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TRIENNIAL REPORT 2021-2024

1. Background

Women astronomers faced numerous obstacles in pursuing careers in astronomy for several generations, including bias, reduced career prospects, lack of role models, child-care elderly care issues, harassment, discrimination, and unfair working conditions. The Women in Astronomy (WiA) Working Group, operating under the Executive committee of the International Astronomical Union (IAU), aims to counteract these challenges and promote gender equality in the field. It is committed to promoting equality of opportunity for both women and men in astronomy, both within the IAU and on the global stage. From 2021 to 2024, the dedicated organizing committee of the WiA WG has been actively engaged in initiatives aimed at addressing the challenges faced by women in astronomy, reducing the gender gap in STEM fields, and offering support to women researchers and Ph.D. students worldwide as they develop their career paths.

1.1. Objectives of the WiA WG from 2021-2024

The primary objectives during this triennial period were to:

- raise awareness and sustainability about the difficulties faced by women astronomers.
- develop training and skill-building activities to bridge the gender gap in astronomy.
- fundraising efforts to support the careers of women researchers worldwide.
- dissemination and communication of results.

2. Developments within the past triennium

Over the past three years, the WiA WG has organized several series of activities aimed at accomplishing the objectives outlined above:

- Hosting seminars, interview series, Enterprising Women in Astronomy, and Meet the Scientist events featuring distinguished women astronomers.

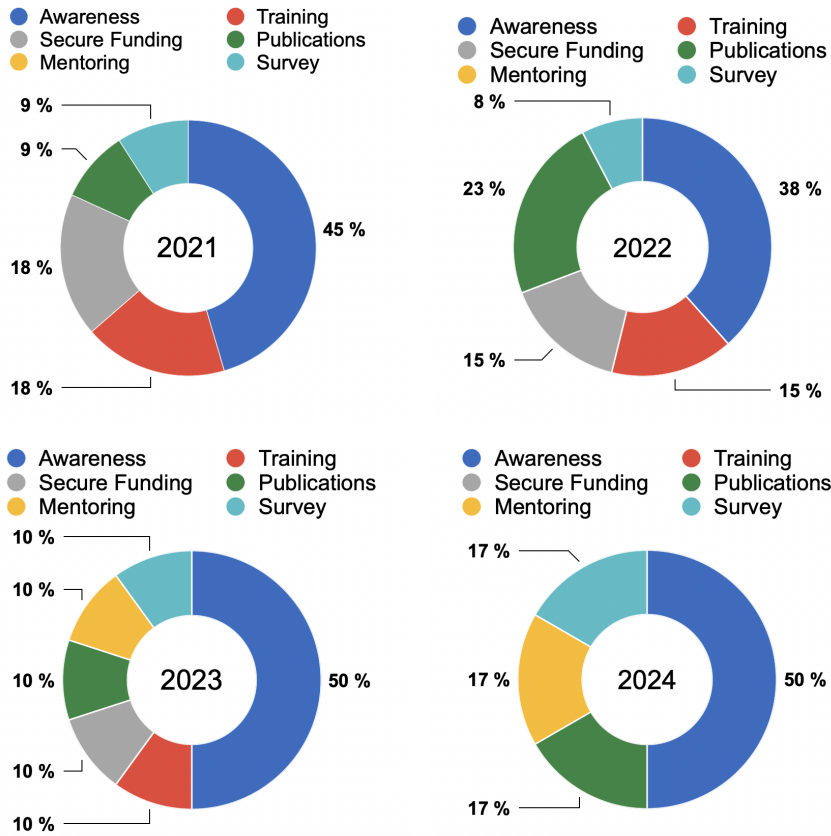


Figure 1. Distribution of events and initiatives organized by IAU WiA WG from 2021-2024

- Organizing events for International Girls and Women’s Day in Science on February 11th to create awareness at school and college levels and International Women’s Day in Astronomy on March 8th for professional astronomers.
- Conducting surveys on topics such as factors affecting women’s careers in astronomy, the impact of Covid-19 on women’s careers in astronomy, and identifying gender balance champions in astronomy to highlight the challenges and impact of gender imbalance in the field.
- Collaborating on joint projects and events with other organizations and committees, such as the Office of Astronomy Outreach of the IAU and the Standing Committee for Gender Equality in Science.
- Providing training programs focused on enhancing essential skills for astronomy research, including archival data analysis, report writing, and programming.
- Establishing various communication channels, including social media platforms, a dedicated website, the publication of ENSEMBLE magazine, publications, and regular newsletters.

