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## Searching for Dark Matter with COUPP

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COUPP is an experimental campaign with the goal of detecting dark matter in the form of Weakly Interacting Massive Particles (WIMPs) using continuously sensitive bubble chambers, operated under mildly superheated conditions. Recoils of dark matter particles off the target nuclei in the chamber would produce single, isolated bubbles, which are detectable both optically and acoustically. Under normal operating conditions, the detector has an energy threshold for nuclear recoils of approximately 10 keV but is insensitive to electron recoils, which typically constitute the background in dark matter searches. Nuclear recoils can be discriminated from alpha decays in the target liquid with the acoustic signal produced by the bubbles, which show excess power at high frequencies for alpha events.

Recent results from a 4 kg chamber (COUPP-4) at a shallow depth produced new limits on WIMP-nucleon interactions while also demonstrating the acoustic rejection of alpha events. The COUPP-4 detector is now taking data in SNOLAB, producing stronger limits on both alpha rejection and dark matter interactions. The COUPP collaboration is also actively working on installing a 60 kg chamber at SNOLAB, with the goal of achieving world-best sensitivity to spin-independent dark matter. This talk will summarize the recent results from COUPP-4 and describe progress on COUPP-60.

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