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Minutes of the Data Quality Meeting of Monday 14 July 2008

Calibration Stream

In the meeting last week we discussed about the need for a **hot stream** of calibration events that could be looked at immediately after data taking. Beat and Markus attended this meeting to explain the views of the online group.

The use case is that we might need some events to do iterative or CPU intensive tasks like typically alignment. The velo alignment needs very few events but takes 10 minutes per fit. In principle this could be done in the monitoring farm in real time, but this leaves less freedom to tune things. We will have to review the need for that data after some time.

Beat sees no problem to have a small (few Hz) stream of events that would be a subsample of the 2 kHz. One just needs to make sure they never get mixed with the 2kHz again, to avoid duplications. In that sense the easiest is that they never leave the pit. The Plus farm could be used to analyse them. There is a buffer of 30 TB at the pit (i.e. 10^9 events, or 6 days of 100% efficient running at 2 kHz), of which some could be used for this data. In principle data is deleted after some time but one could pin down some data for later use. The model was that this data should be used quickly and not kept for long time anyway. It was also ensured it is possible to copy some of the data to some scratch space or laptop if needed.

To minimize the use of CPU, one could write this stream from the ~50 Hz of events reconstructed in the monitoring farm. The problem is that it is not foreseen to "rootify" these events, which would be CPU-intensive (and require a lot of work). But one could write them out as a "blob" in MDF format. The only limitation is that they can only be re-read with the same version of the application (meaning LHCb, Gaudi...).

Action : Online team to ensure that some of the data reconstructed in the MF is written as MDF files to disk and available on the plus farm. The choice of events is defined by the routing bits.

Muon ID Monitoring

There was a new iteration of the discussion on where to run the muon ID monitoring. The outcome of this monitoring could be that one needs to change some hardware settings (voltage). It was felt that such decision should be made quickly and therefore based on what is monitored in real time in the MF. Even the low-rate J/ψ PID calibration with 1 Hz input should be run in the MF if possible. Else there would be delays of several days if run in the offline reconstruction, or weeks if dependent on the stripping.

Histogram analysis framework

The access to the histogram database was considered useful offline, but it is based on Oracle. More discussions with the developers are needed to find out what part of the online code can be re-used offline.

Problems database

No new developments

Next meeting

The two next meetings are cancelled. We meet again on 4 August.

-- PatrickKoppenburg - 14 Jul 2008

This topic: LHCb > DataQualityMinutes080714

Topic revision: r2 - 2018-09-23 - MarcoCattaneo



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