

DIVISION V **VARIABLE STARS** *ÉTOILES VARIABLES*

Division V provides a joint forum for the study of stellar variability in all its manifestations, whether due to pulsation, surface inhomogeneities, evolutionary changes, or to eclipses and other phenomena specifically related to double and multiple stars.

PRESIDENT	Jørgen Christensen-Dalsgaard
VICE-PRESIDENT	Alvaro Giménez
PAST PRESIDENT	Edward F. Guinan
BOARD	Conny Aerts, Luis A. Balona, Jorge Sahade

DIVISION V COMMISSIONS

Commission 27	Variable Stars
Commission 42	Close Binary Stars

DIVISION V WORKING GROUP

Division V WG	Spectroscopic Data Archiving
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INTER-DIVISION WORKING GROUPS

Division V-IV WG	Active B-type Stars
Division V-IV WG	Ap and Related Stars

PROCEEDINGS BUSINESS MEETING on 16 August 2006

1. Introduction

Division V organized a brief Business Meeting during the IAU XXVI General Assembly, in addition to Business Meetings, reported separately, of the two constituent Commissions. Furthermore, the Division held a longer Science Meeting which covered activities of both Commissions; the list of talks in this meeting, giving a good indication of the scope of the activities within the Division, is included below.

2. Overview of activities and events in the past triennium

With great regret the deaths of four prominent scientists within the research fields covered by the Division were noted: Professor Marcello Rodonó, former president of Division V, in October 2005; Professor Norman Baker, former president of Commission 27, also in October 2005; Professor George Isaak, in June 2005; and Professor John Bahcall, in August 2005. They all made seminal contributions to astrophysics and will be greatly missed, also, by many of the members of the Division, on a personal level.

The scientific activities in Division V predominantly take place through the two Commissions who both have long traditions and a continued high level of activity and a healthy development of the membership. Thus it is proposed to maintain an unchanged Commission structure of the Division. On the other hand, the Working Group on Variable and Binary Stars in Galaxies, established at the previous General Assembly, has not developed as hoped, although the area is certainly relevant and active. It has been decided to continue these activities on an informal

level, while investigating the potential for formalizing them in a Working Group at the next General Assembly. The Working Group on Spectroscopic Data Archiving is discussed below.

The Division was involved in a number of conferences in the past triennium, including substantial activity at the IAU XXVI General Assembly: IAU Symposium No. 239 on *Convection in Astrophysics* and IAU Symposium No. 240 on *Binary Stars as Critical Tools and Tests in Contemporary Astrophysics*, as well as three Joint Discussions at the GA.

The Division and Commission web sites play an important role in the activities of these bodies. We are very grateful to Andras Holl of the Konkoly Observatory for setting up and maintaining these sites.

3. Election of new officers

The elections for officers for the coming triennium resulted in the following Organizing Committee:

- Alvaro Giménez, president
- Steven Kawaler, vice-president, president of Commission 27
- Conny Aerts, Division secretary
- Slavek Rucinski, president of Commission 42
- Michel Breger
- Edward Guinan
- Jørgen Christensen-Dalsgaard, ex officio, past president of Division V.

The president thanked the departing members of the Organizing Committee, Jorge Sahada and Luis Balona for the long contributions to the activities of the Division. In addition he warmly thanked Conny Aerts for unofficially serving as Division secretary during the past triennium, a status now officially recognized. He welcomed the new Organizing Committee, particularly the incoming president, with his best wishes for the activities in the coming period.

4. Discussion items

The discussions during the meeting centered on three key issues, raised in abstracts contributed before the meeting.

(a) *Spectroscopic Data Archiving Working Group, by Elizabeth Griffin*

Abstract: The general improvement in willingness and capability, in more recent times, to make data archiving – at least, saving the bits – an accepted telescope routine has encouraged the WG to move its attention to the worst bottleneck in the present progress, which it has identified as pipeline processing. Accordingly, the WG is now looking for fresh members with specific expertise and experience in that field to join the WG. The objective of the modified WG will be the automatic creation of accessible archives of spectra in scientifically-meaningful units. Members of the WG will be considering and recommending, both generally and specifically, how to establish pipeline processing of spectra in a way that will be efficient, robotic and as “correct” as is possible, benefiting from all extant knowledge about the design and operation of the spectrograph in question.

