

Astro Seminar Series



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Yesterday, today and tomorrow: CMB cosmology with ACT, Planck and ACTPol

CMB cosmology is currently undergoing a data-rich epoch, with measurements on small scales from experiments like the Atacama Cosmology Telescope (ACT) and its polarisation instrument, ACTPol, adding to measurements on larger scales by Planck, WMAP and most recently BICEP. I will contextualise the measurements and present constraints on models of interest to small-scale experiments; while paying attention to the foregrounds that complicate our measurements of the primordial microwave sky.

I will illustrate how we need to push on both the theory and data side - briefly highlighting a re-analysis of 2013 Planck data, where we found that the 217GHz x 217GHz detector set spectrum used in the Planck analysis is responsible for some of the tension between the Planck parameters and other astronomical measurements. I'll discuss how the picture has changed with updated Planck data.

Finally I'll highlight the recent ACTPol results, and outline how experiments like AdvACT and others will open up the window on the epoch of reionisation; our least explored epoch to date.

Tuesday Feb 9, 3:30pm

**Bell Room (103)
Rutherford Physics Building**