

Genera

Kick-off meeting

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Teresa Lago

University of Porto, Portugal

Former Chair of ERC Gender Balance Group

Assistant General Secretary of International Astronomical Union

Gender equality in physics

Setting the scene in EU-27

“**She Figures 2012** Gender in Research and Innovation”

- women are clearly underrepresented in research
average 33% up to 40% at High Education and Government sectors
(wide variations between the member countries)

even if annual rate of increase is higher than for men
balance will take decades to be reached

Gender equality in physics

In 2010 women represented globally

- 55% of 1st level students,
- 46% of all PhD graduates

(total number of PhD graduates decreasing in 2006-2010)

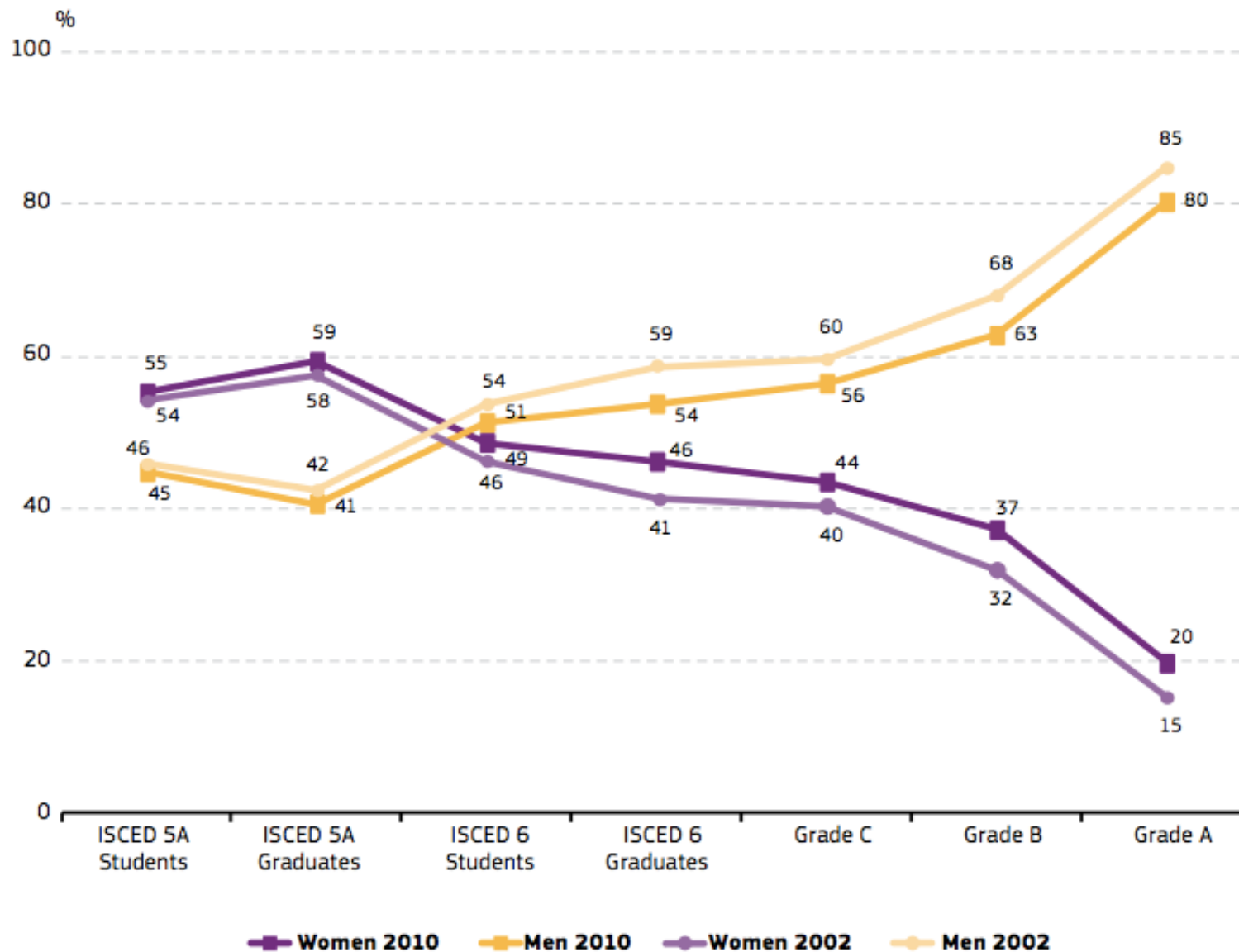
However in science and engineering women were only

