

Elena Pinetti – HEP Seminar – March 11, 2025
Flatiron Institute at the Simons Foundation

Title: Hunting axions with the James Webb Space Telescope

Abstract:

Axions with a mass around 1 eV can decay into near-infrared photons. Utilizing blank-sky observations from the James Webb Space Telescope, I search for a narrow emission line due to decaying dark matter and derive leading constraints on the axion-photon coupling in the eV-scale mass range.

Bio:

Elena Pinetti is Flatiron Research Fellow at the Simons Foundation in New York City. Her research focuses on multi-messenger searches for dark matter in novel environments. She is also an Emmy Noether Visiting Fellow at Perimeter Institute. Before joining Flatiron Institute, Elena was a postdoctoral researcher at Fermilab and earned her Ph.D. in 2021 through a joint program between the University of Turin and Sorbonne University.