

Contributed Talk

Splinter CCAT

HIGH-REDSHIFT GALAXY SURVEYS WITH CCAT-P

B. Magnelli¹, F. Bertoldi¹, A. Karim¹

¹*Argelander-Institut für Astronomie, University of Bonn
Auf dem Hügel 71, 53121 Bonn, Germany*

Characterising the far-infrared emission of high-redshift galaxies is essential to estimate their dust-enshrouded star-formation activity otherwise only measured using not-well-understood rest-frame UV corrections. To date, far-infrared measurements are mostly based on *Herschel* or ALMA observations. However, while *Herschel* could map large areas of the sky, this 3.5 meter telescope was significantly limited by confusion (inability to separate emission from multiple galaxies within a single resolution element), providing far-infrared measurements only for the most luminous and thus not representative high-redshift galaxies.

On the other hand, ALMA can perform ultra-deep far-infrared observations but its relatively narrow field-of-view does not provide us with the statistic needed to study the evolution over cosmic time of galaxy populations.

I will demonstrate how CCAT-p, with its wide-field-of-view and 6 meter aperture, will fill this gap, providing deeper (at $z > 1$) and wider extragalactic surveys than those from the *Herschel Space Observatory*. The planned CCAT-p Galaxy Evolution (GEvo) survey will improve our understanding of the faint galaxy population that is responsible for the bulk of the cosmic far-infrared background. This wide-area survey will also allow for the detection of exotic, highly luminous galaxies.