

# Implementation of A High Throughput IO System for Detector Control System of JUNO

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The Jiangmen Underground Neutrino Observatory (JUNO) is the second phase of the reactor neutrino experiment upgrade from the Daya Bay Reactor Neutrino Experiment. The detector of the experiment was designed as 20k ton LS with an inner diameter of 34.5 meters casting material acrylic ball shape. Due to the gigantic shape of the detector there are approximate 400k channels of monitoring points of devices and sensors. The framework migration and upgrade are needed for DCS of the experiment. In addition to the use of control systems EPICS-based data acquisition and detector controls software have been developed. The paper will introduce the new framework of DCS based on Linux. The implementation of the high throughput IOCs of the high-voltage, stream device drivers and the embedded temperature firmware will be presented. The modular design allows multiple configurations of the data preprocessing plug-in to be set according to the requirements of the neutrino detector and instrument.

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