Workshop on Cosmic Indicators of Dark Matter 2024



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Visualizing high energy particles of extensive air showers with Subaru Hyper Supreme-Cam

Wednesday 16 October 2024 15:00 (20 minutes)

Extensive air showers induced from high-energy cosmic rays provide a window into understanding the most energetic phenomena in the universe. We report on visualizing high energy particles of these showers with the silicon imaging detector Subaru Hyper Suprime-Cam. This method has the advantage of being able to measure individual secondary particles with unprecedented resolution and might be applicable for dark matter search. I will share an interdisciplinary project for combining the Subaru telescope and cosmic ray detectors to decipher details of extensive air showers, dubbed Air-shower Lensing Observatory at High Altitude (ALOHA).

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