHz with c.r. with CTP random 5 MHz of trigger rate

Crosscheck via HMP DCS

Red: busy time
Blue: trigger rate
Some considerations

• The spiky behavior of trigger/data throughput it seems doesn’t depend on the radiation level since it also happens without collisions still in global run with (most probably) LHC clock;

• Question to Clive or Raul: during physics runs could an optical signal via TTCrx optical link rise the busy without an electrical LM is issued (L1 without LM)? Can this condition preventing triggering the C-RORC event read out?

• In global run with cosmic trigger, that is CTP local clock at 5 MHz rate, there is a stable behavior of the HMP. What could be the main triggering difference and/or the RO FW behavior in this two type of runs?