

## CURRICULUM VITAE

CSIRO Astronomy & Space Science  
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**Citizenship** Australian

### Employment history and Education

**CSIRO Astronomy & Space Science** **2011 – present**

ARC Super Science Fellow

*Projects:* (i) *pre-SKA HI science for WALLABY, the next generation all-sky HI survey using the Australian SKA Pathfinder instrument (ASKAP).*  
(ii) *general science commissioning for the ASKAP instrument*

**Yale University** **2007 – 2011**

Postdoctoral Associate

*Project: Mid-infrared studies of dust and star formation in Virgo Cluster spirals*

**University of Melbourne** **2004 – 2008**

PhD (Astrophysics), graduated 27th August 2008

(based at Johns Hopkins University, USA in 2005 – 2006)

*Projects: Northern HIPASS survey and multiwavelength star formation studies of HIPASS galaxies (supervised by Prof Rachel Webster)*

**University of Melbourne** **2002 – 2004**

MSc (Astrophysics)

*Project: Radio spectra & variability of AGN in the Parkes Half-Jansky sample (supervised by Prof Rachel Webster)*

(also worked at Max Planck Institute for extraterrestrial physics, Germany for 1 semester in 2002)

**University of Melbourne** **1998 – 2001**

BSc (Hons) in Physics.

*Honours Project: The Mass of the Milky Way using high-velocity stars (supervised by Prof Michael Drinkwater)*

### Current research interests

Physical process of how galaxies start and stop forming stars:

- via analysis of gas states in the interstellar medium, stellar Initial mass functions, shocked gas, stellar population and star formation histories
- multiwavelength surveys (radio to gamma-ray) of thermal and non-thermal emission from gas, stars, dust and accelerated particles

Effects of gravitational and hydrodynamic interactions on galaxy evolution:

- the morphological transition between young spiral galaxies & old spheroidals
- collisional ring galaxies, galaxies in groups and clusters
- supermassive black hole formation in young spiral galaxies

Science commissioning for next-generation radio astronomy telescopes (ASKAP & SKA)

Citizen Science (Galaxy Zoo and the Zooniverse) as an alternative “big data” technique

## *O. Ivy Wong*

### **Teaching/student supervision experience**

Supervising 2 Macquarie Univ. undergraduate final year projects Semester 2, 2013  
Invited Guest Lecturer at Harley Wood Winter School (for graduate students) July 2013  
Substitute lecturer (Astronomy 130: Life in the Universe) for Fall 2008  
Prof Sabatino Sofia at Yale University  
Teaching assistant (Astronomy 120: Galaxies and the Universe) at Yale University Spring 2008  
Laboratory Demonstrator and tutor for undergraduate Physics at the University of Melbourne (includes being the coordinator of the 1st year undergraduate astrophysics laboratory and conducting observing sessions) 2001 – 2004

### **Awards & Grants as Primary Investigator**

University of Melbourne Summer Vacation Scholarship in Astrophysics 1999 – 2000  
Special Postgraduate Studentship 2002  
Dieul-Kurzweil Scholarship (MSc., University of Melbourne) 2003  
Melbourne University Research Scholarship (PhD) 2004 – 2007  
Postgraduate Overseas Research Experience Scholarship 2005  
ASA Student Travel Grant 2007  
AAS Postdoctoral Travel Grant 2009  
NASA funding for PI Herschel proposal (US \$110K) 2010  
CSIRO Cutting Edge grant for hosting an international conference (AU \$29K) 2012  
--also got matched funding from ICRAR, AAO, CAASTRO & the Powerhouse Museum (& Sydney Observatory) to fund this meeting (AU \$13K)  
Helena Kluyver Visitorship (extended visit to ASTRON, Netherlands) 2013

