

CURRICULUM VITAE

Name: Dr. Yeshe Fenner
Date of birth: 18/07/1977

CONTACT DETAILS

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CURRENT EMPLOYMENT

2005 - ITC Fellow, Harvard-Smithsonian Center for Astrophysics

RESEARCH INTERESTS

- Chemical evolution of:
 - Spiral and dwarf galaxies
 - Damped Lyman-alpha Absorbers (DLAs)
 - Globular clusters
- The connection between dwarf galaxies, DLAs and the intergalactic medium.
- Neutron-capture elements as a new probe of star formation histories.

EDUCATION

- 2001 - 2005** **PhD at Swinburne University, Centre for Astrophysics**
 THESIS : Chemical Evolution of Galactic Systems
 Awards
 Awarded the 2004 Daphne Elliot Bursary by AFUW-SA
 Awarded the 2003 Swinburne University Postgraduate Research Prize
 Scholarships
 Chancellor's Research Scholarship (\$25,000 per annum)
- 2000** **Honours at ANU, Department of Physics**
 1st class Honours degree in Theoretical Physics
 THESIS: Heating and Ionisation in the Warm Ionised Medium
 Awards
 Awarded University Medal for Honours at ANU
 Awarded 2001 Bok Prize by Astronomical Society of Australia
 Fenner Hall Award for Excellence
 Scholarships
 Bok Scholarship - Research School of Astronomy and Astrophysics
- 1997 - 1999** **Bachelor of Science at Monash University**
 Achievements
 Dean's List Fellow 1998 and 1999
 26 subjects taken, 25 High Distinctions

REFEREED PUBLICATIONS

18. *Cosmological implications of dwarf spheroidal chemical evolution*
Fenner, Y., Gibson, B. K., Lugaro, M. & Gallino, R.
2006, submitted, astro-ph/0602489
17. *The chemical evolution of helium in globular clusters: implication for the self-pollution scenario*
Karakas, A. I., Fenner, Y., Sills, A., Campbell, S. W. & Lattanzio, J.
2006, submitted
16. *The Evolution of Fluorine in Galactic Systems*
Renda, A., Fenner, Y., Gibson, B. K., Karakas, A. I., Lattanzio, J. C., Campbell, S., Chieffi, A., Cunha, K. & Smith, V. V.
2005, Nuclear Physics A, Vol. 758, 324
15. *Abundance Anomalies in NGC6752 - Do AGB Stars Have a Role?*
Campbell, S. W., Fenner, Y., Karakas, A. I., Lattanzio, J. C. & Gibson, B. K.
2005, Nuclear Physics A, Vol. 758, 272
14. *Galactic Chemical Evolution Redux: Atomic Numbers $6 < Z < 15$*
Gibson, B. K., Fenner, Y. & Kiessling, A.
2005, Nuclear Physics A, Vol. 758, 259
13. *On variations in the fine-structure constant and limits on AGB pollution of quasar absorption systems*
Fenner, Y., Murphy, M. T. & Gibson, B. K.
2005, Monthly Notices of the Royal Astronomical Society, 358, 468
12. *Stellar abundance gradients in galactic disks. I. Method and spectral line gradients*
Ryder, S. D., Fenner, Y. & Gibson, B. K.
2005, Monthly Notices of the Royal Astronomical Society, 358, 1337
11. *Contrasting the chemical evolution of the Milky Way and Andromeda galaxies*
Renda, A., Kawata, D. K., Fenner, Y. & Gibson, B. K.
2005, Monthly Notices of the Royal Astronomical Society, 356, 1071
10. *Modelling self-pollution of globular clusters from AGB stars*
Fenner, Y., Campbell, S., Karakas, A. I., Lattanzio, J. C. & Gibson, B. K.
2004, Monthly Notices of the Royal Astronomical Society, 353, 789
9. *On the origin of fluorine in the Milky Way*
Renda, A., Fenner, Y., Gibson, B. K., Karakas, A. I., Lattanzio, J. C., Campbell, S., Chieffi, A., Cunha, K. & Smith, V. V.
2004, Monthly Notices of the Royal Astronomical Society, 354, 575
8. *Constraints on Early Nucleosynthesis from the Abundance Pattern of a Damped Ly-alpha System at $z = 2.626$*
Fenner, Y., Prochaska, J. X. & Gibson, B. K.
2004, The Astrophysical Journal, 606, 116
7. *The Galactic Habitable Zone and the Age Distribution of Complex Life in the Milky Way*
Lineweaver, C. H., Fenner, Y. & Gibson, B. K.
2004, Science, 303, 59
6. *Photometric Properties of White Dwarf Dominated Halos*
Lee, H.-c., Gibson, B., Fenner, Y., Brook, C., Kawata, D., Renda, A., Holopainen, J., Flynn, C.
2004, Publications of the Astronomical Society of Australia, 21, 153
5. *Galactic Chemical Evolution*
Gibson, B. K., Fenner, Y., Renda, A., Kawata, D. & Lee, H. C.
2004, Publications of the Astronomical Society of Australia, 20, 401

