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## Reconstructing a Dilution Refrigerator for use in Low Energy Nuclear Experiments

*Tuesday, 27 September 2022 11:30 (25 minutes)*

The Gerasimov-Drell-Hearn (GDH) sum rule states that the difference between the parallel and antiparallel cross sections of a polarized photon hitting a polarized target is proportional to the square of the anomalous magnetic moment of the target. We plan to use the GDH sum rule to study the nuclear structure of the deuteron. To do that, we put our target material into a Frozen Spin setup, made possible by a dilution refrigerator originally constructed at CERN in the 1970s. However, when a leak was discovered in a critical part of the dilution unit, we had to remove it. This talk will discuss the reconstruction of this dilution unit, what still needs to be done, and how the experiment will be run.

### Category

Polarized Targets

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