This was recognized as a natural development of the activities within the Working Group, and Elizabeth Griffin was encouraged to pursue the proposed reorganization. It is evident that these activities are also very closely related to the establishment of ‘Virtual Observatories’, an issue of great prominence at this General Assembly.

(b) *Prospects and problems in cataloging variable stars, by Nikolai Samus*

Abstract: I am planning to speak about the current situation with variable star catalogs. The Moscow GCVS team is continuing its effort but encounters a number of problems. To make the catalog a really GENERAL one, we have to merge it with many new catalogs presented by automatic surveys. We have made the important preliminary step by providing accurate coordinates for virtually all old GCVS stars. Then, the automatic classifications provided in the survey catalogs are too superficial from the GCVS point of view, and the GCVS classification system seems too complex. I will suggest a simpler classification system based on the GCVS experience, having in mind that experts in particular variability types will be able to supplement

it in their specialized catalogs. I need the opinion of the Division for planning the future of the GCVS.

This is an issue common to both Commissions of the Division and it was discussed in both the corresponding Business Meetings. As mentioned in the Commission 27 report, an informal working group will be established to discuss this further, with the aim of setting up an IAU Working Group under Division V at the next General Assembly.

(c) Information Bulletin on Variable Stars, by Katalin Olah

Abstract: The editorial work of IBVS during the past three years will be briefly summarized, with emphasis on the two special, collected papers dealing with discoveries and observations of variable stars, appearing as the last two papers in every 100 issues. The experience in editing such contributions will be discussed. Finally, the appearance of IBVS in electronic databases will be presented.

The highly valuable work of Katalin Olah and the group at the Konkoly Observatory in maintaining this important publication was greatly appreciated by the meeting.

5. Division V science meeting

The science meeting was held on 17 August, 9:00-15:30 hr. The following talks were presented:

- Welcome (Jørgen Christensen-Dalsgaard, Denmark)
- Characteristics of post-outburst novae spectra: the Quadratic Zeeman Effect? (Robert Williams, USA)
 - RS Ophiuchi and its 6th(?) outburst (Stuart Eyres, UK)
 - Evidence for precession of a white dwarf in a close binary system (Gaghik Tovmassian, Mexico)
 - A complete study of the pulsating eclipsing binary (Haili Hu, the Netherlands)
 - Productivity and impact data on binary and variable star astronomy (Virginia Trimble, USA)
 - UU Cnc and BM Cas: two long-period eclipsing binaries involving supergiant primaries: intrinsic variability as a circumstantial evidence on on-going common envelope activity (Izold Pustynnik, Estonia)
 - Evidences of the donor star heating in precessional and orbital variabilities of SS 433 (T. Irsamambetova, Russia)
 - A study of two peculiar interacting binaries from NURO observations: VV CVn and V965 Cygni (Ron Samec, USA)
 - Creating a statistically significant sample of stars showing the flip-flop phenomenon (Heidi Korhonen, Germany)
 - Light curves and high-resolution spectroscopy of Blazhko stars (Katrien Kolenberg, Austria)
 - Long-term photometric monitoring with the MERCATOR telescope (Peter De Cat, Belgium)
 - Amplitude variability and pulsation (Michel Breger, Austria)
 - Spatial asymmetry and temporal aperiodicity in bright Mira variables (Lee Anne Willson, USA)
 - Summary of the meeting (Jørgen Christensen-Dalsgaard, Denmark)

6. Closing remarks

The incoming president expressed his appreciation of the work done by the present Organizing Committee during the last triennium to foster the development of the field and the cooperation between scientists working in different areas. Concerning the activities for the next three-year period, he identified two areas as requiring special attention by the Division: the emerging activities in the study of pulsating stars in binary systems and the cataloging and classification of variable stars coming from large surveys.

Jørgen Christensen-Dalsgaard
president of the Division