- 31% of students (1st level),
- 35% of PhD graduates

In the academic career vertical degradation accelerates: women are

- 32% at lower grade,
- 23% at intermediate level
- only 11% reach the top level (full professor)

Proportions of men and women in a typical academic career, students and academic staff, EU-27, 2002–2010



Gender equality in physics

additional worrying facts

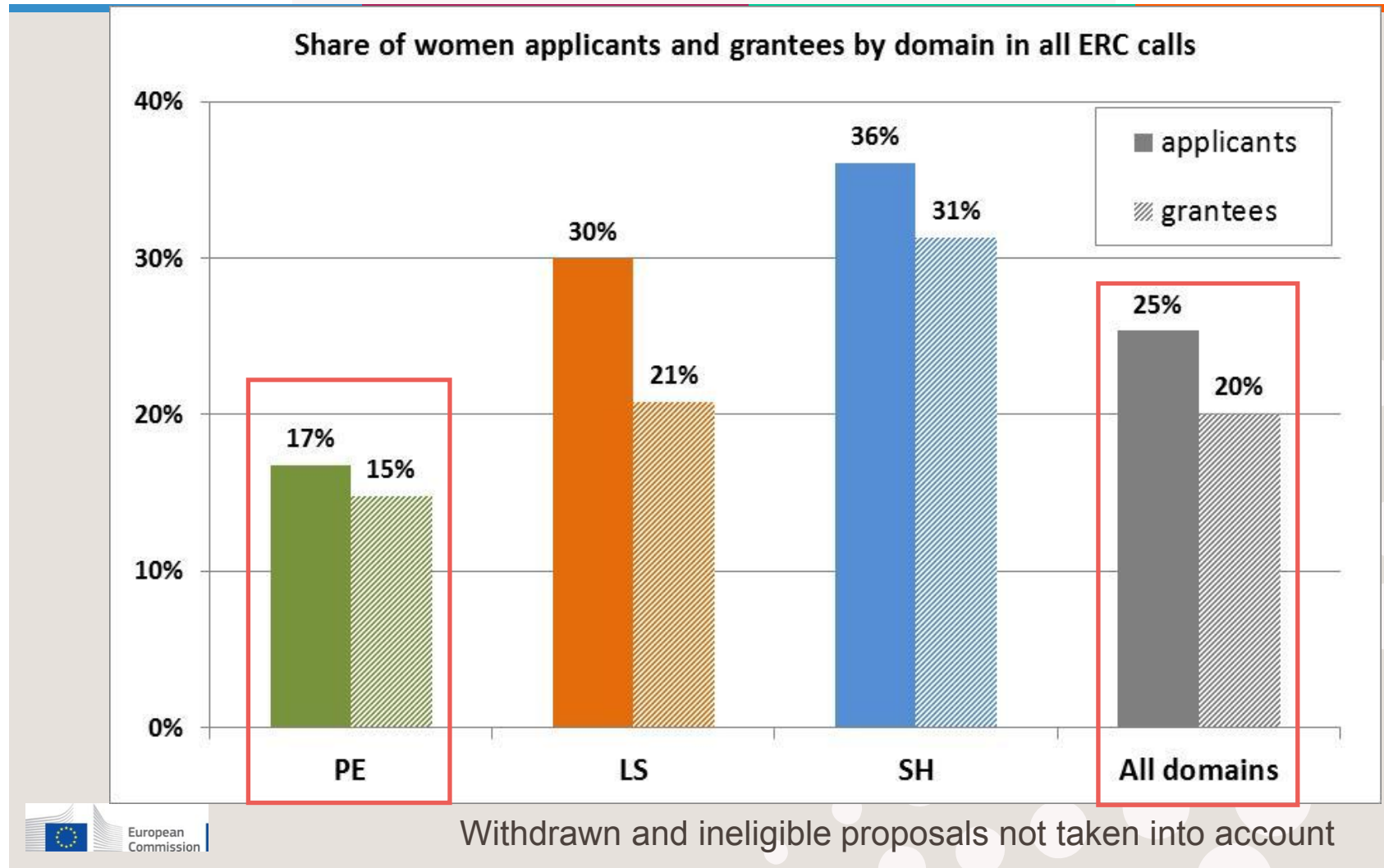
- even if women represent 20% of the academics only 15,5% are head of Institutions and less than 10% are rector of University
- anti-correlation between proportion of female researchers and level of R&D expenditure in the country
- a clear difference in research funding success rate
- is gender gap a generation effect?

