

UKZN-PMO Joint Seminar on Cosmology

Title: Searching for Dark Matter in the Sky

Speaker: Professor Tracy Slatyer, Jerrold R. Zacharias Career Development Professor of Physics

Affiliation: Department of Physics, Massachusetts Institute of Technology

Host and Chair: Prof. Yin-Zhe Ma

Date: 16th October (Friday) 2020

Time: 8:00 EDT /14:00 SAST/**20:00 Beijing time**

Zoom link:

<https://ukzn.zoom.us/j/99608605268?pwd=dkJsL2w0ZmpsVXNlT3ZyUmVRZ0MvQT09>

Meeting ID: 996 0860 5268

Passcode: 506827

(connection starts ten minutes before the seminar)

Abstract: The nature of dark matter remains one of the great puzzles of fundamental physics, with potential connections to a plethora of deep questions. Interactions between dark and visible matter could have reshaped the history of the cosmos, and left their signatures in light that is only now reaching our telescopes. I will discuss new developments in theoretical and analytic techniques to predict and identify such signals, with applications ranging from unveiling the nature of a mysterious gamma-ray glow in the Milky Way's heart, to testing a vast range of possibilities for dark matter using light from the dawn of the universe.

Speaker Info:

Dr. Tracy Slatyer completed her undergraduate work with honors in theoretical physics at the Australian National University in 2005 and her doctoral work in physics at Harvard in 2010 under the direction of Douglas Finkbeiner. She did a three-year postdoctoral fellowship at the Institute for Advanced Study in Princeton, and then joined the MIT Physics Department in July 2013. She was promoted to Associate Professor in 2018 and received tenure in 2019. She was awarded the 2014 Bruno Rossi Prize of the American Astronomical Society, the 2017 Henry Primakoff Award for Early-Career Particle Physics by the Division of Particles and Fields of the American Physical Society, a 2019 Presidential Early Career Award for Scientists and Engineers, and a 2021 New Horizons in Physics Prize.

