

COMMISSION 42

CLOSE BINARIES (ETOILES BINAIREs)

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Katalin Olah, Theodor Pribulla,
Colin D. Scarfe, Guillermo Torres

PROCEEDINGS BUSINESS SESSION, 24 August 2012

1. Introduction

Commission 42 (C42) co-organized, together with Commission 27 (C27) and Division V (Div V) as a whole, a full day of science and business sessions that were held on 24 August 2012. The program included time slots for discussion of business matters related to Div V, C27 and C42, and two sessions of 2 hours each devoted to science talks of interest to both C42 and C27. In addition, we had a joint session between Div IV and Div V motivated by the proposal to reformulate the division structure of the IAU and the possible merger of the two divisions into a new Div G. The current report gives an account of the matters discussed during the business session of C42.

2. The Organizing Committee

The new Organizing Committee of C42 was elected through a nomination and e-mail vote procedure carried out by the Organizing Committee during the months prior to the IAU General Assembly in Beijing. The new OC of C42 will consist of Mercedes Richards (President), Theodor Pribulla (Vice-President), Ignasi Ribas (Past President) and members David Bradstreet, Horst Dreschel, Carla Maceroni, Joanna Mikolajewska, Ulisse Munari, Andrej Prša, Colin Scarfe, John Southworth, Shay Zucker and Tomaz Zwitter. The outgoing OC members are Petr Harmanec, Janusz Kaluzny, Panos Niarchos, Katalin Olah, Slavek Rucinski, and Guillermo Torres. All of them are warmly thanked for their dedication and outstanding contributions to the smooth running of C42.

3. Agenda of the business session

Four main points were covered in the business session, namely a brief account of the main activities during the triennium 2009-2012, a recognition of the members who had recently passed away, a review of the Bibliography of Close Binaries publication, the presentation of a proposal for an IAU resolution on solar units, and the possible creation of a new inter-Division Working Group.

The activities in which C42 has participated during 2009-2012 are reported in Transactions XXVIII A. An important event that is worth mentioning here is IAU Symposium 282 "From Interacting Binaries to Exoplanets: Essential Modeling Tools" held in 2011 in Slovakia, which very successfully explored the synergies between the fields of close binaries and exoplanets.

During the past year, C42 has been reviewing the impact of our sponsored publication Bibliography of Close Binaries (BCB). Continuous advances in all areas of information technologies make it necessary to evaluate whether the time and effort expended into bringing new BCB issues to light every 6 months are rewarded with a significant audience. A critical analysis was performed by Andras Holl, from Konkoly Observatory, who manages the C42 website. The report indicates that BCB is downloaded on average about 70 times per month and each BCB issue is downloaded for a total of 500 times before a new issue is published. It is clear that BCB continues to play an important role in present time in spite of the numerous astronomical databases and new means of communication. Given the flood of information and the inability to cope with all the new publications, a good classification of research papers going beyond a mere object index is of great value. Thus, C42 will continue to sponsor BCB and encourage the chief editor Colin D. Scarfe and the rest of his team to continue their excellent work.

The advent of photometric data of exquisite precision has created a need to be extra careful with the use of astronomical constants. This was pointed out by Harmanec & Prša (2011), who called the community to adopt a new set of astronomical parameters to improve the determination of stellar physical properties. The authors also approached C42 to explore the possibility of presenting an IAU Resolution for approval at the IAU GA. This possibility was met with strong interest by the OC of C42 but it was decided to establish contact with several Divisions and Commissions with ties to the numerical quantities that are being redefined. Most notably, some of the changes affected values for key parameters of the Sun. A round of consultations made it clear that there would not be sufficient time to put together a resolution text that could be agreed on by other Divisions and Commissions. It was then decided that the most appropriate course of action would be the creation of an inter-Division Working Group with the mandate to come up with a new set of parameter values that would achieve broader acceptance. Such a Working Group could prepare a resolution text to be approved at the next IAU General Assembly in 2015. In the event of rapid progress, the relevant Commissions and Divisions could release a document with the new parameter definitions to be used in the interim. All these plans were presented during the business session and a brief discussion ensued. There was a clear consensus that moving forward with this initiative was very important, and there was overall support for the creation of a new inter-Division Working Group.

References

Harmanec, P., Prša, A., 2011, *PASP*, 123, 976

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