### **Successful telescope proposals**

PI : Herschel program (22 hours)  
PI : Westerbork Synthesis Radio Telescope program (~50 hours)  
PI : Australia Telescope Compact Array program (~40 hours)  
Co-I (project coordinator) : Spitzer IRS program (18 hours; PI: Kenney; US\$100K)  
Co-I : Westerbork Synthesis Radio Telescope - WNSHS (5630 hours; PI: Jozsa)  
Co-I : Australian Square Kilometer Array Pathfinder - WALLABY (9500 hours; PI: Koribalski & Staveley-Smith)  
Co-I : Australian Square Kilometer Array Pathfinder - DINGO (7500 hours; PI: Meyer)  
Co-I : Galex Space Telescope Archival proposal (PI: Meurer; US\$56K)  
Co-I : Cycle 1 Galex Space Telescope proposal (PI: Meurer; US\$116K)  
Co-I : Giant Metre Radio Telescope program (20 hours; PI: Yoon)  
Co-I : HST program GO-11112 (9 orbits; PI: Meurer)  
Co-I : Parkes Radio Telescope (8 days; PI: Ryan-Weber)  
Co-I : MSSSO 2.3m (4 nights; PI: Whiting)  
Co-I : Anglo Australian Telescope 4m (3 nights; PI: Drinkwater)

### **Computing skills**

*Astronomical software*: proficient in Miriad, IRAF, SExtractor, Skyview, Karma & idlastro  
*General software and operating systems*: proficient in Linux/Unix, Mac OSX, Windows, Perl, IDL, HTML, Microsoft, iWorks, Gimp, Adobe Photoshop/ Illustrator; familiar with Fortran 77

## *O. Ivy Wong*

### **Scientific and departmental activities**

Steering Committee Member for Early-Career Researcher chapter of ASA	2013
SOC & LOC (Chair) of Galaxy Evolution Conference @Powerhouse Museum	2013
SOC & LOC of Bolton Symposium	2012
LOC of Southern Cross Conference (Multiwavelength Surveys)	2012
LOC of WALLABY Simulations Fest	2011
Duty Astronomer at the Australia Telescope Compact Array	2011 – present
CASS astronomy science meeting talks convenor	2011 – present
CASS WALLABY (ASKAP project) management team	2011 – present
Colloquium organizer, Yale University	2008 – 2009
Member, American Astronomical Society (AAS)	2005 – present
Member, Astronomical Society of Australia (ASA)	2004 – present
Member, Australian Institute of Physics (AIP)	2004 – present
Referee for Astronomy & Astrophysics	

### **Public outreach**

Galaxy Zoo Project team member	2010 - present
Opinion article on “Citizen Science Counts” for ABC Science Online	Aug 2013
Review of space shuttle era to Northern Sydney Astronomical Society	2013
ABC Radio National (Life Matters Program): Citizen science via Galaxy Zoo	2012
Review of the space shuttle era (Science Week @Newington College)	2012
Public review of the space shuttle era (Science Week @North Sydney Library)	2011
“Scientists in Schools” program (Grade 3, Epping West Primary School)	2011
Scientific consultant for the TV documentary “Known Universe”	2011
Contributor to the Galaxy Zoo blog	2010
New Haven Science Fair judge for middle/high school level	2010
High school talks at Leibler Yavneh High & Presbyterian Ladies College	2006
Astronomy night at Coburg West PS for 450 students, parents & teachers	2006
Mentoring a Year 10 student from MacRobertson High	2006

### **Recent talks at colloquia, seminars & conferences**

AAAstro seminar	Macquarie Univ, August 2013
Early Science with ASKAP12	CASS; August 2013
<b>Invited</b> lecture at Harley Wood Winter School	Phillip Island, July 2013
Southern Cross: Feeding, feedback & fireworks	Hamilton Island, June 2013
Parameterisation of galaxy HI properties	SIfA, USyd, June 2013
Lunch seminar at St Andrews University	St Andrews (UK), April 2013
Lunch seminar at European Southern Observatory	Garching (Germany), April 2013
Modern Radio Universe Conference	Bonn (Germany), April 2013
Lunch colloquium at ASTRON	ASTRON (Netherlands), April 2013
CSIRO e-Research ICT meeting ( <b>invited</b> )	Melbourne, March 2013
Astronomy seminar	SIfA, USyd, July 2012
ASA AGM	UNSW, July 2012
Astronomy seminar	University of Melbourne, June 2012
Southern Cross: Multiwavelength surveys	Hunter Valley, June 2012
<b>Invited</b> contribution to SPARCS meeting	CSIRO, May 2012
Super Science Fellows’ Symposium	Hobart, April 2012
Parameterisation of galaxy HI properties	Cape Town, January 2012
Bolton symposium	CASS; December 2011, 2012
Astronomy seminar	ICRAR (UWA), June 2011
218th AAS meeting <b>invited</b> talk in session	Boston, May 2011
Astronomy colloquium	Swinburne University, April 2011
YCAA seminar	Yale University, February 2011
WALLABY Science Meeting	ATNF, November 2010
Friday Talk Seminar	Space Telescope Science Institute, October 2010
Virgo collaboration team meeting	Strasbourg Observatory (France), June 2010

