AGB stars: a key ingredient in the understanding and interpretation of stellar populations

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FOREWORD

The recent years have witnessed a growing interest towards the stars evolving through the asymptotic giant branch (AGB) phase, owing to the key role played by these sources in a number of astrophysical contexts. AGBs are among the most efficient gas and dust polluters of the interstellar medium, thus understanding their structural and evolution properties proves essential to trace the chemical evolution of galaxies and to interpret the spectral energy distribution of individual stars, the infrared properties of galaxies and the extinction curves of distant quasars. A relevant role of AGBs in the formation of multiple populations in globular clusters is currently at the centre of a lively debate within the astrophysical community. The special session entitled AGB stars: a key ingredient in the understanding and interpretation of stellar populations, at the 2015 European Week of Astronomy and Space Science, was an occasion to present state-of-the-art observations, and to allow detailed and lively discussions on the still poorly known phenomena affecting the evolution of these stars and on the dust formation mechanism in their circumstellar envelope. The future observational possibilities related to the upcoming space missions were also among the topics of the special session. There were a total of 15 oral presentations and 8 posters. It is a pleasure to thank all speakers for the high-quality standard of their contributions and all the participants for the very interesting, stimulating discussions on the arguments presented. We encourage all researchers working on AGB and AGB-related phenomena to use the AGB Newsletter as a platform for dissemination and discussion; see http://www.astro.keele.ac.uk/AGBnews. JvL acknowledges the award of a Santander Bank research bursary, which enabled him to participate in the meeting. DAGH acknowledges support provided by the Spanish Ministry of Economy and Competitiveness (MINECO) under grants AYA-2011-27754 and AYA-2014-58082-P

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