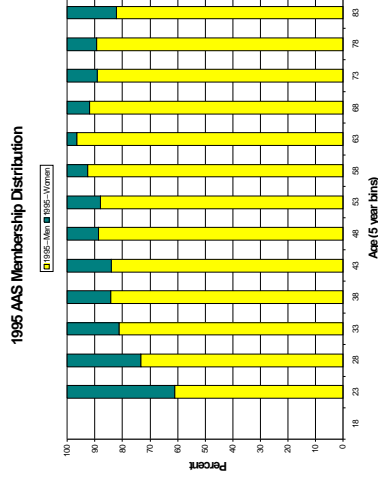
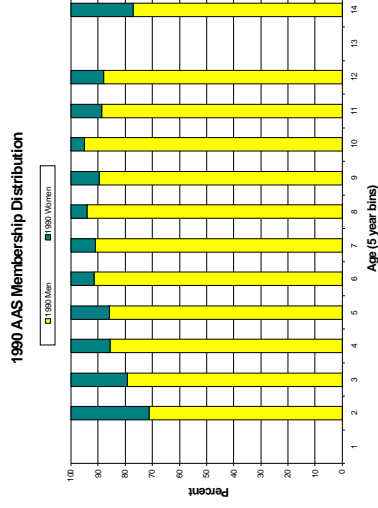
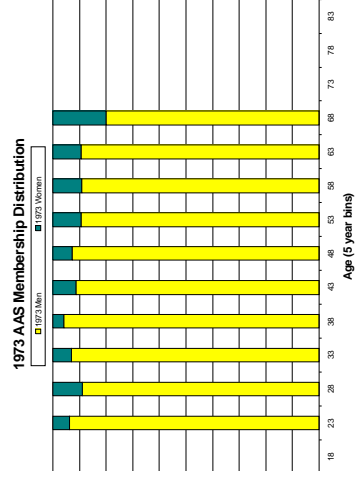


AAS Membership Demographics



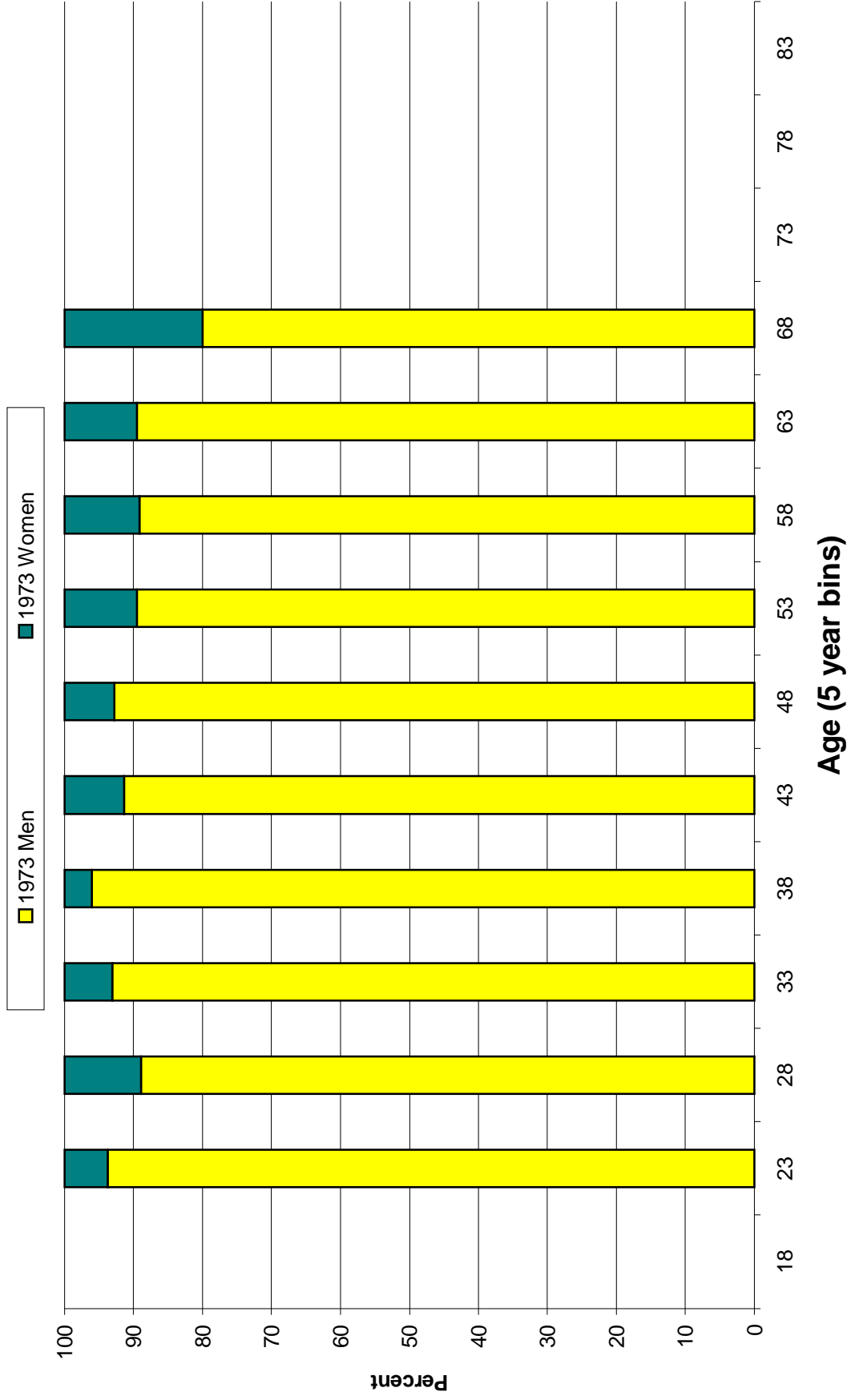
Kevin B. Marvel
Deputy Executive Officer
American Astronomical Society

