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Building a Temperature Controlled Performance Test Setup for SiPMs

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High energy physics experiments rely on sensitive optical devices such as Silicon photomultiplier tubes (SiPMs). While SiPMs have an excellent single photoelectron resolution and linearity, they exhibit strong temperature dependence. It is important to properly test light sources and temperature-based systems prior to testing a SiPM. My work focused on designing a laboratory setup to test the wavelength dependant performance of optical sensors such as SiPMs under a temperature-controlled environment. I will discuss the performance of the current test setup and plans for the optical sensor performance tests.

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