

ELIZABETH ROSE STANWAY

Present Affiliation:

Astrophysics, H H Wills Physics Lab.
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Academic

September 2006 - April 2011 (expected):

Postdoctoral Research Associate, working with Dr Malcolm Bremer
Physics Department, University of Bristol, UK

Spectroscopic and photometric analysis of high redshift ($z > 5$) samples. Extension of high redshift surveys to longer wavelengths and to higher redshifts. Millimetre observations of distant galaxies. The signature of massive stars in the integrated light of galaxies. Characterisation of extreme astronomical populations.

October 2004 - August 2006:

Postdoctoral Research Associate, working with Prof. Amy Barger
University of Wisconsin-Madison. Astronomy Department, Sterling Hall, 475 N Charter St,
Madison, WI, 53706, USA

Analysis of deep, wide-field multiwavelength data. Spectroscopic follow-up to $z > 5$, X-ray and radio surveys. High redshift ($z > 5$) samples at the bright end of the LF.

October 2001 – October 2004:

PhD in Astronomy – 'Probing the End of the Dark Ages'

Viva: 20th September 2004, Degree Awarded: 14th May 2005

Supervisors: A Bunker and R McMahan

University of Cambridge. Institute of Astronomy, Madingley Road, Cambridge, CB3 0HA

Spectroscopy and photometric studies of the $z \sim 6$ galaxy population in deep ground and space-based imaging. Estimation of the $z \sim 6$ Luminosity Function, and implications for star formation and reionisation history.

October 1997 – October 2001

MA & MSci in Natural Sciences (Experimental and Theoretical Physics) – Class I

University of Cambridge. New Hall, Huntingdon Road, Cambridge, CB3 0DF

Course covered the major areas of experimental and theoretical physics. Final project on the redshift variation in expansion rate of galactic radio lobes, with Dr Julia Riley.

Relevant Skills and Experience

- Experienced with Sun Solaris, Linux, Windows and Mac OSX environments in an astronomical context. Data reduction and programming using IDL, also using Fortran, IRAF, Starlink, Miriad+Karma, GILDAS and other packages
- Applying for, preparing and executing observations including Gemini, WHT, WIYN, Hawaii 2.2m, Spitzer, NRAO/GBT, ESO/APEX, IRAM 30m, ATCA
- Attended 2008 IRAM Millimetre Interferometry School
- Presentation of astronomy to the general public and school groups
- Lecturing and small group tuition for undergraduate students

Recent Approved Observing Programmes as PI

Spitzer:

- 50189, "A Close Look at $z>5$ Galaxy Analogues in the Local Universe", IRAC+MIPS+IRS, 15.4hrs, 50% complete when cryogen exhausted, May 2009

IRAM:

- S0CB, "High Order CO in a Unique High z Source", 3mm Spectroscopy, 8hrs, Approved in class B for 2009A, but not observed
- 248-08, "Far-IR Emission in a Unique High z Source", 1.2mm Imaging, 4hrs, April 2009

ATCA:

- C1753, "Characterising the Cool Gas at $z>5$ ", 12mm Spectroscopy, 24hrs, March 2008
- C1821, "Characterising the Cool Gas at $z>5$ ", 7mm Spectroscopy, 44hrs, April 2008
- C1954, "Probing the Cool Baryons at $z\sim 5$ ", 7 & 12mm Spectroscopy, 81hrs, May 2009
- C2151, "Calibrating Optical vs Radio SFRs in a Baseline Sample of GRB Hosts at $z<0.5$ ", 22hrs, January 2010

ESO/APEX:

- 083.A-0199, "LABOCA Imaging of $z=5.12$ CO Emitter", 870 μ m Imaging, August 2009

Recent Conference Presentations and Seminars

- Research Seminar: University of Nottingham, 21st October 2009
- Research Seminar: University of Warwick, 19th November 2008
- Research Seminar: Institute of Astronomy, Cambridge, 25th June 2008
- Contributed Talk: *XXIV IAP Colloquium - Far Away: Light in the Young Universe*, Paris, 7-11th July 2008
- Invited Talk: *Harvard-Smithsonian conference on 21cm Cosmology*, Harvard, 12-15th May 2008
- Contributed Talk: *The First Two Billion Years of Galaxy Formation*, Aspen, 11-15th February 2008 (Recipient of conference prize for a young astronomer)
- Contributed Talk: *A Century of Cosmology – Past, Present and Future*, Venice, 27-31st August 2007

Publications

In Refereed Journals:

- Douglas, Bremer, Stanway, Lehnert & Clowe, 2009, MNRAS accepted, '*Photometric Selection of $z\sim 5$ Lyman Break Galaxies in the ESO Remote Galaxy Survey*'
- Eldridge & Stanway, 2009, MNRAS accepted, ArXiv:0908.1386, '*Spectral synthesis including massive binaries*'
- Stanway, Bremer, Douglas, Birkinshaw & Lehnert, 2008, ApJ, 687, L1, '*Large-Scale Structure Traced by Molecular Gas at High Redshift*'
- Stanway, Bremer, Squitieri, Douglas & Lehnert, 2008, MNRAS, 386, 370, '*A limit on the number density of bright $z\sim 7$ galaxies*'

- Stanway, Bremer & Lehnert, 2008, MNRAS, 385, 493, '*On Contamination and Completeness in $z > 5$ Surveys*'
- Stanway, Bremer, Lehnert & Eldridge, 2008, MNRAS, 384, 348, '*Characterising a Halo Population of M Stars*'
- Douglas, Bremer, Stanway & Lehnert, 2007, MNRAS, 376, 1393, '*Discovery of a single faint AGN in a large sample of $z > 5$ Lyman break galaxies*'
- Stanway, Bunker, Glazebrook, Abraham, Rhoads, Malhotra, Crampton, Colless & Chiu, 2007, MNRAS, 376, 727, '*The GLARE Survey - II. Faint $z \sim 6$ Ly α line emitters in the HUDF*'
- Eyles, Bunker, Ellis, Lacy, Stanway, Stark & Chiu, 2007, MNRAS, 374, 910, '*The stellar mass density at $z \sim 6$ from Spitzer imaging of i' -drop galaxies*'
- Eyles, Bunker, Stanway, Lacy, Ellis & Doherty, 2005, MNRAS, 364, 443, '*Spitzer Imaging of I' -drop Galaxies: Old Stars at $z \sim 6$* '
- Stanway, McMahon & Bunker, 2005, MNRAS, 359, 1184, '*Near-infrared properties of I' -drop galaxies in the Hubble Ultra Deep Field*'
- Stanway, E R, 2004, PhD Thesis, Cambridge University, '*Probing the End of the Dark Ages*'
- Bunker, Stanway, Ellis & McMahon, 2004, MNRAS, 355, 374, '*The Star Formation Rate of the Universe at $z \sim 6$ from the Hubble Ultra Deep Field*'
- Stanway, Glazebrook et al, 2004, ApJ, 604, L13, '*Three Ly-alpha Emitters at $z \sim 6$* '
- Stanway, Bunker, McMahon, Ellis, Treu & McCarthy, 2004, ApJ, 607, 704, '*HST Imaging and Keck Spectroscopy of $z \sim 6$ I-Band Dropout Galaxies in the ACS GOODS Fields*'
- Bunker, Stanway, Ellis, McMahon & McCarthy, 2003, MNRAS, 342, L47, '*A star-forming galaxy at $z = 5.78$ in the CDFS*'
- Stanway, Bunker & McMahon, 2003 MNRAS, 342, 439, '*LBGs and the Star Formation Rate of the Universe at $z \sim 6$* '

Published Conference Preceedings:

- Bunker, Stanway et al, 2008, ASPC, 299, 63
- Bunker, Stanway et al, 2008, ASPC, 395, 73
- Bunker, Stanway et al, 2007, ASPC, 380, 27
- Bunker et al, 2007, ASPC, 379, 280
- Stanway & Bunker, 2007, NCimB, 122, 1189
- Douglas, Bremer, Stanway & Lehnert, 2007, NCimB, 122, 1159
- Bunker, Stanway et al, 2007, NCimB, 122, 993
- Bunker, Stanway et al, 2007, Highlights of Astronomy, 14, 248
- Bunker, Stanway et al, 2007, AAS, 210, #107.04
- Bunker, Stanway, Ellis, McMahon, Eyles & Lacy, 2006, IAU, JD07
- Stanway, Barger, Trouille & Cowie, 2006, AAS, 207, #170.20
- Bunker, Stanway, Ellis, McMahon & Eyles, 2006, NewAR, 50, 94
- Stanway, McMahon, Bunker, Ellis, 2005, Ap&SSL, 329, 74
- Bunker, Eyles, Stanway, Lacy, Ellis & Doherty, 2005, AAS, 206.1003
- Stanway, Bunker, Glazebrook et al, 2006, STScI May Symposium, 18
- Bunker, Stanway, Ellis & McMahon, 2004, AAS, 204.9103
- Bunker, Stanway, Ellis, McMahon & McCarthy, 2003, AAS, 202.1110
- Bunker, Stanway, McMahon, Ellis & McCarthy, 2003, IAUS, 216, 27
- Stanway, Bunker & McMahon, 2003, Ap&SS, 284, 381