

CURRICULUM VITAE

LEE ANNE M. WILLSON b. March 14, 1947, Honolulu, Hawaii

CURRENT POSITION: University Professor, Astronomy and Astrophysics,
Department of Physics and Astronomy
Iowa State University, Ames IA 50011, USA

PERSONAL HISTORY

- 1968 A.B., Harvard University, Physics
- 1969 Fulbright and American Scandinavian Foundation fellowships
for study at the University of Stockholm
- 1970 M.S., University of Michigan, Astronomy;
Planetarium demonstrator, University of Michigan
- 1973 Ph.D., University of Michigan, Astronomy
Instructor, Iowa State University
- 1975 Assistant Professor, Iowa State University
- 1979 Associate Professor, Iowa State University
- 1980 Faculty Improvement Leave (sabbatical): University of Colorado,
University of Texas, Kitt Peak National Observatory
- 1983-5 Coordinator, Astronomy and Astrophysics Program, ISU
- 1985 Faculty Improvement Leave (sabbatical); Visiting Fellow,
Canadian Institute for Theoretical Astrophysics and
Astronomy Department, University of Toronto, Canada
- 1987-90 Coordinator, Astronomy and Astrophysics Program, ISU
- 1988 Professor, Iowa State University
- 1991 Visiting Professor, Uppsala University
- 1993 University Professor* , ISU

MEMBERSHIPS AND HONORS

International Astronomical Union (Commissions 27, 35, 36); American Astronomical Society (Councilor 1993- 6); Fellow, Royal Astronomical Society; Astronomical Society of the Pacific; American Association of Variable Star Observers (Council member 1981-84; 1994- 98; Sr. VP 1998-9; President 2000-2001); Sigma Xi (Secretary-Treasurer, ISU Chapter, 1975-78) ; AAAS (Member-at-large, Astronomy Steering Committee, 1987-90; nominating committee, 1992-5; chair, section D, 2000; elected Fellow 1994); Osborn Research Club (Steering Committee, 1980-83; President 1998).

Annie Jump Cannon Award in Astronomy (AAS and AAUW) for 1980-81;
Award for outstanding teaching at the introductory level, ISU, 1993.

* Title established 1993 recognizing "senior faculty who have had a significant impact on their department and the university in the three areas of research, teaching and service."

PROFESSIONAL SERVICE

- 1972-73 American Astronomical Society Working Group on the Status of Women in Astronomy
- 1983-- 90 Users' Committee, International Ultraviolet Explorer Satellite; Chairperson 1984, 1985 and 1986; also 1984-1990 member of the 3-Agency Long Range Planning Commission for IUE
- 1985- 90 Editorial Board, Journal of the AAVSO
- 1985-86 Member, Scientific Organizing Committee, International Ultraviolet Explorer international scientific meeting, July, 1986 London.
- 1986-89 Committee on the Status of Women in Astronomy, American Astronomical Society (Chairp. 1987-89)
- 1987 Co-Chair, Scientific Organizing Committee, 1987 Trieste Workshop on Pulsation and Mass Loss
- 1988 Member, Scientific Organizing Committee, IUE Tenth Anniversary Symposium, Goddard Maryland April 1988
- 1989-92 Committee on Astronomy and Public Policy, American Astronomical Society
- 1987-90 Member at Large, Astronomy Steering Committee, American Association for the Advancement of Science. (Elected office)
- 1989 Director, NATO Workshop on "Angular Momentum and Mass Loss for Hot Stars", held at ISU October 23-27, 1989
- 1990- Director-at-Large, Association of Universities for Research in Astronomy (AURA) Chair, Nominating Committee, 1993-4; Chair, Observatory Advisory Committee 1994-7 (this committee became the "Observatories Council" on April 3, 1995) and ex-officio member of the Interim Board of Directors (1996-7) elected member of the Board of Directors in 1997 and 1999.
- 1992-95 Member, Electorate Nominating Committee, Section D, American Association for the Advancement of Science.
- 1993-96 Councilor, American Astronomical Society
- 1994-97 Council member, American Association of Variable Star Observers
- 1997-01 Senior VP (2 years) and President (2 years), AAVSO.
- 2000 Chair, Section D (Astronomy), American Association for the Advancement of Science.
- 2001 (Founding) President, Creative Artists' Studios of Ames, Inc.

SELECTED SCIENTIFIC PUBLICATIONS:

- L. A. Willson, "Fluorescent FeI Emission in Long-Period Variables," *Astron. Astrophys.* **17**, 354 (1972).
- L. A. Willson, "Shockwave Interpretation of Emission Lines in Long Period Variable Stars I: The Velocity of the Shock," *Ap. J.* **205**, 172 (1976).
- L. A. Willson and S. J. Hill, "Shock Wave Interpretation of Emission Lines in Long Period Variable Stars II. Periodicity and Mass Loss," *Ap. J.* **228**, 854 (1979).