The AAS – 1973

- Initial survey of membership
- First action by Working Group on the Status of Women in Astronomy, founded August 1972
- 2,800 sample size, 27% response rate
- Overall female membership was only 8%
- Evidence for ‘youth peak’ for women
- Women prize winners and AAS leadership numbers low relative to % membership

Demographics – 1973

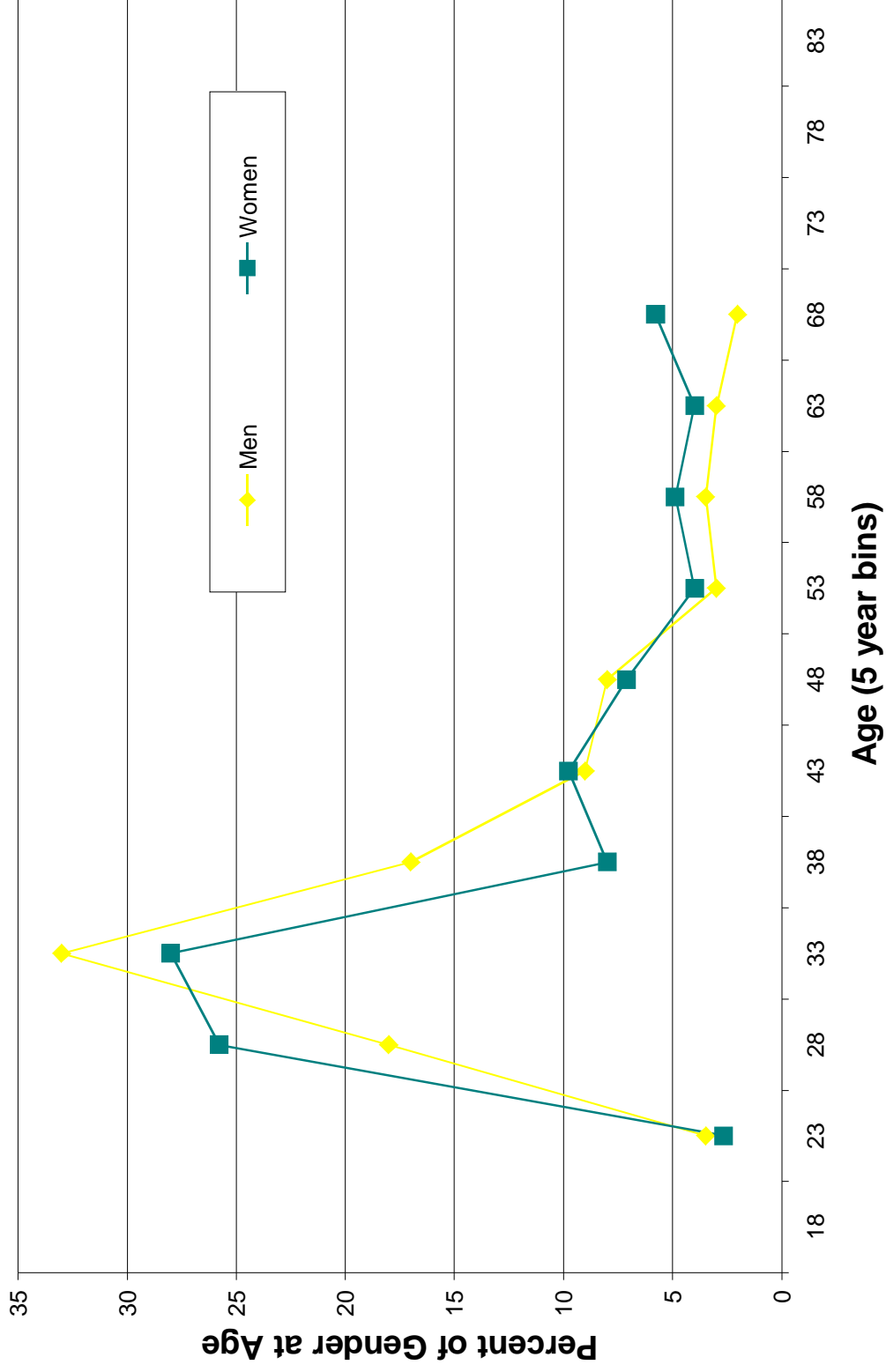
1973 AAS Membership Distribution



