

Developing Experimental Techniques for Paleo-Detectors: Research Updates from the University of Michigan

Friday, April 17, 2026 9:00 AM (20 minutes)

Paleo-detector research at the University of Michigan aims to use ancient minerals as solid-state detectors, preserving evidence of neutrino and dark matter interactions over geologic timescales. Once a mineral sample has been selected as a promising paleo-detector candidate, preparing the sample and determining the proper analysis techniques requires thoughtfulness and care. Track geometry, mineral properties, and sample preservation considerations are examples of the many factors that guide experimental planning. This talk will discuss experimental progress, including sample preparation workflow development, light-Z ion implantation studies, and track enhancement techniques alternative to etching, as well as progress towards bulk track imaging using x-ray microscopy, striving for nanometer-resolution with high volumetric throughput.

Do you plan to give the talk in person?

Yes

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