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William Thompson (Yale): Monitoring System and Data Stability of COSINE-100

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COSINE-100 is a direct detection dark matter experiment consisting of 106 kg of low-background NaI(Tl) detectors located at the Yangyang Underground Laboratory in Korea. One of the primary physics goals of COSINE-100 is to search for a WIMP-induced annual modulation signal to confirm or refute DAMA/LIBRA's claim of dark matter discovery. The search for an annual modulation signal requires a thorough understanding of time-dependent environmental effects and data stability. To measure environmental effects over time, COSINE-100 has developed a monitoring system to keep track of operating conditions, such as temperature, radon levels, and muon rates. Here, I will present the COSINE-100 monitoring system and discuss the achieved stability of COSINE-100 data.

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