Demographics – 1973

1973 AAS Membership – Age Distribution

Difference by Gender

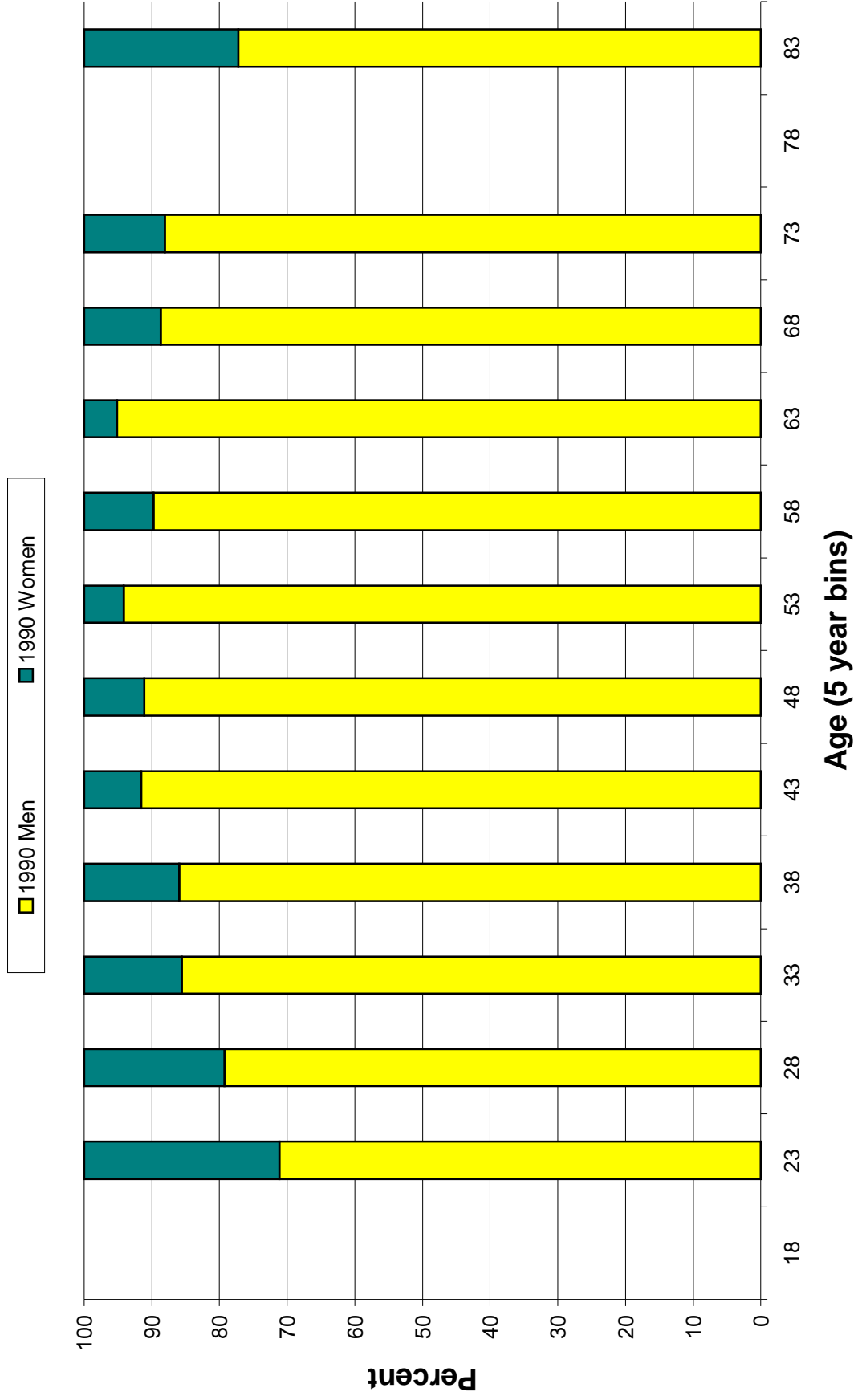


The AAS – 1990

- Complete membership survey
 - Expensive ~ \$25,000 in 1990 dollars
- Response rate good : 42%
 - Implies reliability of +/- 1.6%
- Overall female membership increased since 1973
 - 12.6% vs. 8%
- More young female members than male
 - Peak of age distribution ~ 30 vs. 45

