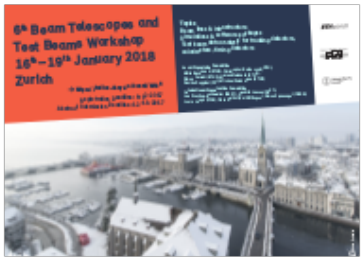


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# Data acquisition for continuous readout and triggered experiments

*Tuesday 16 January 2018 13:00 (45 minutes)*

Data AcQuisition (DAQ) is a very vague term that in high energy physics is associated to the readout, event building and storage of the physics data, as well as the control, configuration and monitoring of the data taking operations.
Though the main functional blocks of DAQ systems remain always the same (readout, event building, storage, control, configuration, monitoring), their design and implementation may vary widely. A DAQ system may consist of a single device for a small laboratory setup or encompass tens of thousands of interconnected devices for large experiments such as at the LHC. Besides size and complexity of the experiment, two other elements characterise the DAQ systems:
- how the front-end electronics sends out data (continuous mode or triggered)
- whether all the experiment's components are synchronised through a unique timing distribution system.
After a brief introduction to DAQ, this talk will focus on the differences between continuous readout and triggered DAQ systems and on how those can lead to very different definitions of a "physics event".

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