



THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
SEMINAR

Cosmic Rays In and Around Star-Forming Galaxies: Observational Signatures and Physical Effects

by

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ALL INTERESTED ARE WELCOME

Abstract

Cosmic rays go hand-in-hand with violent and energetic astrophysical conditions, and can produce observable signatures across the electromagnetic spectrum. They also play a role as an active agent in shaping the evolution of their local environment, and their effects in modifying astrophysical processes over a broad range of length-scales can be substantial. In this talk, I will present an overview of some of my recent work on modeling the effects and signatures of cosmic rays in different environments - from star-forming cores in our cosmic backyard, to circum-galactic structures and populations in the furthest reaches of the observable Universe. I will outline the impacts that cosmic rays can have on the evolution and dynamics their host system, how their astrophysical effects can manifest themselves on sub-galactic, galactic, and super-galactic scales, and how the microphysics of cosmic ray feedback may operate within interstellar and circum-galactic settings.

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