LoTSS galaxy classification pro max ultra – using photometry and spectra

Soumyadeep Das[1]★, Daniel J. B. Smith[1], Marina I. Arnaudova[1]

[1]*Centre for Astrophysics Research, University of Hertfordshire, Hatfield, AL10 9AB, UK*

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ABSTRACT

This is a simple template for authors to write new MNRAS papers. The abstract should briefly describe the aims, methods, and main results of the paper. It should be a single paragraph not more than 250 words (200 words for Letters). No references should appear in the abstract.

Key words: keyword1 – keyword2 – keyword3

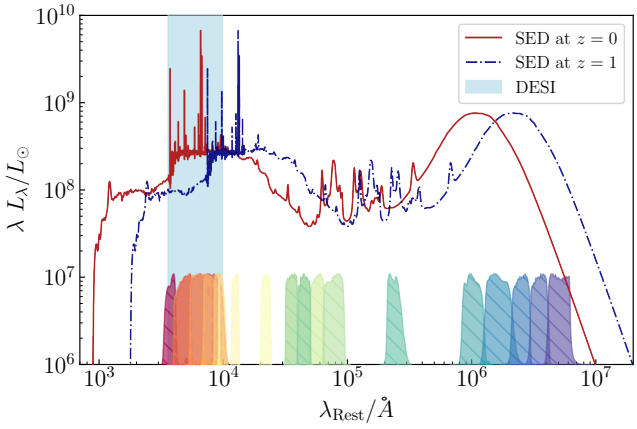

Figure 1. (Left panel) 150 MHz radio luminosity coverage of the radio-detected and the $z < 1$ SWIRE-selected source samples used in this work. (Right panel) Histogram showing the number count of sources binned by 150 MHz luminosity for the two data samples. Sources with radio luminosity less than 10^{16} WHz^{-1} were arbitrarily assigned to the lowest radio luminosity bin.

1 INTRODUCTION

- Talk about the low frequency radio population
  - Why is classification needed
  - previous efforts – spectra based, phot based –
  - this paper - so talk again about desi and lotss

2 DATA

2.1 LoTSS photometry

ELAIS N1 again... Describe the filters – that is sort of there,

2.2 DESI Spectra

Wavelength coverage - 0.6 – 5μm. Three spectral resolutions - 100, 1000, 2700.

2.3 Sample selection

spectra

sample - cuts and all

plot idea - ra dec coverage?? can also add sdss to show how better desi is? Can also include weave to show how better it will be?

3 PROSPECTOR

3.1 Model setup

Do we want to use continuity or bursty? Bursty may be better as it allows a greater degree of freedom.

Do we want to keep c3k library on? What about metallicities?

3.2 Parameter estimates

4 RESULTS

5 CONCLUSIONS

The last numbered section should briefly summarise what has been done, and describe the final conclusions which the authors draw from their work.

ACKNOWLEDGEMENTS

The Acknowledgements section is not numbered. Here you can thank helpful colleagues, acknowledge funding agencies, telescopes and facilities used etc. Try to keep it short.

