

HAYSTAC Dark Matter Axion Experiment

Thursday, 19 July 2018 15:00 (15 minutes)

The HAYSTAC experiment looks for axions, a type of cold dark matter (CDM) particle predicted in the context of the standard model of electroweak interactions. If they exist, axions fall very low on the mass scale, and their presence could be detected when they convert to radiofrequency photons in the presence of a strong magnetic field. HAYSTAC consists of a microwave cavity resonator that is tunable and builds up the axion signal to a point where it is detectable, and a quantum limited amplifier that exploits the Josephson effect. I will discuss its current status, and plans for the upcoming run.

Primary author: VAN ASSENDELFT, Cady (Yale University)

Presenter: VAN ASSENDELFT, Cady (Yale University)