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Slow Monitoring Systems for CUORE SURYABRATA DUTTA, Yale University, CUORE COLLABORATION — The Cryogenic Underground Observatory for Rare Events (CUORE) is a ton-scale neutrinoless double-beta decay experiment under construction at the Laboratori Nazionali del Gran Sasso (LNGS). The experiment is comprised of 988 TeO_2 bolometric crystals arranged into 19 towers and operated at a temperature of $\sim$10 mK. We have developed slow monitoring systems to monitor the cryostat during detector installation, commissioning, data taking, and other crucial phases of the experiment. Our systems use responsive LabVIEW virtual instruments and video streams of the cryostat. We built a website using the Angular, Bootstrap, and MongoDB frameworks to display this data in real-time. The website can also display archival data and send alarms. I will present how we constructed these slow monitoring systems to be robust, accurate, and secure, while maintaining reliable access for the entire collaboration from any platform in order to ensure efficient communications and fast diagnoses of all CUORE systems.

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