

# **A Blind Survey of the Local Dusty Universe with *Herschel*-ATLAS**

*Christopher Clark (Cardiff University, UK), Haley Gomez (Cardiff University, UK), Loretta Dunne (University of Canterbury, NZ), Steve Eales (Cardiff University, UK), Matthew Smith (Cardiff University, UK), Pieter de Vis (University of Canterbury, NZ), Nathan Bourne (University of Nottingham, UK), Kate Rowlands (University of Nottingham, UK)*

The *Herschel* Astrophysical Terahertz Large Area Survey (*H*-ATLAS) is the largest open-time project undertaken by the *Herschel* Space Observatory, observing 550 square degrees of sky. We have used our initial 108 square degree internal data release to carry out the first dust-selected volume-limited ( $0.0035 < z < 0.01$ ) investigation of the local universe. Targeted far-infrared & sub-millimetre surveys of nearby galaxies have to select their samples by means of properties derived from observations at other wavelengths (near-infrared K-band brightness, IRAS hot dust luminosity, etc), exposing them to the biases inherent in their selection criteria. On the other hand, blind, large-area surveys such as IRAS and *Planck* suffer greatly in terms of resolution and sensitivity. However, *H*-ATLAS provides us with the best of both worlds, finally permitting us to perform a blind, large-area study, but with unrivalled resolution and sensitivity. This allows us to both uncover the submillimetre characteristics of the local universe in an unparalleled manner, and also assess the effect that the selection criteria of previous surveys had upon their samples and results. We reveal surprising findings in both regards.