a clear difference in research funding success rate

All ERC calls 2007-2013

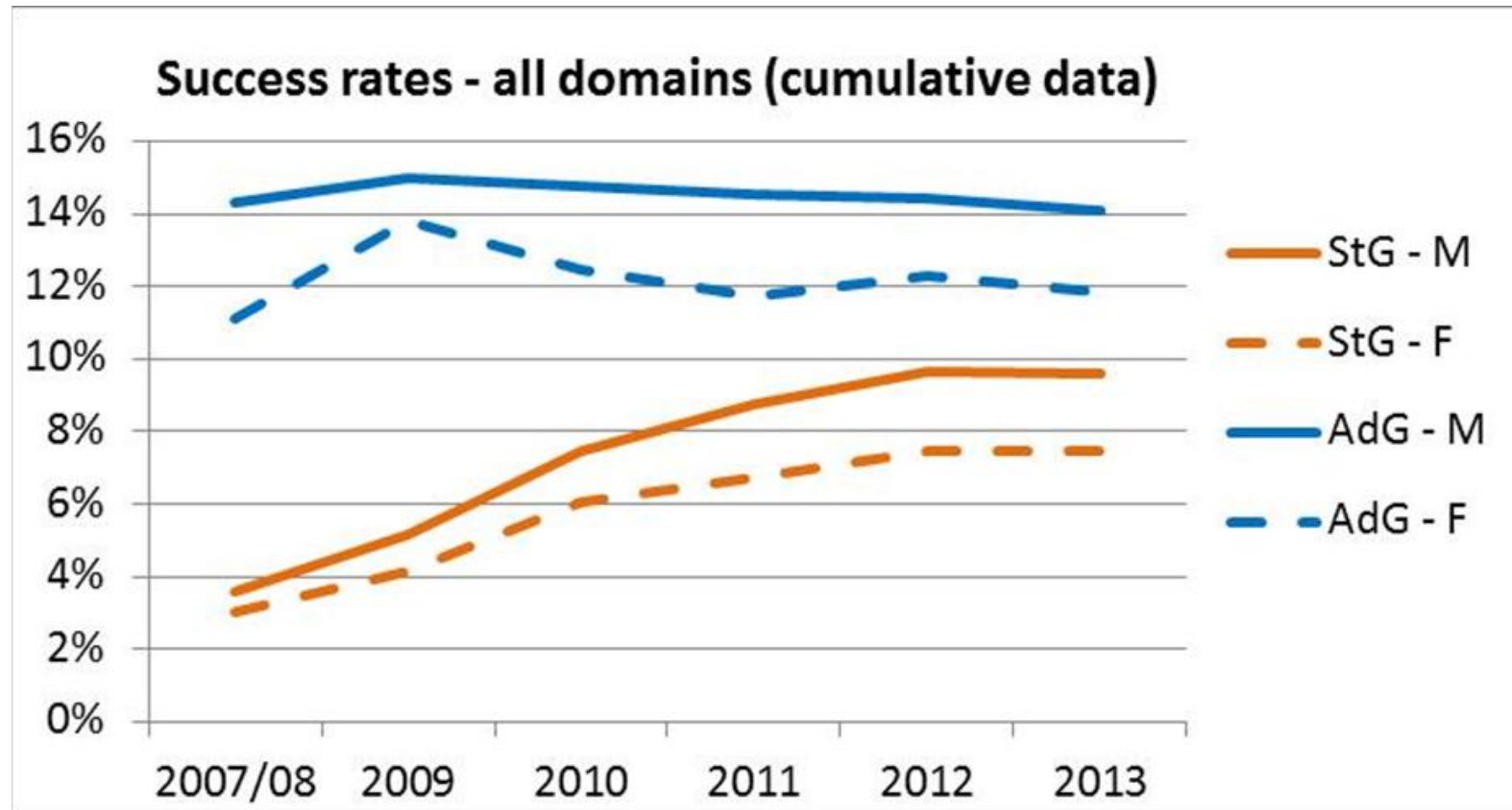
25 % of the applications from women

20 % of the grants to women



is gender gap a generation effect?

Comparing success rates of men and women
by type of grant – **cumulative data**



Gender equality in physics

Women among Physics & Astronomy Faculty

Academic Rank (%)	1998	2002	2006	2010
Full Professor	3	5	6	8
Associate Professor	10	11	14	15
Assistant Professor	17	16	17	22
Instructor / Adjunct	*	16	19	21
Other ranks	13	15	12	18

The percentage of women among physics faculty members continues to rise, reaching 14% overall in 2010. Likewise, the percentage of women in each academic rank continues to rise. However, the rank with the largest number of faculty members, full professors, is less than 10% female

Gender equality in physics

Women in Astronomy

The average fraction of **women with astronomy positions** is about **10% worldwide**

Better than other areas in Physics:

- among CERN's staff members only 2% of research physicists are women*

Interestingly enough from January 1st 2016 CERN's Director-General will be a woman for the first time in history - Fabiola Gianotti

A study of astronomers in the USA (Urry, Status 2000) shows that women make up 25% of the graduate student population, 15% of the postdoctoral and assistant professor level, and just 5% of the professors within the field of astronomy.

*<http://discov-her.com>

Gender equality in physics

IAU - The International Astronomical Union



founded in 1919

mission: to promote and safeguard the science of astronomy in all its aspects through international cooperation

11,259 members from **96** countries worldwide

National Members - organisations representing national professional astronomical communities: 73

Individual Members - professional scientists whose research is directly relevant to some branch of astronomy

<http://www.iau.org>

Gender equality in physics

IAU - The International Astronomical Union



Distribution of Individual Members - Total 11,259

Female 1,789 (16%)

Male 9,470 (84%)

ranging from countries with only 2 members, for example Colombia or Ethiopia, to large communities as France with 762 members ($\approx 74\%$ male, $\approx 26\%$ female) or the United States with 2,563 ($\approx 86\%$ male, $\approx 14\%$ female)

