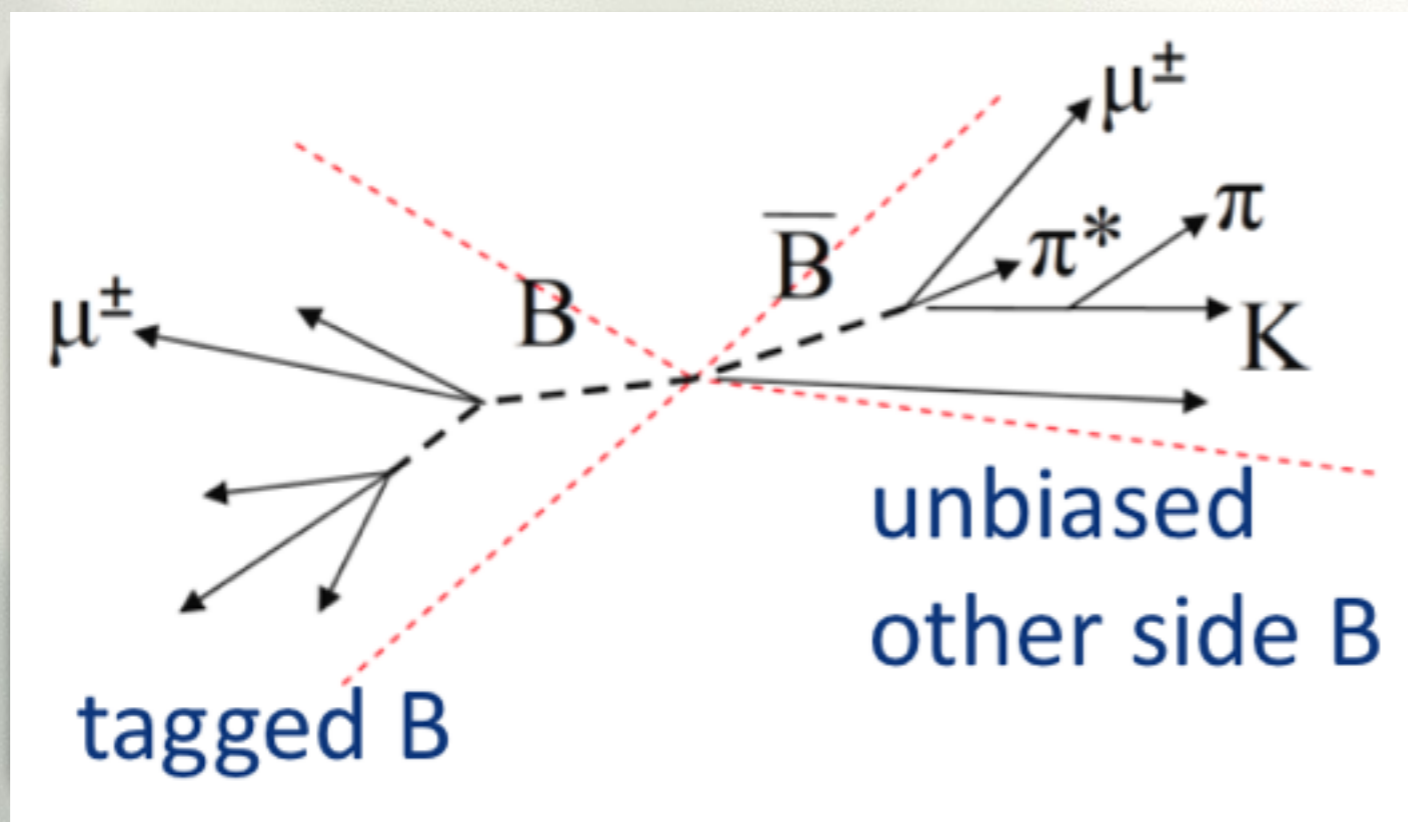


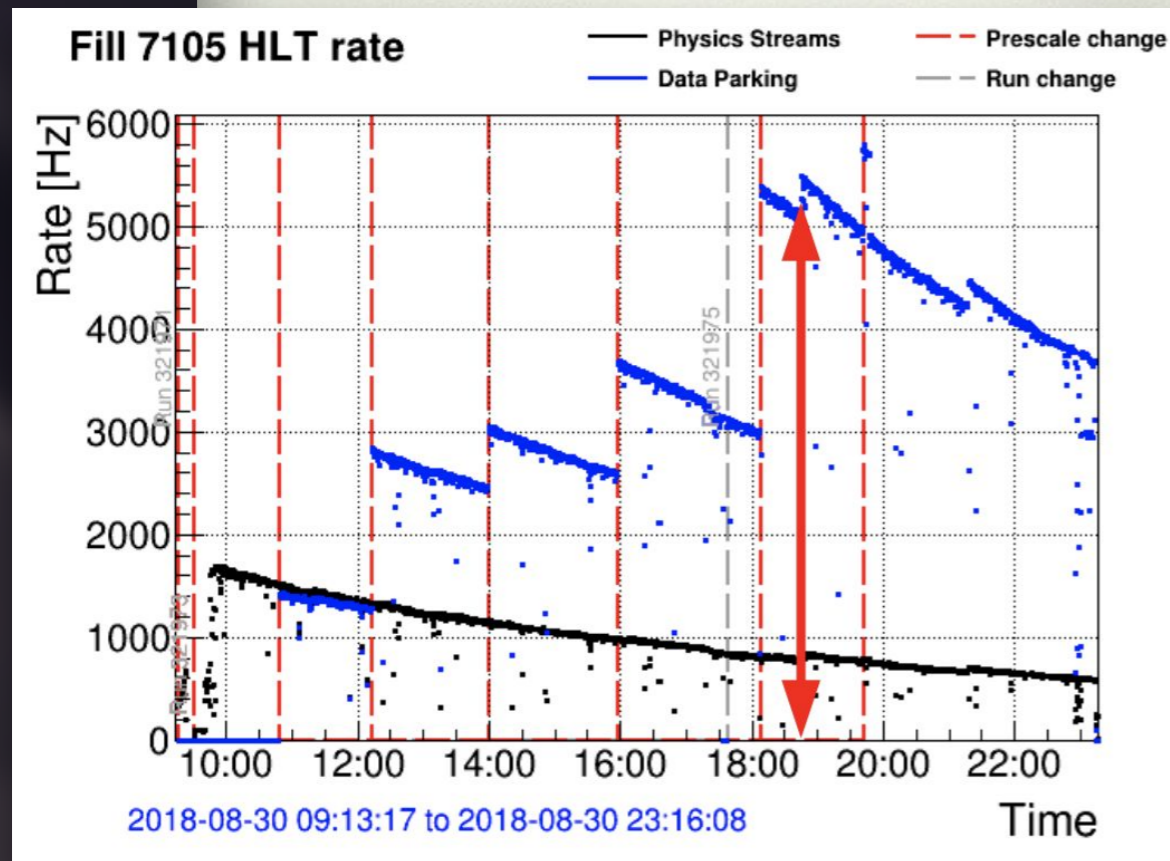
CMS 2018 B-Parking

- ◆ Main motivation — study / cross-check B anomalies; can be used to do other B-physics studies.
- ◆ Goal is to collect a large ($\sim 10^{10}$ events) unbiased sample of B hadrons, by triggering on muon from tagging B, **to collect unbiased B event on the other side (“probing B”)**.



Simply send a single copy of O(2kHz) data to DAQ and storage, *no processing at Tier0.*

CMS 2018 B-Parking (cont.)



Data summary:
23 data sets
Size on tape: **7,596 TB**
of events: **11,879 M**
Average event size: **640 kbytes**

- ◆ Global CMS effort in 2018 has been payed off, resulting **12B triggered events** on tape in addition to regular data taking.
- ◆ **During 2018 run, average on fills > requested 2kHz. Maximum up to 5.5 kHz.**
 - Resulting a $\langle \text{PU} \rangle \sim 20$ (~ 38 for regular triggers) and smaller event size.
- ◆ Successfully fitted into standard resources (no additional requests as planned).
- ◆ 1.1B events already processed since Jan in order to help the development of reconstruction.

CMS 2018 B-Parking (cont.)

◆ Things are still working in progress:

- Processing with central skims — in order to preserve RAW data for $B \rightarrow K^{(*)} e^+ e^-$ candidates for ongoing electron reconstruction development; the rest of events will be kept in standard format for other B-physics analysis.
- B purity measurements with $B \rightarrow D \mu \nu$.
- Data scrutiny with control channels ($B \rightarrow D \pi$, $J/\psi K$, etc.)
- Optimising / understanding electron performance at low p_T .
- In preparation for R_K and R_{K^*} analyses.