★ E-mail: soumyadeep.das.m44@gmail.com

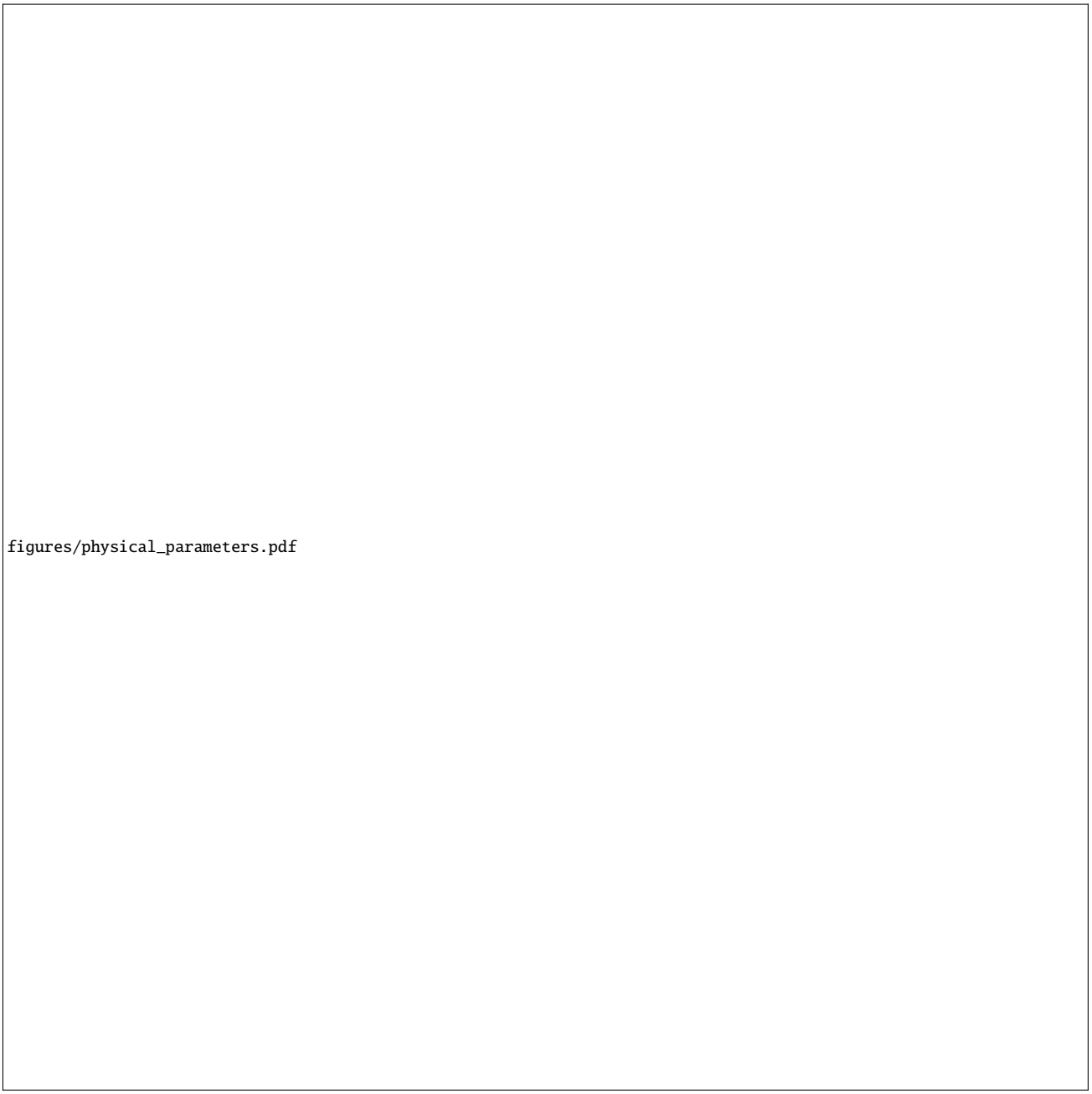

Figure 2. (Left panel) 150 MHz radio luminosity coverage of the radio-detected and the $z < 1$ SWIRE-selected source samples used in this work. (Right panel) Histogram showing the number count of sources binned by 150 MHz luminosity for the two data samples. Sources with radio luminosity less than 10^{16} WHz^{-1} were arbitrarily assigned to the lowest radio luminosity bin.

DATA AVAILABILITY

The inclusion of a Data Availability Statement is a requirement for articles published in MNRAS. Data Availability Statements provide a standardised format for readers to understand the availability of data underlying the research results described in the article. The statement may refer to original data generated in the course of the study or to third-party data analysed in the article. The statement should describe and provide means of access, where possible, by linking to the data or providing the required accession numbers for the relevant databases or DOIs.

REFERENCES

APPENDIX A: IDENTIFYING BAD FITS - PHOT+SPEC EDITION

APPENDIX B: IMPACT OF THE DIFFERENT DATA MODES ON THE PARAMETER ESTIMATES

Pacifici like posterior plots

This paper has been typeset from a TEX/LATEX file prepared by the author.

