Report on the outcomes of a presentation and participation - Young Researcher and Innovator Conference[1]

Action number: **CA21126**

Grantee name: **Teresa Huertas Roldán**

Conference Details

Conference title: Asymmetrical Post-main-sequence Nebulae 9 – The art of stellar wind sculpting

Conference web-page: http://www.granadacongresos.com/apn9

Conference venue[2]: Granada, Spain

Conference start and end date: 22/09/2025 to 26/09/2025

Accepted contribution details

Title of the presentation: Deep mm survey of RRLs towards C-rich planetary nebulae

Type of the presentation: (oral/poster): oral

Co-authors: J. Alcolea, D.A. García-Hernández, J.P. Fonfría, D. Tafoya, J.J. Díaz-Luis, R. B. Barzaga, A. Manchado, V. Bujarrabal, M.A. Gómez-Muñoz

Other details of the presentation: specify here any additional details related to the contribution (e.g. title of the session / track of the conference programme in which the contribution is accepted)

Outcome of the conference participation

Description of the outcome of the presentation of the accepted contribution, in terms of grantee's visibility, including the establishment of new contacts for future collaborations

(max.500 word)

The participation in the APN9 conference thanks to the Young Researcher and Innovator Conference Grant significantly enhanced the visibility of my research by allowing me to present my latest work on carbon-rich (C-rich) planetary nebulae (PNe) observed at radio wavelengths to a specialized international audience. The talk attracted the attention of experts in evolved stars and PNe across multiple wavelengths, and the questions posed—both during the formal session and in informal discussions during coffee breaks and lunches—underscored the relevance of my work and highlighted the importance of radio recombination line (RRL) catalogs for characterizing C-rich circumstellar environments.

This exposure also broadened awareness of the Nanospace COST Action, as several attendees were unfamiliar with its objectives. Conversations about the project's aims, as well as its training schools

[1] This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant.
[2] For an online conference, specify virtual participation; for hybrid conferences, specify whether it is an in-person or virtual participation.

and meetings, further raised the profile of both the initiative and my own research activities. Presenting at the APN9 meeting facilitated direct engagement with senior researchers who have long focused on C-rich sources, thereby expanding my professional network.

A key outcome was the establishment of a prospective collaboration with Joel Kastner, who invited me to participate in the analysis of interferometric observations of the C-rich PN NGC 7027. This joint project will explore the spatial distribution of carbon-bearing molecules and may reveal the spatial distribution of new features thanks to the high angular resolution of the data. Overall, the presentation substantially increased my visibility within the planetary-nebula community and opened concrete opportunities for future collaborative research.

Acknowledgement of inclusion of necessary supporting documents to claim the grant

I confirm that the following documents have been uploaded on e-COST as an integral part of this report:

- the certificate of conference attendance.

- the programme of the conference or book of abstracts / proceedings indicating the presentation (oral or poster) of the grantee.

- copy of the given presentation (oral or poster).