Roles of women astronomers in the IAU

Ewine F. van Dishoeck
Leiden Observatory, the Netherlands

President-elect IAU
What is the IAU?

- Worldwide union of all professional astronomers

  *Promote and safeguard astronomy in all its aspects through international cooperation*

- Founded in 1919
- 12391 members from 98 countries
  - 17% women
- Scientific organization in Divisions, Commissions and Working Groups
IAU Divisions

- A: Fundamental Astronomy
- B: Facilities, Technologies and Data Science
- C: Education, Outreach and Heritage
- D: High energy phenomena and Fundamental Physics
- E: Sun and Heliosphere
- F: Planetary Systems and Bioastronomy
- G: Stars and Stellar Physics
- H: Interstellar Matter and Local Universe
- J: Galaxies and Cosmology
Activities of the IAU

• Scientific meetings
  – General Assembly every 3 years
    • 2018: Vienna; 2021: Busan!
  – IAU Symposia: 9 per year
  – Regional IAU meetings
  – International School Young Astronomers (ISYA)
  – Sponsor of other meetings

IAU GA 2015 Hawaii: >3000 participants, 74 countries
Activities of the IAU (2)

- Naming of astronomical objects and surface features
Activities of the IAU (3)

- Office of Astronomy for Development (OAD)
  - South Africa
- Office of Astronomical Outreach (OAO)
  - Japan
- Prizes
  - Gruber prize in cosmology
  - Gruber fellowship for young scientists
TGF fellowship 2016

Laetizia Delrez

Maria Drozdovskaya

$25000 research funding each
Organization IAU

- President (3 yr)
- President-Elect (3 yr prior)
- General Secretary (3 yr)
- Assistant General Secretary (3 yr prior)
- Vice presidents (6 for each 6 yr)
- Division presidents (9 for each 3 yr)

**Officers:** P + P-e + GS + AGS

**Executive Committee:** Officers + Vice presidents

Secretariat in Paris: 1.5 fte
President: Silvia Torres-Peimbert    GS: Piero Benvenuti
President-elect: EvD            AGS: Teresa Lago
General Assembly Leiden 1928

Executive Committee:
All men!

A few women present
IAU (assistant) General Secretary

Nel Splinter: first Assistant Secretary (Miss IAU)
General Assembly 1958 Moscow

First female vice president: Wilhelmina Iwanowska 1973-1979

Polish stellar astronomer
## Female statistics IAU members

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>10.8</td>
</tr>
<tr>
<td>1948</td>
<td>10.3</td>
</tr>
<tr>
<td>1957</td>
<td>10.7</td>
</tr>
<tr>
<td>1969</td>
<td>8.8</td>
</tr>
<tr>
<td>1978</td>
<td>8.8</td>
</tr>
<tr>
<td>1987</td>
<td>9.6</td>
</tr>
<tr>
<td>1999</td>
<td>11.5</td>
</tr>
<tr>
<td>2008</td>
<td>12.9</td>
</tr>
<tr>
<td>2016</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Some increase in recent years, but fraction still disappointingly low
Statistics per country per age bin

Active Members from Countries with 100-399 Members

- In black above each graph: number of members per country
- In white within graph: number of women per country in a given age range

Figures posted at www.iau.org announcements
Statistics per country per age bin

Active Members from Countries with 400+ Members

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>China - Nanjing</td>
<td>27</td>
<td>30</td>
<td>30</td>
<td>41</td>
<td>22</td>
<td>15</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>France</td>
<td>14</td>
<td>17</td>
<td>17</td>
<td>22</td>
<td>15</td>
<td>17</td>
<td>17</td>
<td>53</td>
</tr>
<tr>
<td>Germany</td>
<td>12</td>
<td>17</td>
<td>17</td>
<td>22</td>
<td>15</td>
<td>17</td>
<td>17</td>
<td>53</td>
</tr>
<tr>
<td>Italy</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>11</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Japan</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>46</td>
<td>8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>14</td>
<td>14</td>
<td>13</td>
<td>22</td>
<td>12</td>
<td>29</td>
<td>64</td>
<td>88</td>
</tr>
<tr>
<td>United States</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>22</td>
<td>15</td>
<td>17</td>
<td>17</td>
<td>53</td>
</tr>
</tbody>
</table>

- In black above each graph: number of members per country
- In white within graph: number of women per country in a given age-range
Actions to promote women

• More women in high IAU positions
• Activities
• Women in astronomy committee
  – Women in astronomy lunches
  – Mentoring
  – Schools
  – ....
• Junior members (TBC)
Female IAU Presidents

Catherine Cesarsky
2006-2009

Silvia Torres-Peimbert
2015-2018

Ewine van Dishoeck
2018-2021
Female (A)GS

Jacqueline Bergeron 1988-1994

Edith Mueller 1973-1979

Teresa Lago 2015-2021
New IAU Officers 2015

3 women, 1 man
IAU Executive Committee

Mexico City May 2016

3/6 Vice Presidents
Division presidents 2012-2015

5 women, 4 men
Women in astronomy lunches
International Schools for Young Astronomers

ISYA Honduras 2015

JEDI Namibie

West Africa
Organization symposia and GA

- Many women co-chair of IAU symposia
- GA 2021 in Busan led by Hyesung Kang!
Summary

• Fraction of women in IAU still low
• Fraction of women in high positions IAU is now high
• Actions to attract more women and making them more visible
  – Suggestions welcome!
• Women can grow within IAU to leadership positions
  – WG, Commission, Division Steering committees
  – Organizing IAU Symposia