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**Characterization of the optical magnetometer at CAPP GNOME station** DONG-OK KIM, YOUNGGEUN KIM, KAIST, CAPP/IBS, YUN CHANG SHIN, CAPP, IBS, YANNIS SEMERTZIDIS, KAIST, CAPP/IBS, GNOME COLLABORATION — The optical magnetometer is one of the most sensitive ways to measure low magnetic field and to be used in a wide range of application including fundamental physics. The high sensitive optical magnetometers can also be employed to search for anomalous interaction between atomic spins and exotic fields such as axion domain walls. The Global Network of Optical Magnetometers to search for Exotic physics (GNOME) is an experiment looking for signals from transient events from such spin interaction based on synchronized multiple magnetometer stations located geographically separated on the Earth. One of stations at the Center for Axion and Precision Physics Research (CAPP) is located in Daejeon, South Korea. We present the setup and optimization of the magnetometer at CAPP.

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