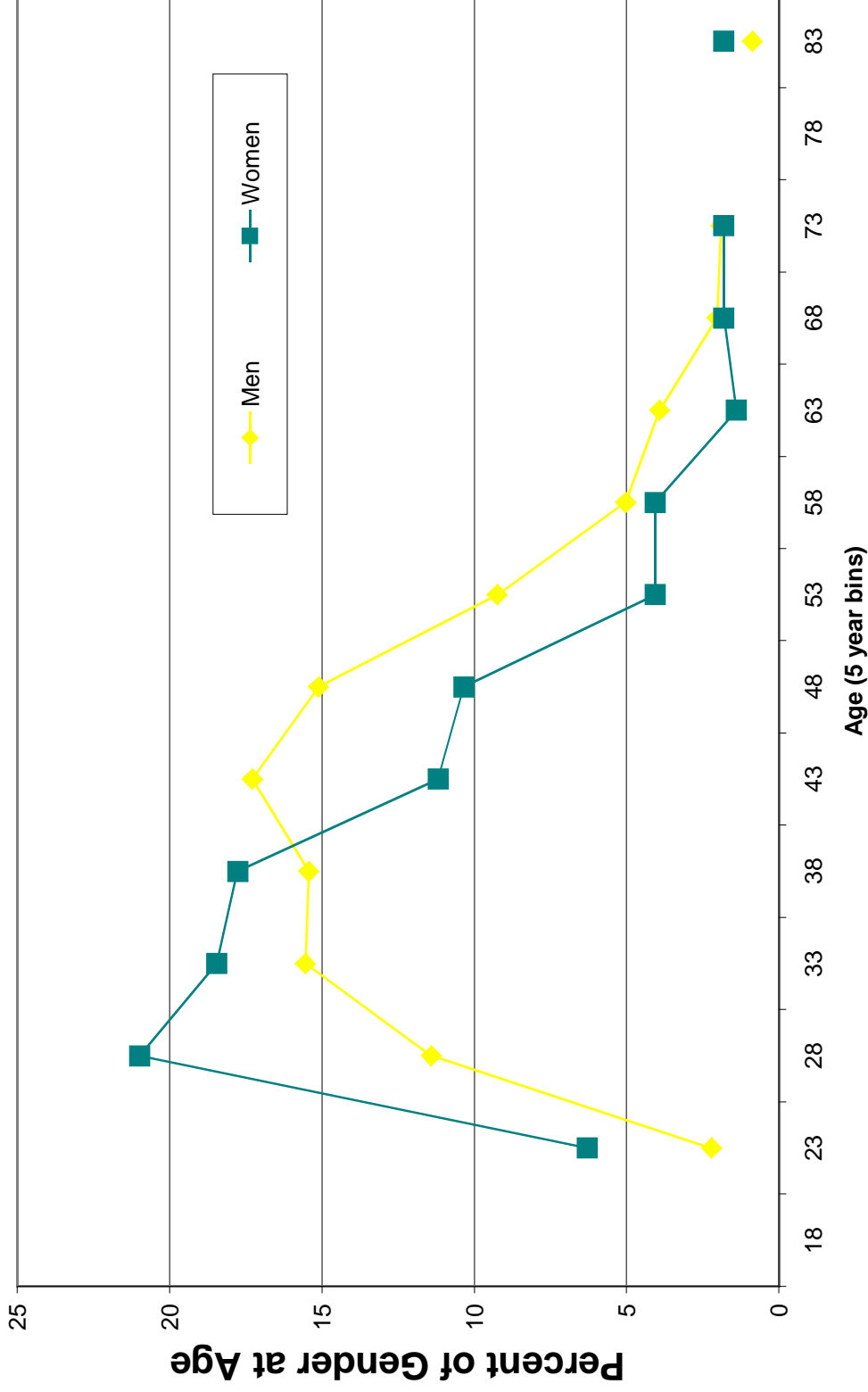
Demographics – 1990

1990 AAS Membership Distribution



Demographics – 1990

1990 AAS Membership – Age Distribution
Difference by Gender

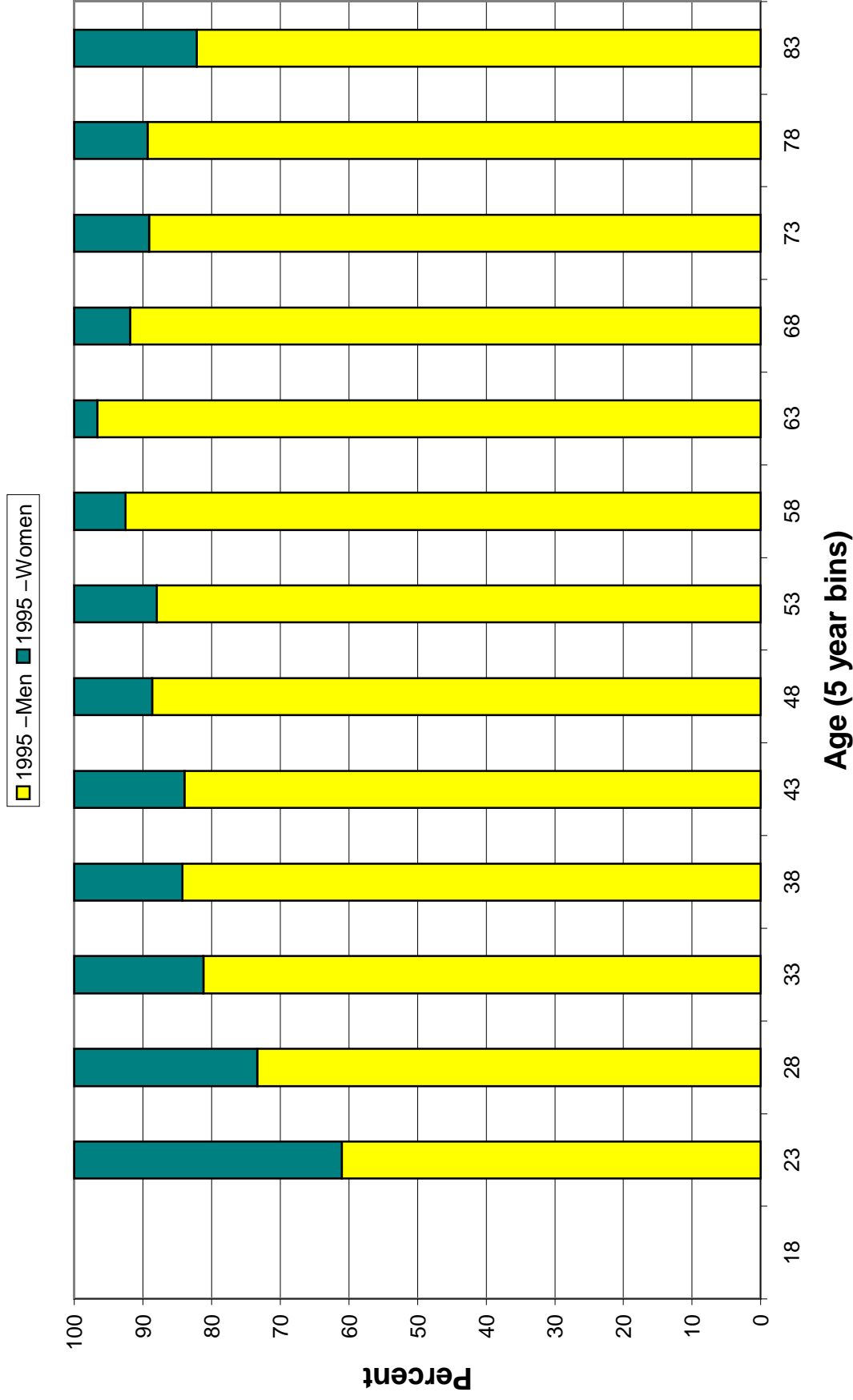


The AAS – 1995

- Partial Membership Survey
 - 30% response rate, ~1,000 member sample
- Overall female membership increased
 - 16.5% vs. 12.6% (1990 Membership Survey)
- Number of women shows episodic growth
 - Causes?

