

Senior Women: A Comparison of Astronomy Organizations

by Joan T. Schmelz, CSWA Chair

Senior women in astronomy provide us with mentors and role models. They can change or even transform the culture, dynamics, and environment of a department or research group. They can stand with us and fight for us if we find ourselves the victim of gender discrimination, sexual harassment, or unconscious bias. They can make an organization more female friendly.

CSWA began compiling a list of the percentage of women among the tenured faculty members of Ph.D. astronomy departments in the US. This list has now been expanded to include the percentage of women researchers/faculty/staff with tenure or the equivalent for US astronomy institutes/universities/observatories. For US government installations such as NASA GSFC, the equivalent of tenure is considered to be a civil service appointment. Numbers and percentages were confirmed by a member of each organization.

The table below shows that the range is wide, with Indiana University leading the pack with 50% women on the tenured faculty, but with some other institutions still in the single digits. The average is 15.1%, with a standard deviation of 10.6%.

For comparison, 18% of full members of the AAS are women. In addition, 30% of named postdocs have been women for the past 20 years; they represent some of the most highly qualified potential candidates for tenure-track positions. These data are public domain and were compiled by the demographics panel for Astro 2010. We received special permission to share the results at the 2009 Women in Astronomy III conference. [Here's](#) a link to the paper.

Why tenured women? Other surveys of women in astronomy have been more general. See, for example, the [article](#) in the June 2004 issue of *STATUS* entitled, "Portrait of a Decade: Results from the 2003 CSWA Survey of Women in Astronomy" by

Jennifer Hoffman and Meg Urry.

In my mind, tenure means success. Of course, there are many ways to succeed in astronomy, but tenure may be the most universal. This survey was narrowly focused to begin to answer a very specific question, "Are women succeeding in astronomy?" One way to answer this question is, "Yes, individual women have always succeeded in astronomy." Another answer, related to the group rather than the individual is, "Yes, but progress is all too slow."

This list is meant to be an evolving document, so as members of your organization get tenure, retire, arrive, leave, etc., we invite you to send the new numbers to [CSWA](#) so we can keep an accurate tally. Please feel free to contact us with any changes, updates, and questions. Also, if you would like to add your department or research organization to the list, please send us the necessary figures.

October, 2013 updates are based on the CSWA's recent demographics survey of departments and institutes. Those figures include only the astronomy components of joint departments and do not include joint appointments and therefore depart from the notes below.

Notes to table:

- For joint appointments, we include the fraction of time devoted to astronomy, unless otherwise noted.
- These data are for the entire department, not just the astronomy component of a department, unless otherwise noted.
- Assistant professors, research professors, junior members, part-time instructors, soft-money researchers, postdocs, emeritus faculty, etc. are not included in this list.

% Women	# Women	# Men	Organization	Department	Joint Appts.	Updated
50.0	4	4	Indiana Univ.	Astronomy		Dec 2, 2011
40.0	2	3	Gemini Obs.	Astronomy		Jun 17, 2012
37.5	3	5	Yale Univ.	Astronomy		July 9, 2012
33.3	4	8	Univ. of Washington	Astronomy		2011
33.3	3	6	New Mexico Tech	Physics		2011
33.3	1	2	Case West. Res. Univ.	Astronomy		2011

29.2	3.5	8.5	Caltech	Astronomy		2011
28.0	1.75	4.5	Univ. of Wisconsin	Astronomy	1 at 0.75; 1 at 0.5	2011
27.2	28	75	NASA GSFC	Solar System		Dec 3, 2012
25.5	37	108	NASA GSFC	Earth Sciences		Dec 3, 2012
25.0	2	6	New Mexico State Univ.	Astronomy		Dec 2, 2011
23.8	5	16	UCSC	Astronomy & Astrophysics		2011
23.1	3	10	Univ. of Michigan	Astronomy		2011
23.1	3	10	Columbia Univ.	Astronomy		2011
22.4	3	10.4	Ohio State	Astronomy	1 at 0.25; 3 at 0.05	2011
22.2	2	7	Lowell Obs.	Astronomy		Jul 11, 2012
20.8	15	57	NASA GSFC	Astrophysics		2011
20.0	4	16	Univ. of Arizona	Astronomy		2011
20.0	2	8	Univ. of Minnesota	Astronomy		2011
19.0	2	8.5	Princeton Univ.	Astrophysical Sciences	1 at 0.5	2011
16.7	3	15	UCLA	Astronomy & Astrophysics		2011
15.7	8	43	NASA GSFC	Heliophysics		2011
15.0	3	17	Univ. of Colorado	Astrophysical & Planet. Sci.		2011
15.0	3	17	Rensselaer Poly. Ins.	Physics		2011
14.3	4	24	Yale Univ.	Physics		2011
14.3	2	12	Univ. of Florida	Astronomy		2011
14.3	2	12	Univ. of Mass.	Astronomy		2011
13.6	3	19	Northwestern Univ.	Physics & Astronomy	2 at 0.5	2011
12.5	2	14	Penn State	Astronomy & Astrophysics		2011

