Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Status of the CYGNUS Directional Recoil Observatory Project
SVEN VAHSEN, University of Hawaii, CYGNUS COLLABORATION — A large directional nuclear recoil observatory can be used to observe and distinguish different neutrino sources, to search for dark matter in the presence of irreducible background, including neutrinos, and to demonstrate the cosmological origin of a dark matter signal. With WIMP-nucleon scattering limits approaching the neutrino floor, and coherent neutrino-nucleon scattering firmly experimentally established, there is increased interest in such an observatory. The CYGNUS proto-collaboration aims to deploy an underground network of Time Projection Chambers (TPCs). I will review recent work carried out within CYGNUS, including R&D on new readouts, construction of prototypes, and physics sensitivity studies.

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Date submitted: 12 Jan 2020 Electronic form version 1.4