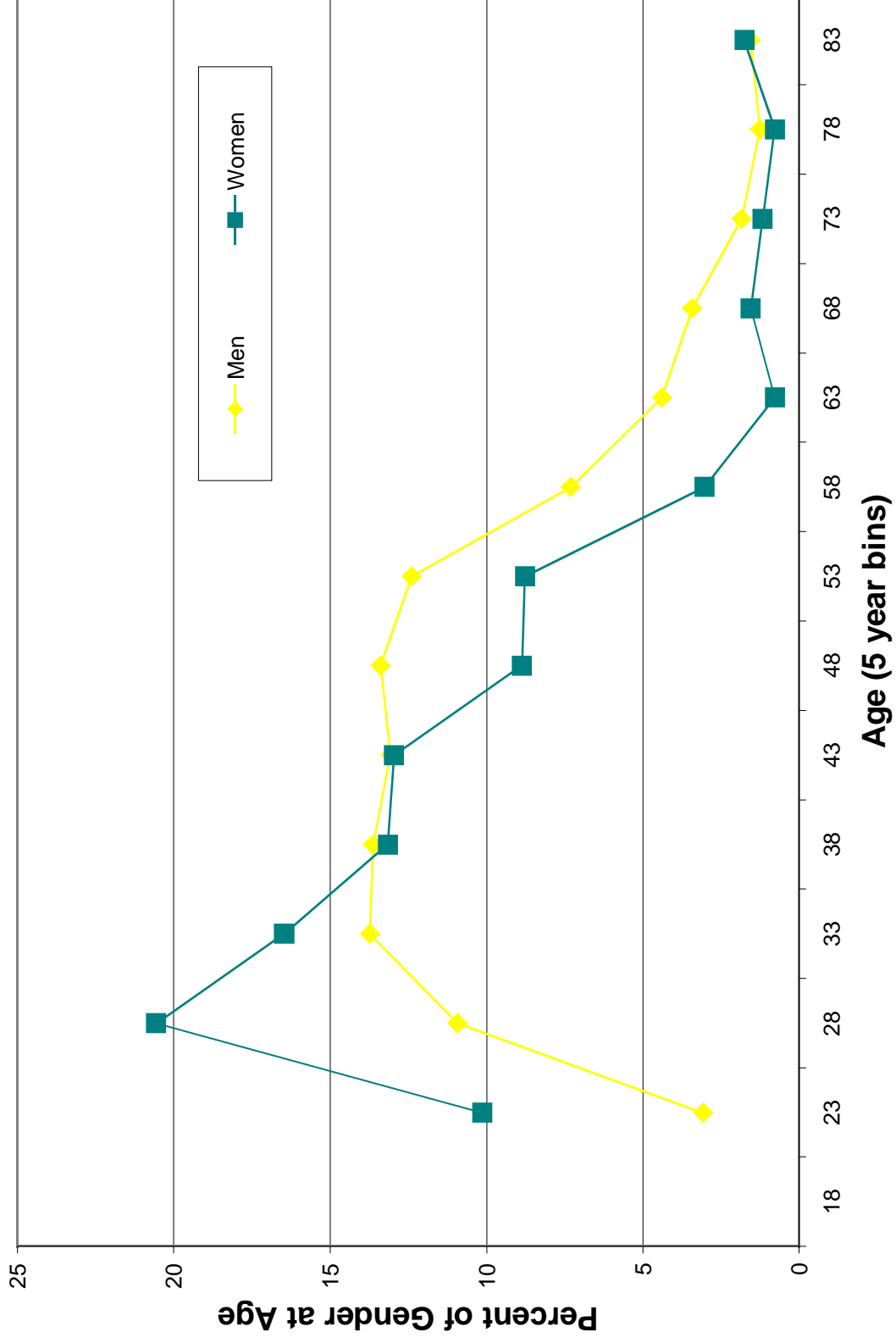
Demographics – 1995

1995 AAS Membership Distribution



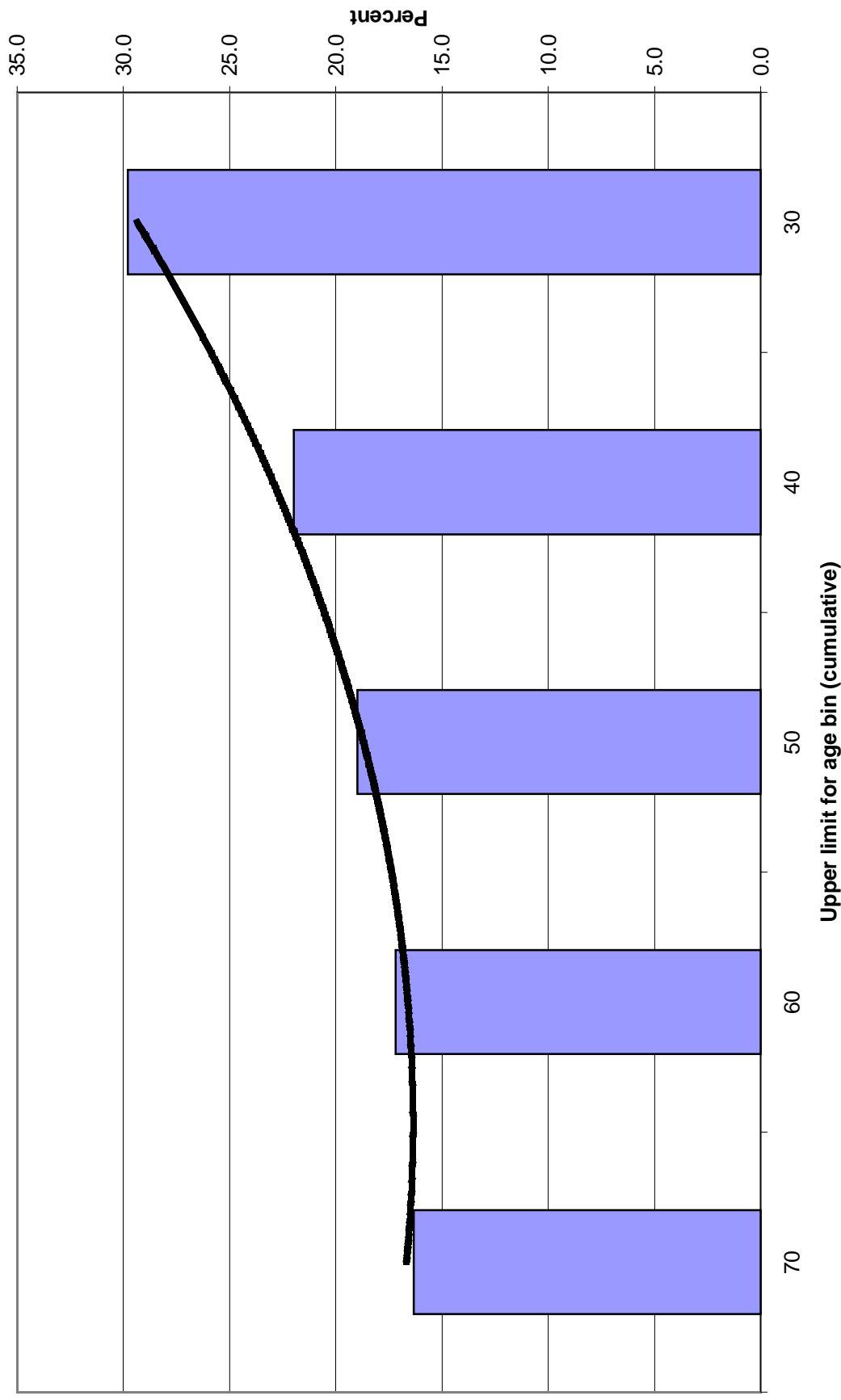
Demographics – 1995

1995 AAS Membership – Age Distribution
Difference by Gender



Demographics – 1995

An accelerating demographic
1995 Data

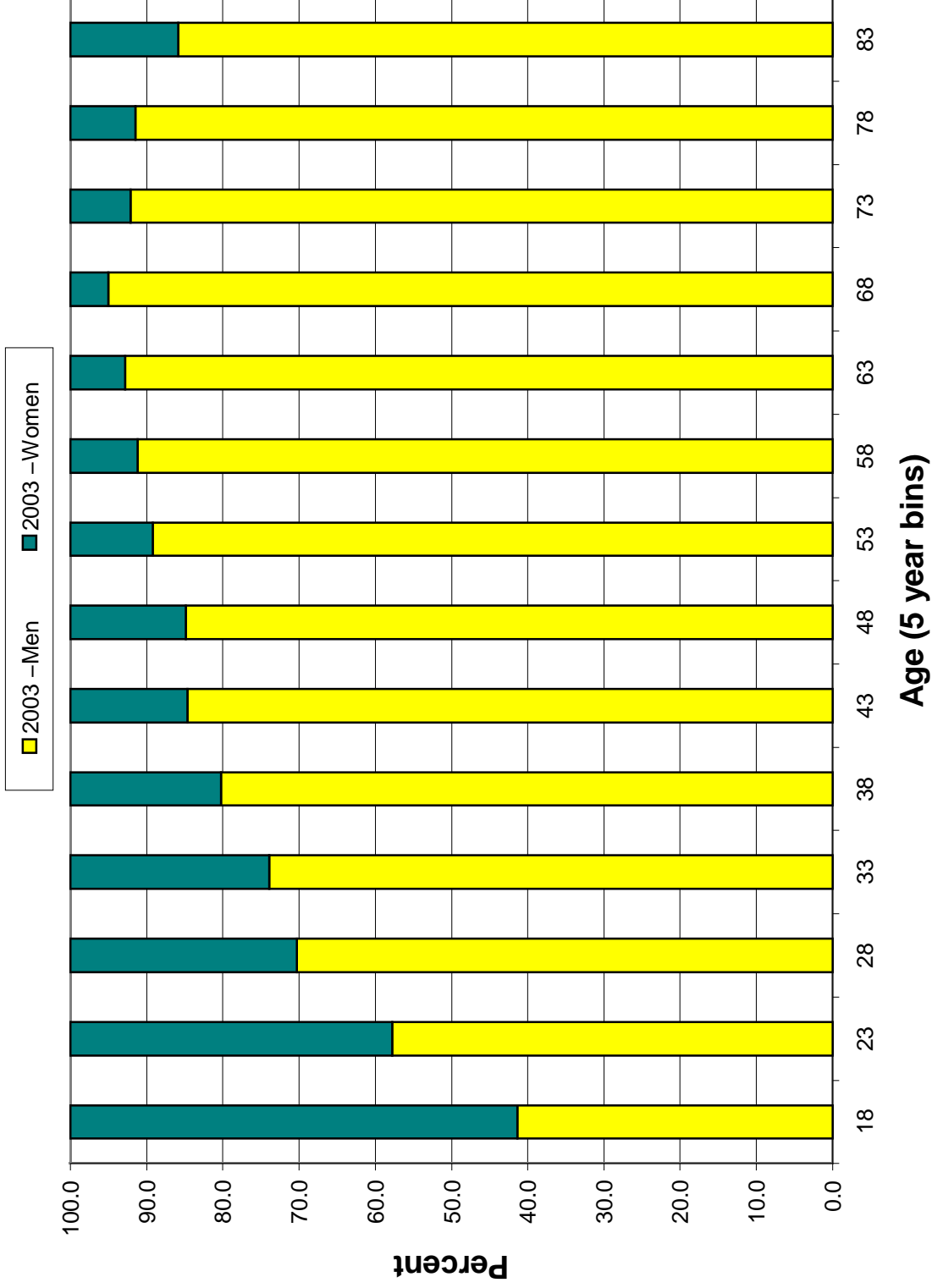


Demographics 2003

- Snapshot of AAS membership database as of 6/23/03
- Includes all member types except publisher affiliates: Lifetime, Emeritus, Full, Associate, Junior, Division, Division Affiliates
- Birth date is optional information provided at time of joining => total sample is 5,962