2.1. Challenges faced by the WiA WG from 2021-2024

The WiA WG encountered several challenges during this triennial period, including:

- Limited resources, and volunteer availability for proposing and organizing activities.
- Difficulty in fundraising to support women in astronomy.
- No dedicated funds from the IAU and other organizations, for the STEM Ambassador initiative proposed by the WG to improve the situation for women in astronomy.
- Discouraging remarks and warnings received by a few anonymous survey participants, potentially aimed at undermining the efforts of the WiA WG.
- Despite the valuable contributions, the WiA WG's activities require a significant time commitment, averaging around two months per year to organize activities all year long. While these efforts are mandatory to increase awareness, yet remain unpaid and unrewarded as they are voluntary in nature.
- Absence of concrete bodies with action plans and policies at organizational levels to address and collaborate on gender imbalance issues.

2.2. Impact and Outcomes

Despite challenges, the WiA WG has made significant progress, including:

- Ongoing endorsement from the IAU Executive Committee for WiA activities.
- Growing membership in the WiA WG from across the globe.
- Global support and participation from astronomers from institutions and organizations from 92 different countries.
- Increased awareness of gender inequality and "leaky pipeline" issues within the field of astronomy.
- Strengthened skills among women astronomers through comprehensive training initiatives.
- Support, involvement, and endorsement from the international astronomy community.
- Participation/Implementation of surveys to collect data aimed at tackling gender imbalance issues in astronomy.

2.3. Financial requirements

Throughout the triennial period, the WiA WG made attempts to obtain funding to support the careers of women astronomers- one of its main initiatives. However, these efforts were largely unsuccessful by a combination of factors including insufficient awareness, funding, and organizational efforts to seriously address the "leaky pipeline" phenomenon in astronomy. Consequently, the working group heavily depended on limited resources and volunteer contributions to maintain its operations and objectives. Note: These issues have

been also mentioned in the previous Triennial reports of 2015-2018 and 2018-2021.

3. Conclusion and Future plans

3.1. Conclusion, Recommendations and closing remarks

- The Women in Astronomy (WiA) Working Group has demonstrated a deep commitment to its mission of promoting gender equality in astronomy. Despite facing challenges in their research career and productivity, the group of unpaid volunteers has gathered significant support, and recognition, and laid a strong foundation for future actions.

- While the WiA WG will continue to develop efforts to address the gender gap in astronomy and combat the “leaky pipeline” effect, the primary responsibility lies with the policymakers at institutions (including IAU), research organizations, universities, and funding bodies. It’s essential that they integrate and publish yearly progress reports on their mandatory Gender Equity Plan, along with their Code of Conduct, within their meetings, symposiums, strategies, and vision plans. This ensures a documented record of efforts to address the prevalent “leaky pipeline” and “glass ceiling” effects, as well as several other harassment issues.

- Institutions(including IAU), research organizations, universities, and funding bodies should allocate dedicated funding to support women’s careers in research. It’s imperative that concerted efforts are made to mitigate the persistent unsolved challenge of the “leaky pipeline” effect in Astronomy.

- The IAU WiA WG concludes with a call to action for these entities to implement specific action plans and policies to support women astronomers, ultimately fostering a more inclusive environment in astronomy worldwide. By implementing specific action plans and policies to aid women astronomers in the field, these organizations will establish a roadmap that universities and institutions need to follow to tackle the “leaky pipeline” effect.

3.2. Future plans

For the next triennial period (2024-2027), the WiA WG plans to:

- Continue raising awareness about the “leaky pipeline” effect, advocating for a need for a mandatory gender equality plan and gender balance champions in astronomy.
- Collaborate with organizations and stakeholders to develop concrete action plans and policies that can be implemented to address the “leaky pipeline” effect.
- Increase fundraising efforts to secure financial support for women’s careers in astronomy.
- Collaborate, organize joint activities, and training programs with bodies advocating gender balance in STEM fields, and reach out to a broader audience.

Mamta Pommier

Chair of the IAU Women in Astronomy Working Group

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