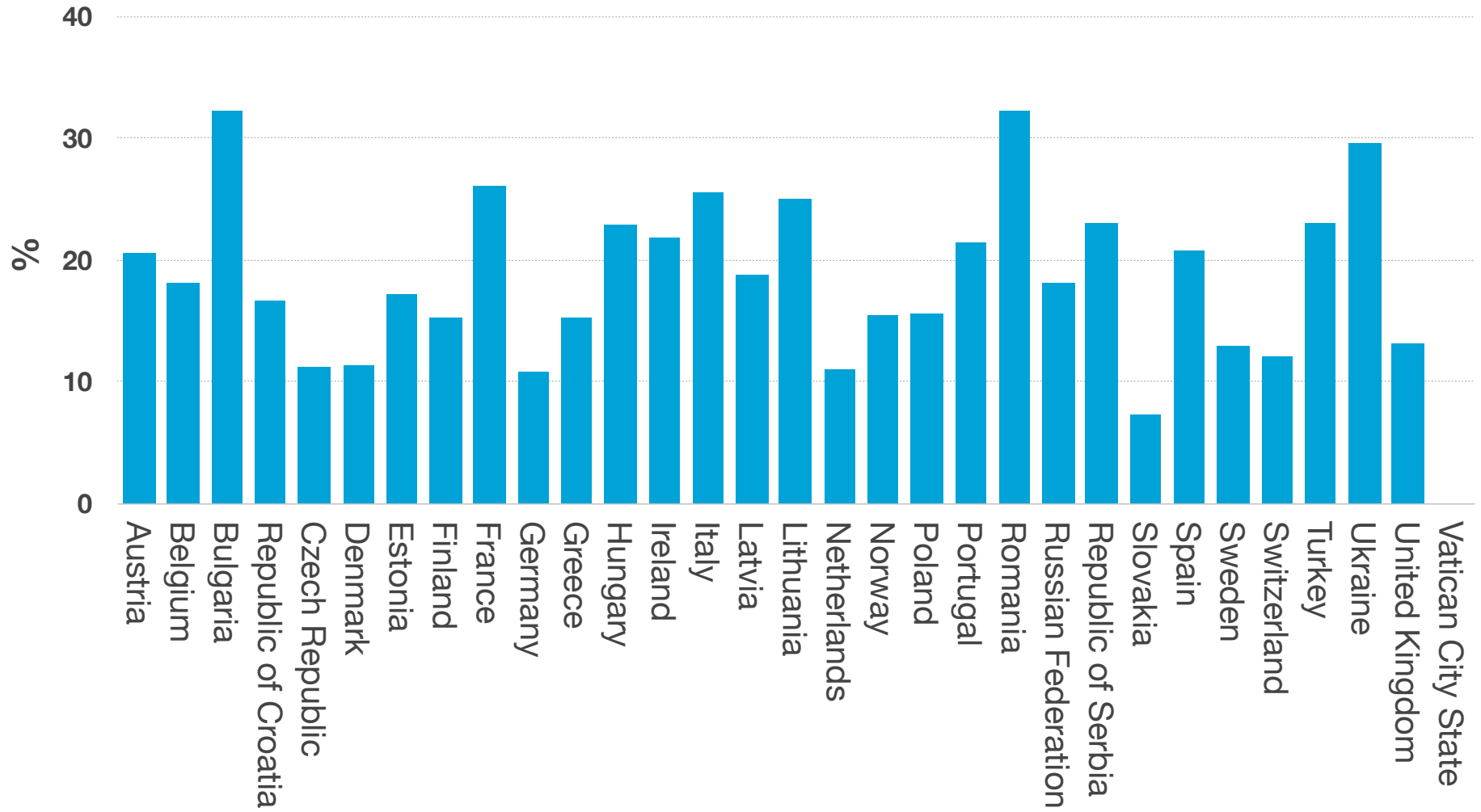
Looking at **Europe** the statistics of 30 states members of IAU run between 32% female representation (Bulgaria and Romania) to 7% (Slovakia) with an **average 18%**

Of course Vatican City State shows 100% male (8 members)

Gender equality in physics



Women in Astronomy in Europe (IAU)



Gender equality in physics

IAU - The International Astronomical Union



IAU Women in Astronomy Working Group

established at the XXVth IAU General Assembly in Sydney, Australia, July 2003

aims:

- evaluate the status of women in astronomy through the collection of statistics over all countries where astronomy research is carried out;
- establish strategies and actions that can help women to attain true equality as research astronomers, which will add enormous value to all of astronomy

<http://iauwomeninastronomy.org>