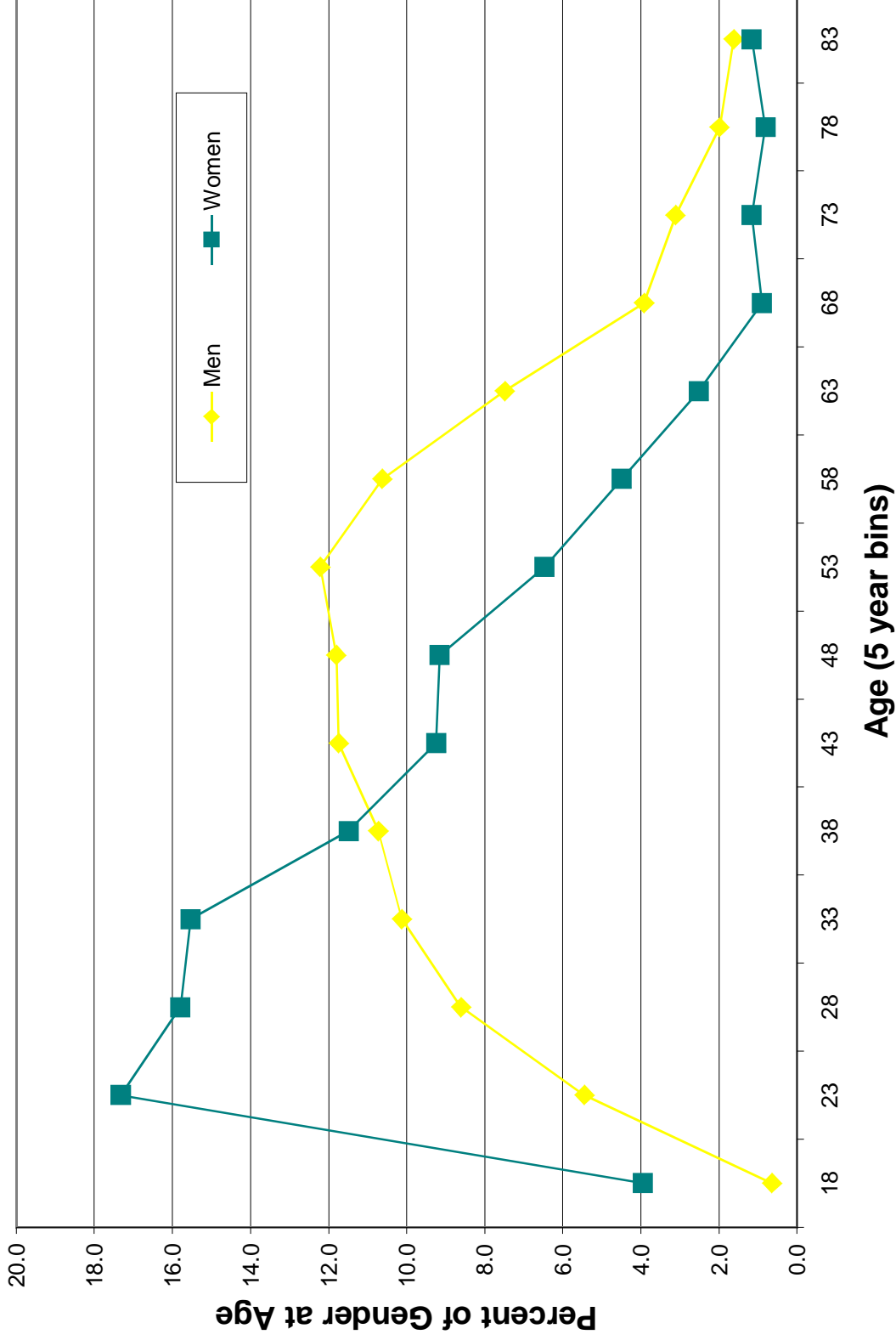
Demographics 2003

AAS Membership Distribution



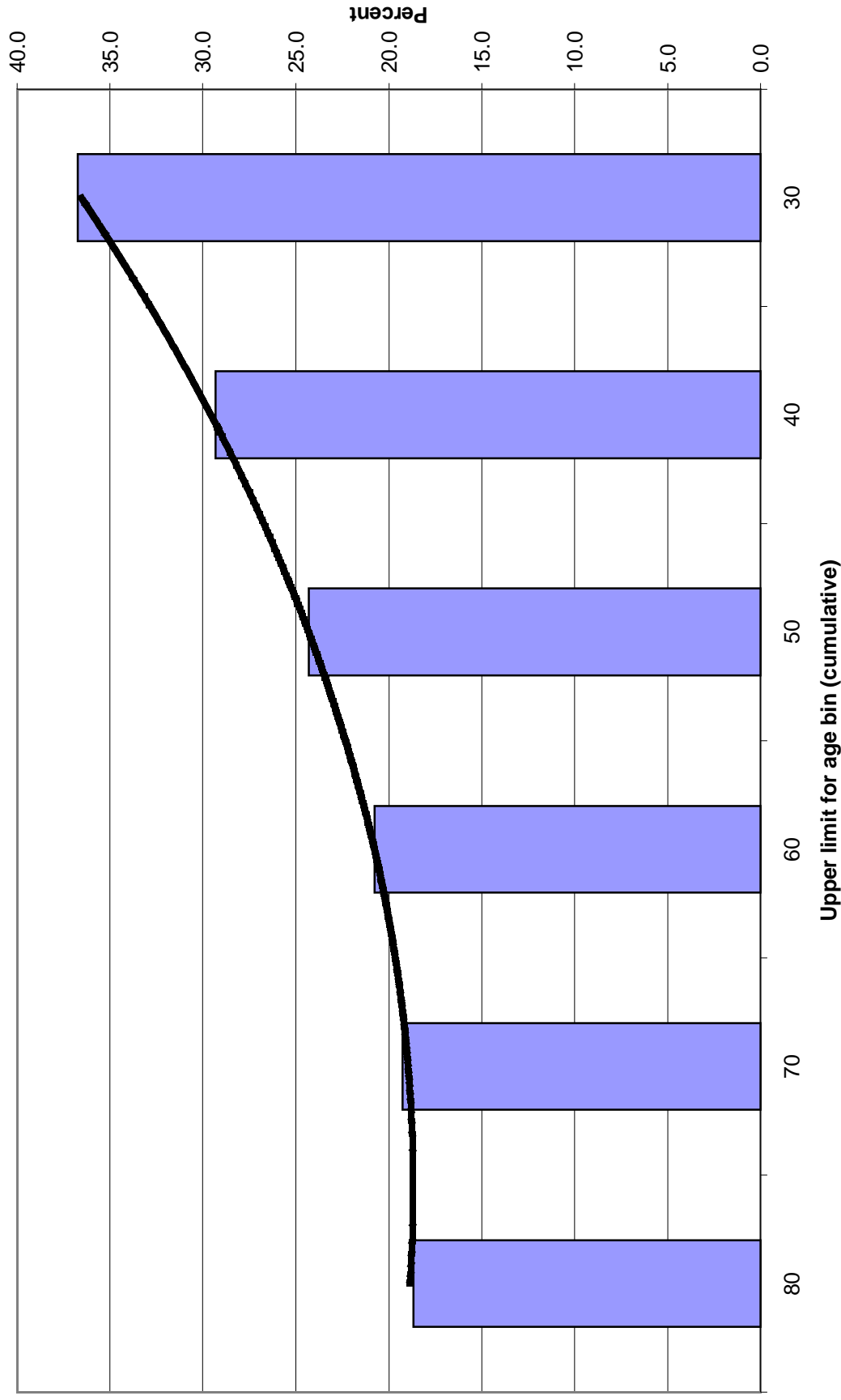
Demographics 2003

2003 AAS Membership – Age Distribution
Difference by Gender



Demographics – 2003

An accelerating demographic
2003 Data



Other Surveys

- A variety of surveys
 - PHD+8, but focused on career outcomes in general
 - Institutional surveys of Urry et al. (1998) and Hoffman et al. (2003) **SEE POSTER!**
 - AIP surveys, regular and systematic, mildly tailored to astronomy needs
 - NSF, but lags by a few years
 - Miscellaneous personal efforts: H. Dinerstein, J. Price, A. Preston, Y. Ournamehere etc.
- Note: Past AAS surveys have come about because of volunteer effort and/or expenditure of membership \$\$\$, no current membership-wide survey planned.

Interlude: Comments on the 1990 survey from AAS members

- Please make it a five-year event.
- I am happy that my dues are being used in such a concrete way, questionnaire is one of the best I've seen.
- AAS has tried, with some success, to make the questionnaire look legitimate.
- I usually HATE questionnaires. This one is sensible.
- Reading this questionnaire has raised my level of awareness.

Interlude: Comments on the 1990 survey from AAS members

- How much did this questionnaire cost?
- Disappointed in this questionnaire, which seems to ignore all critical issues in astronomy.
- Waste of time and money.
- Whose dues are paying for this questionnaire?
- Don't waste funds on surveys!
- How much did this study cost? Too much of this questionnaire stuff is dangerous and costly.
- Ego-stroking at our expense is not a proper use of AAS funds.
- Do not try this again too often.

AAS Actions

- Formation of WGSWA – 1972
 - 1973 report recommendations (BAAS v6.3)
 - Creation of list of women astronomers
 - Encouragement of women at undergrad and grad levels
 - Employment concerns & report dissemination
 - Formation of CSWA June 1979
