

A PROPOSAL FOR NON-AMBIGUOUS DESIGNATION OF STARS AND STELLAR OBJECTS

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Summary : The number of new lists of stars and stellar objects published each year increases rapidly. From the designation of a star it is often difficult to trace back the original list or the basic data relevant to the star or stellar object. Designations are sometimes ambiguous. A few proposals are presented to try to improve the present situation.

The number of new lists of stellar objects or stars appearing in the literature increases from year to year with an amazing rate and these lists are not always properly referred. It is therefore more and more difficult for the astronomer to establish cross-references, especially when he is gathering information in a field which is not his own specialized field. For instance the nomenclature of X-Ray Sources is somewhat confusing (Dolan, 1976). On the other hand it is more and more useful to gather information from various specialized fields. An effort has therefore to be made, to keep as clear as possible the designation of stars and stellar objects.

To illustrate the problem, may I quote the designation "W175" which in addition to the identifications quoted by Collins (see his paper in this Colloquium) may represent the star Wolf 175 (Wolf, 1913) the star Woolley 175 (Woolley, 1970) or the star Wray 175 (Wray, 1966).

After discussion with F. Ochsenbein, who is frequently confronted to this problem at the Centre de Données Stellaires (Stellar Data Center) in Strasbourg, I conclude that the simplest rule (and therefore the first step to make) is the following : when a star or stellar object is quoted in a paper from a number in a list or a

catalogue, the list or the catalogue should appear with its complete bibliographic reference among the other references.

Of course, I don't advocate the appearance of the complete reference of the Henry Draper Catalogue, as soon as an HD star is quoted. But why? Because this catalogue is very well known. So that the complement of this rule follows by itself : the basic lists or catalogues are gathered in a table, with approved abbreviations, worked out in such a way as to avoid any ambiguity. This would enable to quote stars and stellar objects in very well known lists or catalogues without writing down the complete bibliographic reference (and even somebody not knowing astronomy enough to know the Henry Draper Catalogue, could have there a way for learning what the mysterious initials HD are meaning!). In my opinion, Commission 5 of I.A.U could build such a table of catalogues and abbreviations. Then any designation of a star or a stellar object could easily be traced back : either from the I A U table or from the bibliographic references at the end of the paper.

Of course, the I.A.U. table can be easily increased, each 3 years for instance, so that any catalogue or list becoming "basic" can be added to the list of the basic catalogues.

This proposal is not the complete solution of the problem, but only a first step. Of course, this step could be improved. For example, rather than the original list from which the star is named, another list giving more precise data or more data could as well be recommended: for instance, a proper motion star of the list of Wolf has probably better parameters in modern lists than in Wolf's original list, although it retains its name after Wolf's list. It is always possible to add a note referring to a catalogue better than the original one, either in the I.A.U table or in the bibliographic references. But this is another problem, and I think that the main one is to avoid any ambiguity, and for keeping with simple things I suggest to stay with the proposal which could be summarized by : you are urged to write down the references of the lists or catalogues which are quoted in your papers and are not yet basic enough to appear in the I.A.U table. Some practical problems remain, such as "how to build up the I.A.U table". This is to be decided upon agreement between the astronomers, but for the stellar catalogues, a first basis for the discussion could be the table of the catalogues which appear as the most frequently quoted in the statistics of the Strasbourg Stellar Data Center.

Dolan, J.F. 1976, *The Observatory*, 96,66.

Wolf, M. 1913, *Ver. Sternw. Heidelberg*, 7, n° 10.

Woolley, R.v.d.R., Epps, E.A., Penston, M.J., Poccock, S.B. 1970, *Roy. Obs. Ann.* n° 5.

Wray, J.D. 1966, *Dissertation*, Northwestern University, Evanston, Illinois, reproduced by University Microfilms, Ann Arbor, Michigan.