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国台学术报告 NAOC COLLOQUIUM

2023 13 / No.13 2023

Time: Wednesday, 2:30 PM, Jun 28th 2023

Location: A601, NAOC & Live Streaming

Structural evolution of galaxies since cosmic noon

Prof. Stijn Wuyts (University of Bath)



Prof. Stijn Wuyts is a Professor of Astrophysics at the University of Bath. He obtained his PhD from Leiden University on the topic of "Red Galaxies at High Redshift", worked on the interface between galaxy observations and simulations as a Keck Fellow at the Harvard-Smithsonian Center for Astrophysics, and further explored the distant Universe as a Junior Scientist at the Max Planck Institute for Extraterrestrial Physics. At the University of Bath, he combines tracers of stars, dust, ionized and cold gas to reveal the physics governing the build-up of stars within galaxies

near and far, and the evolution of their structure through cosmic time.

Abstract

In this talk he will discuss the geometry, structure and morphological transformation of star-forming and quiescent galaxies from the peak of cosmic star formation to the present day. Resolved observations from multiple wavelengths and tracers enable us to reconstruct where stars form within galaxies and how stellar distributions are assembled, while simultaneously revealing insights into the evolving 3D spatial distributions of stars and dust. Integral-field spectroscopy adds to this the kinematic perspective, probing both gravitational and non-gravitational motions, and with it signatures of dark matter content and feedback in action. He will draw from HST, JWST, ALMA and IFU observations to illustrate the structural make-up of galaxies across cosmic time, and will draw connections to state-of-the-art cosmological simulations.

