You are welcome to nominate speakers to colloquium@nao.cas.cn. The video and slides of previous colloquia and more information can be found at http://colloquium.bao.ac.cn/.

国台学术报告 NAOC COLLOQUIUM

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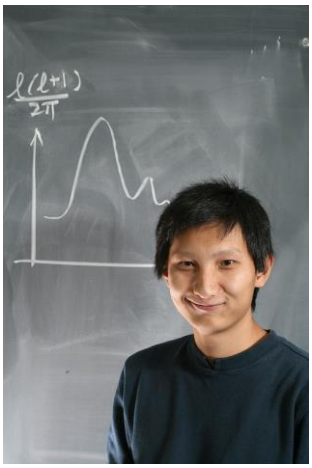
Time: Wednesday 2:30 PM, May 24th Location: A601 NAOC

New statistical measurements of the 21-cm signal beyond the power spectrum

Prof. Yi Mao

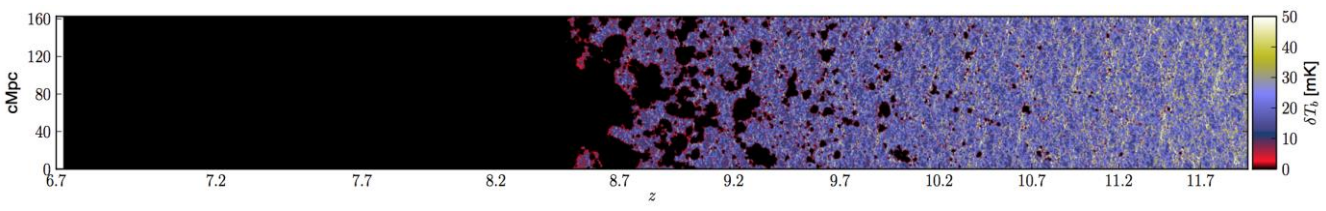
The Department of Physics, Tsinghua University



Prof.Yi Mao is working as an assistant professor at the Department of Physics at Tsinghua University. He obtained the Bachelor degree in physics at Peking University, the Master degree in physics at the University of Virginia, and the Ph.D. degree in physics at the Massachusetts Institute of Technology. He was a postdoc at the University of Texas at Austin in 2008 - 2012, and a Lagrange Fellow at the Institute of Astrophysics at Paris (IAP) in 2012 - 2015. He joined the Tsinghua University as a junior faculty in September 2015, and was awarded the “Thousand Talents Plan for Young Professionals” in China in 2017. He is a theoretical and computational astrophysicist. His research focuses on modeling the epoch of reionization with both analytical approaches and numerical simulations, and predicting the signatures of reionization on observations such as the cosmic 21 cm background.

Abstract

The fluctuations in the 21-cm brightness temperature from the epoch of reionization are intrinsically non-Gaussian, due to patchy reionization. In principle, we can extract a wealth of information on cosmic reionization and ionizing sources from statistical measurements beyond the power spectrum, the quantity which has been investigated in many details in the 21-cm literature. I will report ongoing progresses on two new statistical quantities: (1) the 3-point correlation function of the 21-cm signal, (2) the dipole of the cross-correlation power spectrum between the 21-cm line and the CO(1-0) emission line.



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