

## PRO-AM COLLABORATION IN SPANISH ASTRONOMY (POSTER)

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**Abstract.** Astronomy is a field where the boundaries between professional and amateur work are often blurred. Amateur astronomers continue to make significant contributions to the advancement of astronomical research, thanks to their dedication, equipment, and passion. The Federation of Astronomical Associations of Spain (FAAE) fosters relationships between amateurs and professionals, while the Spanish Astronomical Society (SEA) supports this collaboration through its Proam Commission. This poster outlines the key players in Pro-Am collaboration in Spain, describes the structure of the SEA's Proam Commission website, and discusses ongoing projects and the findings of the 2021 report on Proam collaboration in Spain.

Keywords: Astronomy, collaboration, amateurs, professionals, Spain

### 1 Introduction

Amateur astronomers play a critical role in several areas of astronomy, including modeling the orbits of stars, comets, and asteroids, studying planetary atmospheres, monitoring supernovae, and observing exoplanet transits. The data generated by modern professional telescopes and instruments is immense, and amateur astronomers assist in analyzing and verifying this data with their own observations. Additionally, professional observatories sometimes make their equipment available to amateurs, further enhancing collaborative opportunities.

Astronomy is one of the fields where collaboration between amateurs and professionals is not only possible but essential. The number of publications resulting from such collaborations has increased significantly in recent years. For this collaboration to succeed, both groups need platforms and tools to facilitate communication and sharing of data. The SEA's Proam Commission website serves as one such platform, providing a space for both communities to connect and contribute to shared projects.

### 2 Actors in Spain

The two main organizations supporting Pro-Am collaboration in Spain are the Federation of Astronomical Associations of Spain (FAAE) and the Spanish Astronomical Society (SEA). The FAAE consists of over 80 amateur astronomy associations, representing about 8,000 members. Its primary objective is to promote relationships between amateur associations and other professional organizations in astronomy and astrophysics. The SEA, which includes over 950 professionals, promotes the development of astronomy in Spain and provides an independent forum for discussing matters of interest to the Spanish astronomical community. Its Proam Commission is specifically dedicated to fostering collaborations between amateur and professional astronomers.

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### 3 The SEA's Proam Commission website

The SEA's Proam Commission website is the primary hub for Pro-Am collaboration in Spain. The website is organized into various sections, such as Proam Projects, Proam Publications, Proam Congresses, and training materials. Users can access ongoing Pro-Am projects, subscribe to alerts for astronomical phenomena, and find information about amateur observatories participating in professional research. The website also provides resources for training and organizes Pro-Am sessions in partnership with the FAAE. One notable feature is the Javier Gorosabel Award, which recognizes outstanding collaboration between professionals and amateurs. This award honors the legacy of Javier Gorosabel, a scientist deeply committed to Pro-Am collaboration.

The interconnectedness of the FAAE and SEA websites exemplifies how the two organizations work together to promote collaboration across the amateur and professional communities in Spain.

### 4 Some ongoing projects

Several ongoing Pro-Am projects showcase the productive collaboration between amateurs and professionals in Spain. Examples include the PVOL project, which focuses on planetary observations, the K2-EYES project, which deals with exoplanetary transits, and the Spanish Virtual Observatory, which organizes and analyzes large astronomical datasets. Amateur astronomers contribute significantly to these projects, especially in monitoring solar system objects and tracking occultations, which can reveal new information about distant stars and exoplanets. Despite the progress being made, light pollution remains a growing challenge for both amateur and professional astronomers, and they are working together to advocate for solutions to this issue.

### 5 Surveys and action plan

Periodic surveys are conducted to assess the state of Pro-Am collaboration in Spain. The 2021 Report on Proam collaboration identified several key needs, including better dissemination of information about Pro-Am partnerships, greater accessibility to Pro-Am resources, and improved communication between amateur and professional astronomers. Based on these findings, an action plan was created to enhance the SEA Proam website, increase outreach through monthly Pro-Am sessions, and offer additional training opportunities for amateurs. The 2023 Proam Status Report, which was published after the SF2A meeting in Marseille, continues to build on this action plan and aims to further improve collaboration between the two communities.

### 6 Conclusions

The collaboration between amateur and professional astronomers is essential for the future of astronomy. Amateurs provide valuable resources, time, and passion, while professionals contribute expertise and access to advanced equipment. This synergy has resulted in numerous successful research projects and publications. Presenting the status of Pro-Am collaboration in Spain at a French forum highlights the commonalities between the challenges and opportunities faced by both countries. The conclusions of the 2021 and 2023 reports form a solid foundation for continuing to strengthen Pro-Am collaboration, ensuring that both communities can work together to advance our understanding of the universe.

### References and contacts

Federación de Asociaciones Astronómicas de España - FAAE:

<https://federacionastronomica.es/index.php>

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Spanish Society of Astronomy - SEA:

<https://www.sea-astronomia.es/colaboracion-pro-am>

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Activation of Proam alerts and proposals for collaboration:

<https://proam.sea-astronomia.es/index.php/activacion-alertas>

Am Observatories: <https://proam.sea-astronomia.es/index.php/observatorios-am>

Pro-Am projects: <https://proam.sea-astronomia.es/index.php/proyectos-pro-am>