

COMMISSION 2

MASSIVE STARS

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TRIENNIAL REPORT 2018-2021

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 operation for 20 years. The Commission currently counts approximately 200 active members.

The objective of IAU Commission G2 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, interstellar medium, feedback, low-Z galaxies, starbursts and first stars in the Universe, gamma-ray bursts and more recently also gravitational wave events).

At the same time, the G2 Commission maintains the Massive Stars Newsletter (with its 24-hour announcement system) and organises Massive Star Meetings held approximately every 4 years (most of the time with the support of the IAU).

2. Developments within the past triennium

Our Commission is heavily involved in the organisation of IAU Symposium 361 (*Massive Stars Near & Far*) to be held in Ireland in May 2020. This will become the XII 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). IAUS 361 is particularly aimed at bringing researchers working on massive stars in local environments into contact with those working on massive stars at larger distances, and earlier Cosmological times, which is of key relevance in light of the upcoming JWST mission and the construction of extremely large telescopes that are planned to reveal the light from the First Stars in the Universe. More than 300 participants have indicated an interest to attend the meeting, showcasing a more than healthy interest in massive stars world-wide.

One of the special discussions during the meeting will concern the upcoming HST ULLYSES project, the ultraviolet Legacy Library of Young Stars as Essential Standards. Many people have indicated an interest in studying these ultraviolet spectra in conjunction with complementary optical and Infrared legacy libraries that our Commission attempts to obtain on behalf of our entire community.

In preparation for the General Assembly in Busan 2021 we encouraged our members

to submit proposals for IAU Symposia or Focus Meetings. Letters of Interest for one IAU Symposium and one focus meeting were presented by members of the Commission.

The OC held regular meetings by electronic means (and is planning to hold a face-to-face meeting in Ireland during IAUS 361). Between the new commission started after the Vienna GA in 2018 and March 2020 there have been xx electronic meetings. We continue transparency to the community by publishing the meeting minutes on the Commission external web page (http://www.astroscu.unam.mx/massive_stars/index.php).

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 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 for 2024, 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.

Jorick S. Vink
president of the Commission