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国台学术报告 NAOC COLLOQUIUM

2018 年 第 4 次 / No. 4 2018

Time: Wednesday 2:30 PM, Jan.24th **Location: A601, NAOC**

Intergalactic Medium

Prof. Yin-Zhe Ma

University of KwaZulu-Natal



Prof. Yin-Zhe Ma obtained his PhD in Astronomy in 2011 at Institute of Astronomy, University of Cambridge. Then he spent 3 years at University of British Columbia (Canada) as a CITA national postdoc fellow, and another 1-year at Jodrell Bank Centre for Astrophysics at University of Manchester, UK. He becomes a senior letter of University of KwaZulu-Natal, South Africa from 2015, and later promoted to an associate professor.

His research is mainly on radio astronomy and cosmology. He also has strong interests in testing general relativity and extreme physics with various astronomical observations. He believes that the future multi-tracer observations (such as galaxy surveys, neutral hydrogen survey etc) can give us a clearer and correct understanding of the cosmic evolution.

He is currently a member of SKA (Square Kilometer Array) team, Planck Core team, BINGO experiment (BAO as Integrated Neutral Gas Observation) and TAIPAN survey.

Abstract

Previous studies of galaxy formation have shown that only 10 per cent of the baryons are in compact objects, while 90 per cent of them are missing. Numerical simulation shows that the missing baryons are in a state of diffuse plasma with temperature 10^5 to 10^7 Kevlin, which is hard to be detected by X-ray observations. I will present three studies that coherently detect the missing baryons and reveal the temperature of the intergalactic medium. These include the thermal Sunyaev-Zeldovich effect, kinetic Sunyaev-Zeldovich effect and weak lensing.

All are welcome / Tea, coffee, biscuits will be served at 2:15 PM.