

DIVISION VII COMMISSION 37

STAR CLUSTERS AND ASSOCIATIONS *(AMAS STELLAIRES ET ASSOCIATIONS)*

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PROCEEDINGS OF THE BUSINESS SESSION, 24 August 2012

1. Introduction

The business session for Commission 37 was held on 24 August 2012 at the IAU General Assembly in Beijing. The meeting was attended by about a dozen members of our Commission, including President Carraro, VP de Grijs and several committee members. We introduced ourselves and then went through a powerpoint presentation first prepared by outgoing President Elmegreen and revised by incoming President Carraro. The contents of the powerpoint presentation are given in this summary.

In what follows, we list past, present and future meetings, publications statistics and important surveys, reviews, and databases about clusters, and then we discuss the procedure for the election of new commission officers.

2. Past Meetings

- Encounters and interactions in dense stellar systems: modeling, computing, and observations, Beijing (China), Aug 30–Sep 2, 2010
- IAU Symposium 270: Computational Star Formation, Barcelona (Spain), May 31–Jun 4, 2010
- A Universe of Dwarf Galaxies, Lyon (France), June 14–18, 2010
- Spiral Structure in the Milky Way: Confronting Observations and Theory, Bahia Inglesa (Chile), Nov 7–10, 2010
- RR Lyrae Stars, Metal-Poor Stars and the Galaxy, Pasadena (USA), Jan 23–25, 2011
- Dynamics of Low-Mass Stellar Systems : From Star Clusters to Dwarf Galaxies, Santiago (Chile), Mar 4–8, 2011
- Assembling the Puzzle of the Milky Way, Le Grand-Bornand (France), Apr 17–22, 2011
- Stellar Clusters and Associations, Granada (Spain), May 23–27, 2011

- From Star Clusters to Galaxy Formation - The Virtual Universe, Heidelberg (Germany), Sep 20–23, 2011
- 42nd Saas-Fee Course: Dynamics of Young Star Clusters and Associations, Villars-sur-Ollon (Switzerland), Mar 25–31, 2012
- Galaxies: Origin, Dynamics, Structure, Sochi (Russia), May 14–18, 2012
- EWASS 2012 - Symposium 6: Stellar Populations 55 years after the Vatican conference, Rome (Italy), Jul 2–4, 2012
- The Formation and Early Evolution of Stellar Clusters, Sexten (Italy), Jul 23–27, 2012

3. Meetings at the IAU General Assembly

- The Formation and Early Evolution of Stellar Clusters, IAU GA 2012 SpS1, Beijing (China), Aug 20–24, 2012
- IAU Symposium 289: Advancing the Physics of Cosmic Distances, IAU GA 2012, Beijing (China), Aug 27–31, 2012

4. Upcoming Meetings

- Workshop on the Magellanic Clouds, Perth (Australia), Sep 10–13, 2012
- 30 Doradus: The Starburst Next Door, Baltimore (USA), Sep 16–19, 2012
- Ecology of Blue Straggler Stars, Santiago (Chile), Nov 5–9, 2012
- Small Stellar Systems in Tuscany, Prato (Italy), Jun 10–14, 2013
- Massive Stars: From alpha to Omega, Rhodes (Greece), Jun 10–14, 2012

5. Publications

The topic of star clusters and associations continues to be one of the most widely followed in all of astronomy. It spans the range of interest from stellar properties, to stellar clusters, to star formation and evolution, with considerable overlap in other commissions.

Publications in Refereed Journals in the period from January 2009 to August 2012 tally as follows:

- Globular Clusters: 800 papers (more than 6400 citations)
- Open Clusters: 450 papers (more than 3000 citations)
- Stellar Associations: 65 papers (more than 540 citations)

Some of the **issues** addressed in these publications are:

- the formation and dynamical evolution of star clusters
- stellar evolution and ages
- star clusters as tracers of stellar populations
- studies of specific types of objects within clusters
- nuclear clusters
- extragalactic cluster systems

The authors utilize observations covering an increasing portion of the electromagnetic spectrum, ranging from X-rays to the far-infrared, as well as advanced N-body simulations.

