

COMMISSION 2

MASSIVE STARS

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TRIENNIAL REPORT 2015-2018

1. Introduction

The IAU Commission on Massive Stars (Commission G2) was created under Division G during the General Assembly held in Hawaii in 2015. Previously, the IAU Working Group on Massive Stars, its ancestor, had been in continuous operation for 20 years, during which the community showed an intense activity. Therefore the G2 Commission did not begin from scratch, but with a solid background and a large list of interested IAU members, which allowed its smooth transformation from Working Group to Commission during the structural changes proposed by IAU and approved in Hawaii.

The objective of the new Commission is to promote research on massive stars and the interaction with other fields of Astrophysics for which massive stars play a crucial role (such as supernovae, black holes and neutron stars, binaries, interstellar medium, feedback, low-Z galaxies, starbursts and first stars in the Universe, binaries, gamma-ray bursts or gravitational waves). At the same time, the G2 Commission aims at keeping the successful activities of the preceding Working Group, for example the Massive Stars Newsletter (with its 24-hour announcement system) and the Massive Star Meetings held every 4-5 years (most of the time with the support of the IAU).

2. Developments within the past triennium

Our Commission was heavily involved in the organization of the IAU Symposium 329 (*The lives and death-throes of Massive Stars*) held in New Zealand in November 2016. This was the XI massive star meeting in a series that began in 1971 (with all but one selected as an IAU Symposium, pointing to strong interest and involvement of our community). This particular meeting aimed at strengthening the bonds between the massive stars and the supernova communities. Invited talks were distributed among participants from both communities and discussions were very lively. There was also an approach to the early Universe, where massive stars also play a fundamental role. There were numerous attendants (178) with a fair (but still improvable) gender and geographical balance. The next massive star meeting is tentatively planned to be held in Ireland in 2020. The Organizing Committee of the Commission is already working with the organizers of the meeting on the preparation of a proposal for an IAU Symposium. Again, we will promote the interaction with a scientific community with overlapping interests.

In preparation for the General Assembly in Vienna the Organizing Committee (OC) of the Commission encouraged their members to submit proposals for IAU Symposia and Focus Meetings. Letters of Interest for two IAU Symposia and two focus meetings were presented by members of the Commission. Finally, one IAU Symposium was approved, and the second one merged with another Symposium proposal, and the merged proposal was approved. Only one of the Focus Meetings made it to the final proposal phase, but was not approved. Many more meetings not supported by the IAU have been held during the three-year period.

The OC held regular meetings by electronic means (plus one face-to-face meeting in New Zealand, during the IAU Symposium). Between the creation of the Commission (August 2015) and this report (March 2018) there have been seven meetings, and at least another one will be held before the General Assembly in Vienna. One of the decisions of the OC has been to increase the transparency for the community. To that aim, it was agreed to prepare summaries of the OC meetings and make them publicly available through the Commission external web page (http://www.astrosu.unam.mx/massive_stars/index.php), that was updated. However, the difficulties in accessing the external servers together with the sparse man power have produced an undesired situation, in which the Newsletter system has suffered delays. This has also produced delays in the initiatives to improve and stimulate the interaction with the community (which depend strongly on the web page). The OC is currently working towards a long-term solution for this problem which will probably involve the migration of the Commission's external web site to another platform. The 24-hour announcement system, a fundamental tool for the community, also suffered some problems in 2016, but it was regularized and is working satisfactorily.

3. Closing remarks

The immediate aims of the new OC after the General Assembly will be to prepare the next massive star meeting in Ireland, promote the interaction with other astrophysical communities and find a solid long-term solution for the Commission web page, as a preliminary step to encourage the participation of the massive star community through social media and other web-based initiatives.

A. Herrero
president of the Commission