12.5	1	7	Univ. of Illinois	Astronomy	2 at 0.5	2011
11.8	2	15	UC Berkeley	Astronomy		2011
11.1	2	16	Florida Inter. Univ.	Physics		2011
11.1	4	32	Univ. of Hawaii	Physics & Astronomy		Jun 17, 2012
10.5	2	17	NOAO	Astronomy		2011
10.5	6	51	Rutgers	Physics & Astronomy		Jun 17, 2012
10.5	4	34	STScI	Astronomy		Nov 28, 2011
10.0	1	9	Arizona State Univ.	Astrophysics		2011
10.0	2	18	Univ. of Texas, Austin	Astronomy		2011
10.0	2	18	Univ. of Toledo	Physics & Astronomy		Nov 17, 2011
9.5	2	19	Cornell Univ.	Astronomy		2011
9.3	5	49	Smithsonian Astro. Obs. (CfA)	Astronomy		2011
8.3	3	33	Louisiana State Univ.	Physics & Astronomy		2011
8.3	1	11	Harvard Univ. (CfA)	Astronomy	4 at 0.5	2011
8.1	2.5	28.5	Rice Univ.	Physics & Astronomy	5 at 0.5	2011
8.0	2	23	NRAO	Astronomy		Jun 17, 2012
7.7	1	12	Boston Univ.	Astronomy		2011
7.7	2	24	Vanderbilt Univ.	Physics & Astronomy		Nov 29, 2011
7.5	4	49	MIT	Physics		2011
7.4	1	12.5	Univ. of Maryland	Astronomy	1 at 0.5	Jul 10, 2013
7.1	4	52	Texas A&M Univ.	Physics & Astronomy		2011
6.8	2	27.5	Univ. of Delaware	Physics & Astronomy	1 at 0.5	2011
6.4	3	44	Stony Brook Univ.	Physics & Astronomy		2011

5.6	2	34	Iowa State Univ.	Physics & Astronomy		2011
4.7	1	20.5	Univ. of Chicago	Astronomy & Astrophysics	3 at 0.5	2011
4.0	1	24	Johns Hopkins Univ.	Physics & Astronomy		2011
0.0	0	13	Georgia State Univ.	Physics & Astronomy		Dec 2, 2011
0.0	0	8	National Solar Obs.	Astronomy		Dec 6, 2011
0.0	0	21	Univ. of Utah	Physics & Astronomy		2011
0.0	0	13	Univ. of Virginia	Astronomy		Nov 28, 2011
0.0	0	7	Univ. of Wyoming	Physics & Astronomy		Nov 17, 2011

For additional comparative data (posted by the webmaster):

For comparative data for 2003, 2005, 2007, readers may consult the [data on race and gender balance in the faculties of the top fifty departments in various scientific and engineering fields, including astronomy](#), entitled "Diversity in Science Association" and compiled by Dr. Donna J. Nelson of The University of Oklahoma.

Additional comparative data sets are compiled on a continuing basis on the [statistics page](#) of the American Institute of Physics.

Data for named and unnamed postdocs, 1995 - 2005, are given in Hoffman, Modjaz, West, and Graham 2009, "Transitional States: Addressing the Gender Imbalance Among Postdoctoral Researchers at UC Berkeley," in *Women in Astronomy and Space Science: Meeting the Challenges of an Increasingly Diverse Workforce*, Proceedings from the conference held at The Inn and Conference Center University of Maryland University College, October 21—23, 2009, edited by Anne L. Kinney, Diana Khachadourian, Pamela S. Millar and Colleen N. Hartman, p. 213, and in J. Schmelz et al. 2009, "The 30% Benchmark: Women in Astronomy Postdocs at US Institutions" *ibid.*, p. 234

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