4. *The Chemical Evolution of Magnesium Isotopic Abundances in the Solar Neighbourhood*
Fenner, Y., Gibson, B. K., Lee, H.-c., Karakas, A. I., Lattanzio, J. C., Chieffi, A., Limongi, M.
 & Yong, D.
2003, Publications of the Astronomical Society of Australia, 20, 340
3. *Deriving the Metallicity Distribution Function of Galactic Systems*
Fenner, Y. & Gibson, B.K.
2003, Publications of the Astronomical Society of Australia, 20, 189
2. *A Limit on the Metallicity of Compact High-Velocity Clouds*
 Sembach, K. R., Gibson, B. K., Fenner, Y. & Putman, M. E.
2002, The Astrophysical Journal, 572, 178
1. *Galaxy Evolution tool: Construction and Applications*
Fenner, Y., Gibson, B. K. & Limongi, M.
2002, Astrophysics and Space Science, 281, 537

NON-REFEREED PUBLICATIONS AND MEDIA OUTREACH

ET's Postcode, Fenner, Y.

Cover story: Australasian Science, 2004, April, 14.

Galactic Chemical Evolution: The Solar Neighborhood

Fenner, Y. & Gibson, B. K., 2003, ASSL Vol. 281: **The IGM/Galaxy Connection. The Distribution of Baryons at $z=0$, 237.**

Are High-Velocity Clouds the Building Blocks of the Local Group?

Gibson, B. K., Fenner, Y., Maddison, S. T. & Kawata, D., 2002,

Extragalactic Gas at Low Redshift, edited by J.S. Mulchaey & J.T. Stocke, (**Astron. Soc. Pac. Conf. Ser. 254, San Francisco**), **225.**

CONFERENCES, SEMINARS AND PUBLIC APPEARANCES

Invited talk: *Galactic Chemical Evolution*, Frank N. Bash Symposium 2005: New Horizons in Astronomy, University of Texas, 2005.

Talk: *Quasar absorbers as probes of IAGB nucleosynthesis*, IAU Symposium 228: Elemental Tracers of Early Cosmic Evolution, Paris, 2005.

Poster: *The Role of AGBs in the Chemical Evolution of the Cosmos*, Chemical Abundances and Mixing in Stars, Italy, 2004.

Television appearance: Australian National Nine News primetime interview on the Galactic Habitable Zone study published in Science. January, 2004.

Radio interview: Sydney radio station interview on the Galactic Habitable Zone study published in Science. January, 2004.

Talk: *Self-pollution of Globular Clusters*, 2004 ASA annual scientific meeting.

Poster: *Globular Cluster Chemical Evolution*, Carnegie Observatories Symposium IV. Origin and Evolution of the Elements, Pasadena, 2003.

Seminar: *Constraints from Galactic Chemical Evolution: A Modeler's Wish List*, Torino Workshop on nuclear astrophysics, Monash University, 2002.

Talk: *Galactic Chemical Evolution*, 2002 ASA annual scientific meeting.

Poster: *Galaxy Evolution tool: Future Plans and Development*, Low Z at Low z and High z : Early Chemical Evolution, Minneapolis, 2002.

Poster: *Galaxy Evolution tool: Construction and Applications*, EuroConference, The Evolution of Galaxies II, Reunion Island, 2001.

Invited lecture: *Heating and Ionising the Warm Ionised Medium*, 2001 ASA annual scientific meeting.

Lecture: *What heats and ionises the WIM?*, at the WHAM Conference, Sydney University, 2000.

RELEVANT EMPLOYMENT HISTORY

2001 - 2005

Swinburne University

Position: Astronomy Online Instructor

Duties: Supervision of astronomy research projects
Teaching

Dec 2000

- Feb 2001

Swinburne University

Position: Summer Research Fellow

Nov 1999

- Feb 2000

ANU, Research School of Astronomy and Astrophysics

Position: Summer Research Scholar

OBSERVING EXPERIENCE

- **Optical Imaging:** Granted total of 22 nights on the 4m Anglo-Australian Telescope using the Taurus Tunable Filter to perform absorption-line imaging of face-on spiral galaxies to detect radial abundance gradients.
- **Optical Spectroscopy:** Two nights on 2.3m telescope at Siding Spring Observatories measuring integrated spectra of globular clusters.
- **Radio:** Four days on Parkes radio telescope as part of the HIPASS project.

REFEREEING DUTIES

Astrophysical Journal and Publications of the Astronomical Society of Australia.

ADDITIONAL SKILLS

Proficient in:

- IDL
- C-language
- FORTRAN 77 and 90
- IRAF

Experienced with UNIX/LINUX.

Experienced with Windows, MS Excel, and MS Word.

REFEREES

Prof. Brad K. Gibson

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