Reviews related to star clusters that appeared in the bibliography from 2009 to August 2012 are:

- A review on Young Massive Star clusters by Simon F. Portegies Zwart, Stephen L.W. McMilland and Mark Gieles, *Annual Reviews of Astronomy and Astrophysics*, Vol. 48, Issue 1, pp.431-493 (2010)
- Additional reviews regarding a variety of aspects of star cluster research have also appeared in the proceedings of the conferences and meetings mentioned earlier

6. DataBases

Several new cluster **catalogues** have been published:

- M33: Ma, Jun, 2012, *AJ*, 144, 41
- PHAT Stellar Cluster Survey, Jonhson *et al.* 2012, *ApJ* 752, 95
- M31 Galax catalog, Kang *et al.* 2012, *ApJS* 199, 37
- NGC 5128 star clusters, Harris *et al.* 2012, 143, 84

Recent **databases** on clusters are:

- Data on Open Clusters in the Milky Way and the Magellanic Clouds can be found in the WEBDA site (<http://www.univie.ac.at/webda/>), which was originally developed by Jean-Claude Mermilliod from the Laboratory of Astrophysics of the EPFL (Switzerland) and is now maintained and updated by Ernst Paunzen from the Institute of Astronomy of the University of Vienna (Austria).

- Data on Galactic Globular Clusters can be found in the "Catalog of parameters for Milky Way globular clusters" by W.E. Harris (<http://www.physics.mcmaster.ca/Globular/>), as well as in "The Galactic Globular Clusters Database" at Astronomical Observatory of Rome (INAF-OAR: <http://venus.mporzio.astro.it/marco/gc/>).

- A Catalogue of Variable Stars in Globular Clusters developed and maintained by Christine Clement can be found in <http://www.astro.utoronto.ca/cclement/>.

7. Ballot Procedure for Election of New Officers

An election of new officers was held in March and April 2012 by the outgoing president, vice president, and organizing committee.

Balloting was carried out for the first time via a web-based tool. A call for nominations was sent by email. A list of Commission 37 members who were nominated and who accepted the nomination was then put to the vote. We had 5 VP candidates and 18 Commission organizing committee candidates. The voting took place via the a website set up by IAU. We had 118 votes, which means that 37% of the commission members voted, a record so far!

This demonstrated that the web-based ballot, previously strongly requested, worked very well.

We attempted to maintain a balance in the Organising Committee with respect to theory versus observations, gender and geographical location. This was difficult to achieve, especially gender, in spite of having several female candidates. In the future a better coordination has to be discussed before.

We would have found it useful to have a list of previous members of the Organizing Committee, including previous presidents and vice-presidents. This list could be on the IAU website. Such a list is important because IAU rules do not allow people to serve for more than one term for president and vice-president, or a maximum of two terms for OC members.

We upgraded our Commission web site. We would like to include an updated list of members of the Commission, and a list of former Organizing Committee members, Presidents and Vice-Presidents. We also want updated links to websites of conferences

endorsed by the Commission. We should also create a site that is accessible to the Organizing Committee only, to facilitate OC business management (e.g. evaluation of conference proposals).

8. Closing Remarks

Our discussion at the meeting centered on improving communication between members. This includes getting a more complete list of email addresses, and regularly sending out notices of meetings, reviews, databases, and other material of interest to Commission 37 members. We note that the email newsletter, SCYON (edited by H. Baumgardt, E. Paunzen and P. Kroupa), is very successful at spreading important information and research news.

Another discussion we had was how to make the Commission more relevant among astronomers, since so far it is quite disconnected from the community. Only a few professional consult the webpage and address P and VP with questions or requests.

Giovanni Carraro
President of the Commission