Investigating the Epoch of Galaxy Formation with Artificial Intelligence

by

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Abstract

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Publications

Preface

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Contents

"A dedication quote/sentence"

Acknowledgements

"A quote"

By whom *From what source*

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Chapter 1

Introduction

1.1 A title

Chapter 2

Herschel-ATLAS Data Release III

2.1 The Herschel-ATLAS

The *Herschel* Astrophysical Terahertz Large Area Survey (H-ATLAS; Eales et al. 2010) was the largest open-time sub-mm survey carried out with *Herschel*. The survey was observed across five photometric bands using two instruments onboard the *Herschel Space Observatory*: the Photodetector Array Camera (PACS, Poglitsch et al. 2010) at 100 and 160 µm, and the Spectral and Photometric Imaging Receiver (SPIRE, Griffin et al. 2010) at 250, 350 and 500 µm. Compared to the first SMGs (Assumption: I have already described SMGs and their initial discovery in the 80s/90s.) detected using SCUBA at 850 µm(Smail et al. 1997; Barger et al. 1998; Hughes et al. 1998), the PACS and SPIRE wavebands span the peak of the infrared spectrum for low redshift ($z < 1$) galaxies. Their intrinsic brightness at the SPIRE wavelengths makes their detection in the thousands more achievable.

The complete survey covers $\sim 660\,\mathrm{deg}^2$, split into three regions located to avoid emission from Galactic dust and to utilize complimentary spectroscopic surveys including the Sloan Digital Sky Survey (SDSS, York et al. 2000), the 2df Galaxy Redshift Survey (2dfGRS, Colless et al. 2001) and the Galaxy and Mass Assembly (GAMA, Driver et al. 2009). The North Galactic Pole (NGP) region covers $\sim 180\,\mathrm{deg}^2$ of the northern sky, centered at R.A 13^h18^m and declination +29°13' (J2000); three equatorial fields, located at approximately R.A 9^h, 12^h and 15^h coinciding with the GAMA survey (henceforth named GAMA9, GAMA12 and GAMA15 fields), each with an area of approximately $54\,\mathrm{deg}^2$, and the South Galactic Pole (SGP) region, centered at R.A 0^h6^m and declination -32°44' (J2000) with an area of $\sim 318\,\mathrm{deg}^2$.

2.1.1 Detecting Submillimeter Sources on Herschel Images

2.1.2 Data Releases of the H-ATLAS

Chapter 3

Conclusion

"A quote"

By whom *From what source*

Appendix A

An Appendix

A.1 An Appendix

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