 - Endorsed Baltimore Charter:
 - **“On Women, Under-Represented Groups and the Baltimore Charter,” adopted 11 January 1994**
 - 1990 & 1995 demographics surveys
 - Continued support of CSWA activities, e.g. sponsor of this meeting

AAS Prize Trends

- 1990 membership survey included analysis of awards by gender

– As of 1990:

	Men	Women
Russell	41	2
Warner	38	1
Pierce	15	3
Tinsley	3	
Heineman	10	1

AAS Prize Trends

- Prize lists published in each directory
 - Since 1990:

	Men	Women
Russell	11	2
Warner	13	0
Pierce	8	4
Tinsley	9	0
Heinrich	13	0
n		

AAS Leadership Trends

- **President**
 - As of 1990, the AAS had had only one female president
 - Since 1990, the AAS has had 4 female and 4 male presidents
- **Vice Presidents**
 - As of 1990, the AAS had had only about 9% women as members of ex-com, in aggregate
 - Since 1990, the AAS has had 3 women VPs for an aggregate ex-com percentage of 28%

Conclusions

- AAS membership demographics are changing rapidly
- The Baltimore Charter impacted the number of women elected to leadership positions in the AAS
- More women should be winning AAS prizes, especially those geared towards early-career astronomers

Resources

- NSF Science Resources Statistics (SRS): <http://www.nsf.gov/sbe/srs/stats.htm>
- AIP Statistical Research Center: <http://www.aip.org/statistics/> Sigma Xi Postdoc Survey: http://postdoc.sigmaxi.org/overview/supporting_research
- NRC Report,
- *Enhancing the Postdoctoral Experience:* [http://www7.nationalacademies.org/postdoc/](http://www7.nationalacademies.org/postdoc/AAS) AAS web pages and CSWA page: <http://www.aas.org/>
- [http://www.aas.org/cswa/Myself: marvel@aas.org](http://www.aas.org/cswa/Myself:marvel@aas.org)
-
- Interesting book in process: *Leaving Science: An analysis of Occupational Exit of Men and Women from Science and Engineering* by: Anne Preston; online chapters at : http://www.haverford.edu/econ/faculty/preston_research.html