

From sticky analysis to fast VME shadows

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Storing long-lived slow control information directly in the data stream simplifies analysis, particularly during experiment setup and calibrations. Typical examples are to correlate event-wise data with magnet currents, high-voltage values or thresholds. Sticky events are meant to realise this. Their distinctive feature is that they are valid until revoked or replaced. The status of implementation in the generic UCESB raw data unpacker will be presented.

Experiments often do not reach the limits imposed by hardware. In the quest for more statistics, a scheme to use existing commercial multi-event VME modules to their conversion time limit has been implemented. Conversion times below 10 us correspond to accepted event rates above 100 kHz. These are continuously handled as long as the data volume is within the transfer bandwidth of the VME processor. This asynchronous readout mode will be briefly reviewed.

Summary

Analysis with slow-control information embedded in the raw data stream as “sticky events”.
High-rate VME readout, at the conversion time limit.

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