## *O. Ivy Wong*

### **References:**

Prof Rachel Webster  
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School of Physics, University of Melbourne  
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Email: [r.webster@unimelb.edu.au](mailto:r.webster@unimelb.edu.au)

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## *O. Ivy Wong*

### **Refereed publications**

*(H-index of 9 with >340 citations over 32 abstracts as determined by the SAO/NASA Astrophysics Data System)*

*The Green Valley is a red herring: Galaxy Zoo reveals two evolutionary pathways towards quenching of star formation in early- and late-type galaxies*

K. Schawinski, C.M. Urry, B.D. Simmons, L. Fortson, S. Kaviraj, W.C. Keel, C.J. Lintott, K.L. Masters, R.C. Nichol, M. Sarzi, R. Skibba, E. Treister, K.W. Willett, **O. I. Wong**, S.K. Yi, 2013, *submitted to MNRAS*

*The search for shock-excited molecular Hydrogen in Virgo spirals experiencing ram pressure stripping*

**O. I. Wong**, J.D.P. Kenney, E.J. Murphy & G. Helou, 2013, *submitted to ApJ*

*Choirs, HI Galaxy Groups: catalogue and detection of star-forming dwarf group members*

S. Sweet, G. Meurer, M.J. Drinkwater, V. Kilborn, H. Dénes, K. Bekki, D. Hanish, H. Ferguson, P. Knezek, J. Bland-Hawthorn, M. Dopita, M.T. Doyle-Pegg, E. Elson, K. Freeman, T. Heckman, R. Kennicutt, J.H. Kim, B. Koribalski, M. Martin, M. Putman, E. Ryan-Weber, C. Smith, L. Staveley-Smith, **O. I. Wong**, R. Webster, J. Werk, M. Zwaan, 2013, *MNRAS*, 433, 543

*The influence of the cluster environment on the star formation efficiency of 12 Virgo spiral galaxies*

B. Vollmer, **O. I. Wong**, J. Braine, A. Chung, J. D. P. Kenney, 2012, *A&A*, 543, 33

*Galaxy Zoo: building the low-mass red sequence with local post-starburst galaxies*

**O. I. Wong**, K. Schawinski, S. Kaviraj, K. Masters, R.C. Nichol, W.C. Keel, D. Darg, S. Bamford, D. Andreescu, P. Murray, M.J. Raddick, A. Slosar, A. Szalay, D. Thomas, J. Vandenberg, 2012, *MNRAS*, 420, 1684

*The star cluster population of the collisional ring galaxy NGC922*

A. Pellerin, G. R. Meurer, K. Bekki, D. M. Elmegreen, **O. I. Wong**, P. M. Knezek, 2010, *AJ*, 139, 1369

*Outlying HII regions in HI-selected galaxies*

J.K. Werk, M.E. Putman, G.R. Meurer, E.V. Ryan-Weber, C. Kehrig, D.A. Thilker, J. Bland-Hawthorn, M.J. Drinkwater, **O.I. Wong**, K.C. Freeman, M.S. Oey, M.A. Dopita, M.T. Doyle, H.C. Ferguson, D.J. Hanish, T.M. Heckman, V.A. Kilborn, J.H. Kim, P.M. Knezek, B. Koribalski, M. Meyer, R.C. Smith, M.A. Zwaan, 2010, *AJ*, 139, 279

*Evidence for a non-uniform Initial Mass Function in the Local Universe*

G. R. Meurer, **O. I. Wong**, J. H. Kim, D. J. Hanish, T. M. Heckman, J. Werk, J. Bland-Hawthorn, M. A. Dopita, M. A. Zwaan, B. Koribalski, M. Seibert, D. A. Thilker, H. C. Ferguson, R. L. Webster, M. E. Putman, P. M. Knezek, M. T. Doyle, M. J. Drinkwater, C. G. Hoopes, V. A. Kilborn, M. Meyer, E. V. Ryan-Weber, R. C. Smith, L. Staveley-Smith, 2009, *ApJ*, 695, 765

