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Radar, a DAQ software framework

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Radar is a software framework for high energy physics experiment data acquisition and online processing. The LHAASO DAQ and JUNO DAQ systems are developed based on RadarV1.0 and RadarV2.0, respectively. The data volume of CEPC is two orders of magnitude higher than that of JUNO, which puts forward higher requirements for online data processing capabilities. With reference to the data processing capability of JUNO, the CEPC DAQ developed based on RadarV2.0 may require a cluster consisting of thousands of CPU servers. In order to improve the single node computing performance, we plan to adopt the heterogeneous computing scheme with FPGA + GPU + CPU, and are developing the high throughput and high bandwidth heterogeneous data acquisition and online processing framework for CEPC- RadarV3.0.

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