

Project 11/2014: "**SF2 at low redshift: data reduction of the H-ATLAS and Stripe 82 surveys**"

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Abstract:

The most striking feature of the Cosmic Star Formation History (CSFH) of our Universe is that it shows a dramatic drop of an order of magnitude in the last 8 Gyrs to the present day after a rather constant phase of high activity. What caused this dramatic change, is still one of the biggest questions in astrophysics. The goal of SF² project is to measure the contribution of dark matter halos of different masses to the CSFH, to definitively probe whether the environment is one of the key drivers of the galaxy evolution. The widest baseline of the project will be given by the eROSITA All-Sky Survey (aRASS). eRASS will encompass an area of about 800 deg² (H-ATLAS and Stripe 82 fields), observed in the far infrared by the PACS photometer on board of the Herschel telescope. This will provide a full sampling of the SF activity of the galaxy population in field, groups and clusters up to z about 0.4. Here we require C2PAP cluster time for the massive data reduction of the PACS H-ATLAS.