

Matt Bothwell (University of Cambridge, postdoc)

Wagg J (SKA)

Maiolino R (Cambridge)

Cicone C (Cambridge)

De Breuck C (ESO)

Moller P (ESO)

Presentation Requested: oral

Category: Evolution of the Interstellar Medium and Star formation over Cosmic Time

Question: Other

ALLSMOG – a legacy survey for molecular gas in low mass galaxies at $z=0$

I will discuss the survey design and first results from 'ALLSMOG', the APEX Low-redshift Legacy survey for MOlecular Gas in low-mass galaxies.

ALLSMOG is an APEX large legacy programme, awarded 300 hours over two years, designed to measure CO emission in a large sample of local ($z = 0$) low mass ($\log M^* < 10$) galaxies. Previous large surveys for molecular gas have concentrated on massive systems, and it is only with modern instrumentation that low-mass systems can be observed in statistically significant numbers.

I will briefly discuss the survey design and future aims, before presenting initial results from the survey. With ~ 50 low-mass galaxies currently observed, we are able to explore gas fractions and SFR efficiencies in the low-mass regime, and tie this in to the wider context of galaxy formation and evolution.

Finally, with the aid of ancillary optical spectroscopy, I discuss the connection between metallicity and gas content in the $z = 0$ Universe.