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国台学术报告 NAOC COLLOQUIUM

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Time: **Wednesday 2:30 PM, Nov. 14th** Location: **A601, NAOC**

Cosmology with X-ray Galaxy Clusters

Prof. Thomas H. Reiprich

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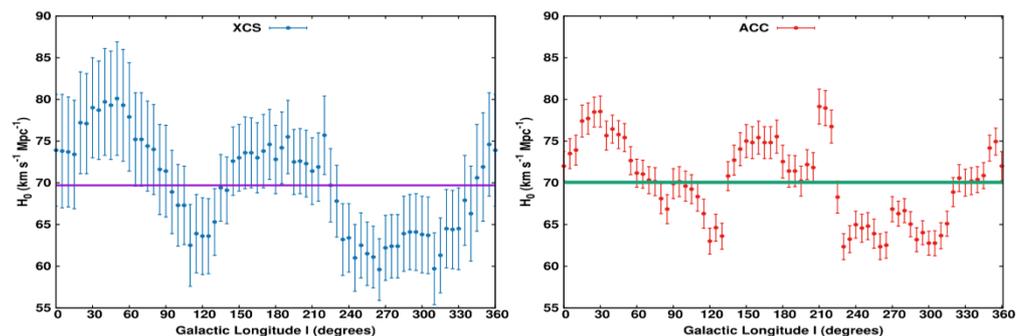
Prof. Reiprich did his PhD in 2001 at the Max Planck Institute for extraterrestrial Physics and the Ludwig-Maximilians-University in Munich, Germany. After three postdoc years at the University of Virginia, he moved to the Argelander Institute for Astronomy, University of Bonn, as (“Emmy Noether”) research group leader. In 2010 he became “Heisenberg” professor for astrophysics there and since 2015 he has been regular professor. He currently serves as the institute’ s director. He really enjoys teaching and recently received a teaching award from the faculty. Thomas is particularly interested in the astrophysics of galaxy groups and clusters, in cosmology, as well as in X-ray astronomy. He is a member of the

Astrophysics Working Group of the European Space Agency, co-chair of the Cluster and Cosmology Working Group of the eROSITA_DE consortium, co-chair of the Hot Universe Working Group within the Athena community structure, a member of the Athena/WFI Science Team, and he co-leads the external data work package within the Euclid Galaxy Cluster Working Group.

Abstract

The massive dark matter halos that host galaxy clusters can be traced well with X-ray satellite observatories. The intracluster gas trapped in the deep potential wells gets heated to 10s of

millions of Kelvin, emitting thermal bremsstrahlung at X-ray wavelengths. In this talk, the latest cosmological constraints from X-ray selected galaxy clusters will be discussed. The importance of galaxy groups (i.e., low mass clusters) will be outlined in this context. A new test to constrain the cosmological luminosity distance anisotropy using galaxy clusters is introduced and results indicating a violation of isotropy are shown. The current status of and cosmological prospects for the eROSITA telescope to be launched aboard the SRG mission early next year are presented. An outlook for the ESA Large-Class mission Athena is given.



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