

SPS3: Epilog

Brian D. Mason and William I. Hartkopf

United States Naval Observatory

Abstract. Events and actions transpiring after SPS3 are detailed here.

1. Resolution

During SPS3 the following resolution was presented and ratified:

On Designating Components of Binary/Multiple Star Systems

Recognizing

- the increasing synergy of techniques for the investigation of stellar companions blurring the traditional distinction between astrometric, spectroscopic, and photometric binary and multiple stars;
- the detection of sub-stellar (including planets) as well as stellar components by these techniques and,
- the need for a simple, unambiguous, flexible, and computer friendly designation scheme for components of binary and multiple star systems,
- Noting that future ground and space-based telescope projects have the potential to detect both sub-stellar as well as stellar components in increasingly large numbers,

Recommends that

- a uniform designation scheme, based on expansion of the Washington Multiplicity Catalog (WMC) system, be developed during the next 3 years to include all types of components and that this be reviewed in time for its adoption to be considered at General Assembly XXVI.

This resolution was adopted at the Sydney GA by Commissions 5 (Documentation & Astronomical Data), 8 (Astrometry), 26 (Double & Multiple Stars), 42 (Close Binary Stars), 45 (Stellar Classification) and the Working Group on Optical and Infrared Interferometry.

2. Changes to WMC, Post-SPS3

To accommodate the desire for a fixed designation but also give the most correct interpretation of multiplicity structure there will be two component designation columns. The first will be the “**official**” **component designation**, which, as per Commission 5 guidelines, will remain fixed in order to avoid confusion when dealing with historical data. The second will be our “**best-guess**” **component designation**, based on our current knowledge of a system’s hierarchical structure. Designations in this “data column” may change as new components are discovered or additional information is published on known components.

3. WMC Working Group

At the suggestion of Colin Scarfe (President, Commission 26), a working group was formed within Division IV for the implementation and completion of the WMC prior to the Prague GA. The initial working group membership consists of W. Hartkopf, B. Mason (chair), D. Pourbaix, C. Scarfe, M. Schmitz, and A. Tokovinin. About a year before IAU GA XXVI, the WMC WG will present to the SOC the all-sky WMC in preparation for a type B resolution to be presented in Prague. At that time, following new IAU bylaws, the future needs and prospects of this Working Group will need to be evaluated to determine if it needs to be renewed or should dissolve.

A few of the questions to be addressed by the WG include:

1. What additional sources of duplicity information have been published?
2. How can we be kept informed of discoveries in other fields of binary star research?
3. The sample WMC assumed separations greater than $\sim 1''$ were possibly optical, so no hierarchies were assigned (i.e., all components were given uppercase letters). What should we adopt as the official optical/physical limit? Should we use, for example, the Aitken magnitude-separation criteria? What about common proper motion pairs?
4. What should we adopt as the official definition of “primary”? Is the suggested priority — most massive \rightarrow brightest in V \rightarrow brightest in another filter — reasonable? If the system includes a variable star, is the peak or median brightness more appropriate?

4. Acronym WMC

The acronym **WMC** is classified as a new acronym being registered at CDS (see <http://vizier.u-strasbg.fr/cgi-bin/Dic?/6947579>).

5. WMC Websites

Further information on the WMC can be found at the following websites.

- http://ad.usno.navy.mil/wds/wmc/iaumcm_old.html - Archival webpage for 2000 Multi-Commission Meeting at IAU GA XXIV
- <http://ad.usno.navy.mil/wds/wmc/sps3.html> - Special Session 3 webpage for IAU GA XXV
- <http://ad.usno.navy.mil/wds/newwds.html> - WMC designation scheme and Working Group webpage
- http://ad.usno.navy.mil/wds/wmc/wmc110_intro.html - Sample WMC
- http://ad.usno.navy.mil/wds/wmc/wmc_descrip.txt - Description of WMC
- http://ad.usno.navy.mil/wds/wmc/wmc_timeline.txt - WMC development timeline

Acknowledgments. In addition to the participants, organizers, and presenters of SPS3, we'd like to thank the Sydney LOC for a wonderful venue with the most agreeable of hosts, especially our local liaison, John Davis.