- S. J. Hill and L. A. Willson, "Theoretical Velocity Structure of Long Period Variable Star Photospheres," *Ap. J.* **229**, 1029 (1979).
- J. N. Pierce, L. A. Willson, and W. I. Beavers, "Radial Velocity Observations of Long Period Variables," *Pub. A.S.P.*, **91**, 372 (1979).
- L. A. Willson, "Theoretical Relationships between Observable Quantities for Mira Variables," in *Physical Processes in Red Giants*, Reidel, 1981, edited by I. Iben, Jr. and A. Renzini, p. 225.
- L. A. Willson, "Miras, Mass Loss, and the Origin of Planetary Nebulae," *IAU Colloquium #59 Effects of Mass Loss on Stellar Evolution*, Reidel, 1981 ed. by C. Chiosi and R. Stalio, p 353.
- L. A. Willson, G. Wallerstein, and C. Pilachowski, "Atmospheric Kinematics of High Velocity Long Period Variables," *Monthly Notices of the Royal Astronomical Society* **198**, 493 (1982).
- L. A. Willson, "Properties of Mira Variables" (review), *Pulsations in Classical and Cataclysmic Variable Stars*, J. P. Cox, editor; 1982.
- L. A. Willson and G. Bowen, "Constraints on AGB Evolution from Properties of Miras and OH-IR Sources," in *Observational Constraints on Stellar Evolution Theory*, IAU Symposium 105, edited by A. Maeder; 1983.
- T. E. Beach, L. A. Willson, and G. H. Bowen, "The Effects of Pulsation- Extended Atmospheres on the Apparent Diameters of Miras," *Ap. J.* **329**, 241.
- L. A. Willson, "IUE Observations of Pulsating Stars: Atmospheric Structure, Shock Waves, and Stellar Winds," in *A Decade of UV Astronomy with the IUE Satellite*, ed. Y. Kondo, W. Wamsteker, and R. Wilson, ESA Publication SP281, 1988, p. 29.
- L. A. Willson, "Pulsation, Mass Loss and Stellar Evolution," *Proceedings of the 1987 Trieste Workshop on Pulsation and Mass Loss*, Reidel, L. A. Willson and R. Stalio, editors, p.285
- L. A. Willson and G. H. Bowen, "Atmospheric Structure and Polarization for Red Giants," *Proceedings of the Vatican Workshop on Circumstellar Polarization*, ed. G. Coyne, S.J. p485-508.
- H. Olofsson, U. Carlström, K. Eriksson, B. Gustafsson, and L. A. Willson, "Bright carbon-stars with detached circumstellar envelopes - A natural consequence of helium shell flashes?", *Astronomy and Astrophysics* **230**, 13-16.
- Bowen, G. H., and Willson, L. A. 1991, "From Wind to Superwind: The Evolution of Mass Loss Rates for Mira Models", *Ap. J.* **375**, L53-L56.
- R. R. Cadmus, L. A. Willson, C. Sneden and J. A. Mattei, "Observation of possible mode-switching in three semi-regular variables", *Astron. J.* **101**, 1043-1049, 1991.
- Willson, Struck, and Bowen, 1997 "Winds from Pulsating Stars", in *Cosmic Winds and the Heliosphere*, Jokipii, Sonett and Giampapa, eds., U. of Arizona Press, 155-195.
- Willson, L. A. and Bowen, G. H. "Pulsation and Stellar Winds: Some lessons learned from dynamical models of the atmospheres of cool stars" in *Cyclical Variability in Stellar Winds*, Fullerton, A. W. and Kaper, L. Eds, ESO Conference Proceedings, Springer Verlag, 1998.
- Willson, L. A. "Mass Loss from Cool Stars", in *Unsolved Problems in Stellar Evolution Theory* *Unsolved Problems in Stellar Evolution*, M. Livio, ed., Cambridge U. Press, 2000.
- Turner, G. W.; Willson, L. A. 2000 "Three-dimensional time-dependent hydrodynamic model of the solar atmosphere" *American Astronomical Society Meeting 197*, #51.08
- Willson, L. A. 2000 *Amateur-Professional Partnerships for Understanding the nature of Variable Stars*", in *Amateur-Professional Partnerships in Astronomy*, J. R. Percy and J. B. Wilson, eds, ASP Conference Series Vol. 220
- Willson, L. A. "Mass Loss from Cool Stars: Impact on the evolution of Stars and Stellar Populations" in *Annual Reviews of Astronomy and Astrophysics*, 2000, vol. 38, 573-611.