

Statement of Originality

The work presented in this thesis was carried out by me at the Department of Astrophysics, University of Oxford between October 2013 and December 2016, under the supervision of Prof. Chris Linttot. It was funded by a Science Technology Facilities Council Studentship Grant Code ST/K502236/1. I hereby declare that no part of this thesis has been submitted in support of another degree, diploma or other qualification at the University of Oxford or other higher learning institute. Except where otherwise stated or where reference is made to the work of others, the work in this thesis is entirely my own.

The work in Chapters 2 & 3 is based on the peer-reviewed, published paper Smethurst et al. 2015, MNRAS, 450, 435, of which I am the lead author. Similarly, Section 4.1 is based on the peer-reviewed, published paper Smethurst et al. 2016, MNRAS, 463, 2986, of which I am the lead author.

The work presented in Section 4.2 was carried out in collaboration with Dr. Brooke Simmons and Prof. Chris Linttot and is in preparation for submission to MNRAS.

The work throughout this thesis relies on observations from the Sloan Digital Sky Survey (SDSS). Funding for SDSS-III has been provided by the Alfred P. Sloan Foundation, the Participating Institutions, the National Science Foundation, and the U.S. Department of Energy Office of Science. The SDSS-III web site is <http://www.sdss3.org/>.

The work throughout this thesis is based on observations made with the NASA Galaxy Evolution Explorer. GALEX is operated for NASA by the California Institute of Technology under NASA contract NAS5-98034.

This thesis made extensive use of the Tool for Operations on Catalogues And Tables (TOPCAT; Taylor, 2005) and the `astropy` Python module (Astropy Collaboration et al., 2013). This research has also made use of NASA's ADS service and Cornell's ArXiv.

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Rebecca J. Smethurst
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