Tracy Slatyer

CHAIRE GEORGES LEMAÎTRE 2021

New probes of dark matter physics in astrophysics and cosmology

Leçon inaugurale, lundi 16 mai 2022 à 10h30
« Dark Matter Puzzles from Indirect Searches »
Auditoire Charles de la Vallée Poussin (CYCLO1), Bâtiment Marc de Hemptinne

Cours en 4 leçons de 2h, le mardi 17, mercredi 18, jeudi 19 et vendredi 20 mai à 14h00,
Salle de séminaire E-349 Bâtiment Marc de Hemptinne (Tour E, 3e étage)

Lecture 1 PREDICTING DARK MATTER SIGNALS IN THE SKY
Lecture 2 DISENTANGLING GAMMA-RAY SIGNALS: TEMPLATE ANALYSIS AND BEYOND
Lecture 3 DECIPHERING THE EARLY UNIVERSE'S DARK HISTORY
Lecture 4 EFFECTS OF LONG-RANGE FORCES IN DARK SECTORS

Professor Slatyer is a theoretical physicist who works on particle physics, cosmology and astrophysics. Her research is motivated by questions of fundamental particle physics — in particular, the nature and interactions of dark matter — but she seeks answers to these questions by studying possible signatures of new physics in astrophysical and cosmological data. Her particular areas of focus include research into scenarios where the dark matter experiences new forces of nature, precision theoretical predictions for photon signals from heavy colliding dark matter particles, modeling of the possible effects of dark matter interactions on the history of the early cosmos, and hands-on data analysis of high-energy gamma-ray data in search of dark matter signals. She was a co-discoverer of the giant gamma-ray structures known as the "Fermi Bubbles" erupting from the center of the Milky Way.

INFO https://agenda.irmp.ucl.ac.be/event/4622/
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