*NOIRCAT—The Northern HIPASS Optical/IR Catalogue*

**O. I. Wong**, R. L. Webster, V. A. Kilborn, M. Waugh, L. Staveley-Smith, 2009, *MNRAS*, 399, 2264

*The volume densities of giant molecular clouds in M83*

J. S. Heiner, R. J. Allen, **O. I. Wong** & P. C. van der Kruit, 2008, *A&A*, 489, 533

*Northern HIPASS catalogue—Data presentation, completeness and reliability*

**O. I. Wong** et al., 2006, *MNRAS*, 371, 1855

## *O. Ivy Wong*

*NGC922—A new drop-through ring galaxy*

**O. I. Wong** et al., 2006, MNRAS, 370, 1607

*A catalog of HI-selected galaxies from the South Celestial Cap region of Sky*

V. A. Kilborn, R. L. Webster, L. Staveley-Smith, M. Marquarding, G. D. Banks, D. G. Barnes, R. Bhathal, W. J. G. de Blok, P. J. Boyce, M. J. Disney, M. J. Drinkwater, R. D. Ekers, K. C. Freeman, B. K. Gibson, P. A. Henning, M. Howlett, H. Jerjen, P. M. Knezek, B. S. Koribalski, D. F. Malin, R. F. Minchin, J. R. Mould, J. C. O'Brien, T. Oosterloo, P. F. Ortiz, R. M. Price, M. E. Putman, S. D. Ryder, E. M. Sadler, I. M. Stewart, F. Stootman, **O. I. Wong**, A. E. Wright, 2002, AJ, 124, 690

### **White paper publication**

*How do galaxies accrete gas and form stars ?*

M. E. Putman, ... **O. I. Wong**, L. Young, 2009, Astro2010: The Astronomy & Astrophysics Decadal Survey, Science White Papers, 241

### **Outreach/media publication**

*Citizen Science Counts*

**O. I. Wong** 2013, ABC Science Online,  
<http://www.abc.net.au/science/articles/2013/08/14/3824313.htm>

### **Unrefereed conference proceedings and poster presentations**

*HI-star formation connection: Open questions*

G. R. Meurer, **O. I. Wong**, D. J. Hanish, 2008, Proceedings for "The Evolution of galaxies through the Neutral Hydrogen window" meeting in Arecibo, Puerto Rico

*Spitzer observations of environmental effects on Virgo Cluster galaxies*

J. D. P. Kenney, **O. I. Wong**, A. Abramson, J. H. Howell, E. J. Murphy, G. X. Helou, 2008, Proceedings for "The Evolving ISM in the Milky Way and nearby galaxies" in Pasadena, CA

*A Spitzer study of star-forming regions in Virgo Cluster galaxies*

**O. I. Wong**, J. D. P. Kenney, 2008, Proceedings for "The Evolving ISM in the Milky Way and nearby galaxies" in Pasadena, CA

*The Northern HIPASS Optical/IR Catalogue (NOIRCAT)*

**O. I. Wong**, R. L. Webster, M. Waugh, V. A. Kilborn, L. Staveley-Smith, 2007, Proceedings for "Dark galaxies and lost baryons", IAU Symposium 244, Cardiff, UK

*The UV luminosity density of the Local Universe from an HI-selected sample*

**O. I. Wong**, G. R. Meurer, D. J. Hanish & the SUNGG team, 2006, AAS Meeting 207, Washington D. C., USA

*Multifrequency observations of the gamma-ray blazar 3C279 in low state during INTEGRAL AO-1*

W. Collmar, M. Boettcher, V. Burwitz, T. Courvoisier, S. Komossa, P. Kretschmar, E. Nieppola, K. Nilsson, T. Ojala, K. Pottschmidt, M. Pasanen, T. Pursimo, A. Sillanpaa, L. Takalo, M. Tornikoski, H. Ungerechts, E. Valtaoja, R. Walter, R. Webser, M. Whiting, K. Wiik, **I. Wong**, 2004, Proceedings of the 5th INTEGRAL workshop on the INTEGRAL Universe, Munich, GERMANY

*Mass of the Milky Way*

**O. I. Wong**, M. J. Drinkwater, J. B. Jones, M. D. Gregg, K. C. Freeman, 2003, 25th IAU Symposium 220, Sydney, AUSTRALIA

*Radio spectra of the Parkes Half-Jansky Flat-Spectrum Sample*

**O. I. Wong**, R. L. Webster, 2003, 25th IAU Joint Discussion 18, Sydney, AUSTRALIA