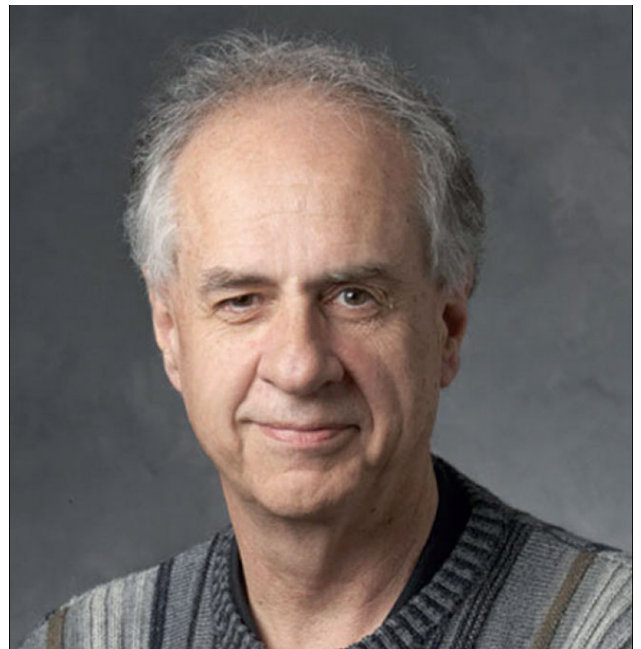


PHYSICS AND ASTRONOMY COLLOQUIUM

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Search for Dark Matter WIMPs with Ge Cryogenic Detectors

It is more and more certain that dark matter is in the form of a fluid made up of elementary particles. For some time the favorite candidate from particle physics has been the lightest supersymmetric particle often called the neutralino and is a subset of a broad category of weakly interacting massive particle or WIMPs. The SuperCDMS Collaboration is searching for dark matter WIMPs in and around our galaxy using 15 advanced iZIP Ge detectors in the Soudan Underground Laboratory in northern Minnesota. Recent analysis of the CDMS-II Si detectors has provided a hint for a light mass WIMP around 8 times the mass of the proton. For the next phase called the SuperCDMS SNOLAB



experiment, we plan to instrument up to 200 kg of larger Ge and Si iZIP detectors. We will discuss the status of the direct detection field and the plans for the next decade.

THURSDAY, NOVEMBER 14, 2013 | 4:00 PM | HAWKING AUDITORIUM



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