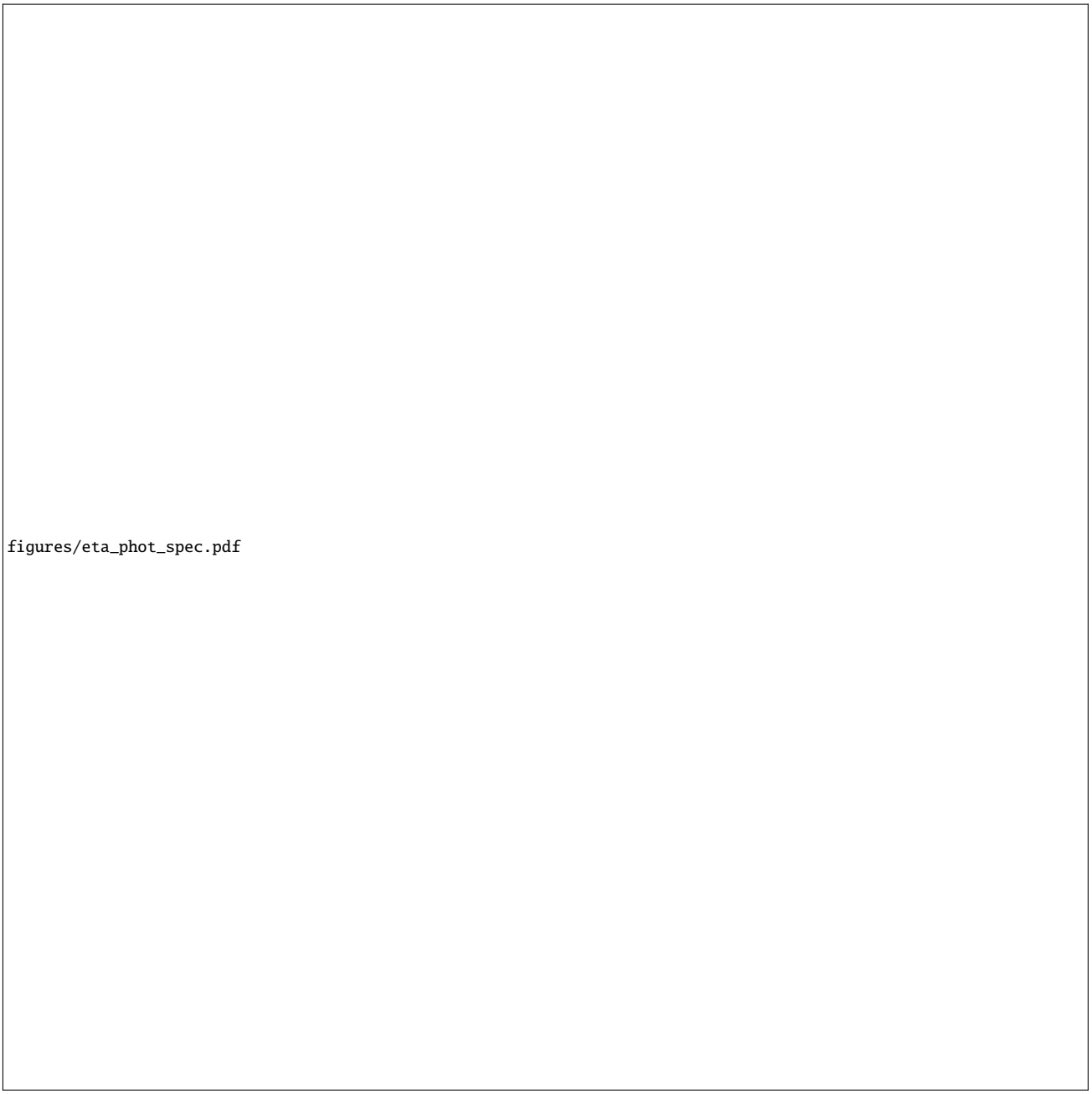

Figure 3. (Left panel) 150 MHz radio luminosity coverage of the radio-detected and the $z < 1$ SWIRE-selected source samples used in this work. (Right panel) Histogram showing the number count of sources binned by 150 MHz luminosity for the two data samples. Sources with radio luminosity less than 10^{16} WHz^{-1} were arbitrarily assigned to the lowest radio luminosity bin.