

CONTRIBUTED PAPERS

THE MICROFICHE OF STANDARD STARS

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We are preparing a microfiche, at the Stellar Data Center in Strasbourg, concerning standard stars in various systems which will be included with the proceedings of this meeting. In the first part of the microfiche we will present a list of stars which are standards in spectroscopic, photometric systems or for which fundamental determinations of temperature, gravity, radius or mass have been made or for which spectrophotometry has been done, fluxes measured or [Fe/H] determined. If a star is a standard in one of these systems an X will be placed in the column opposite its name.

Part two of the microfiche will contain the lists of the standard stars in each system, with V magnitude, positions (1950) and the parameters of each system listed. Part three of the microfiche will contain lists of the standard stars in each system, sorted by the parameters of the system so that one can pick out stars with specified values of the parameters.

The systems originally picked for coverage are:

Spectroscopic Standards

1. MK Types
2. Radial Velocities
3. $V \sin i$
4. Equivalent Widths

Photometric

1. UBV
2. Four-Color
3. Geneva
4. DDO
5. H_{α} , H_{β} , H_{γ}
6. Infrared

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7. Ultraviolet
8. Polarization
9. Vilnius
10. Walraven

Fundamental Parameters

1. Temperatures
2. Gravity
3. Radius
4. Mass

Other

1. Flux Measurements
2. Spectrophotometry
3. [Fe/H]
4. Magnetic Stars

Appendix

1. Solar Analogs
2. Binaries with well studied properties
3. Clusters with well derived distances

Many of these lists are already on file at the Stellar Data Center, other lists have been requested during the last few months. An effort will be made during the meeting to complete the lists and to take suggestions concerning the data to be displayed in the microfiche. Please contact either author if you wish to make a comment. Reidel has agreed to include the microfiche in a pocket on the back cover of the proceedings volume.

DISCUSSION

PHILIP: The original plan was to have a preliminary version of the microfiche ready in time for this meeting. This has not been possible, but the Stellar Data Center is working on preparing the microfiche of standard stars. When a preliminary version is ready, copies will be mailed to all participants of the symposium so that they will have a chance to comment on the organization of the microfiche and the data that it contains.

The photometric standard star data are pretty well in hand. Infrared photometry does not yet have suitable standards. We have sources for spectroscopic standard data (radial velocities - Batten, Vsini - Slettebak, equivalent widths - Cayrel). Concerning the listing of stars with fundamental parameters determined we should list "stars with well determined values" of mass, temperature, gravity etc. The review article by Popper can be used for most of these, supplemented by the list by Davis of well observed angular diameters. Other quantities with which we are concerned are flux measurements and [Fe/H]. Dr. Cayrel has promised a list of the best observed stars for abundance.

BESSELL: The Cayrel catalogue has no "censorship"?

PHILIP: Only the very best observed stars are being selected. In the appendix to the microfiche we will list solar analogs, binaries with well-studied properties and clusters with good distances.

JASCHEK: The CDS is willing to produce the microfiche and to add it to the proceedings of this symposium. We would like to get from the astronomers present explicit instructions as to what lists of standards to use, in order to complete work on the microfiche as soon as possible. This is not an attempt to force anyone to use any set of standard values, it is only to help astronomers locate standard data.

PHILIP: I agree. This information is important to us.

HAYES: You have mentioned catalogues of spectrophotometry; Breger, or Ardeberg and Virdefors. You should use the lists of secondary standards by Taylor and by Glushneva.

JASCHEK: Yes.

GARRISON: It would help if you would classify the lists as primary standards, secondary standards, etc. instead of generally listing the stars as standard stars.

JASCHEK: I emphasize that the lists of standard stars must be prepared by specialists.

MISSANA: For the spectra of fundamental stars I would express the hope that in the future accurate wavelengths, central intensities and

equivalent widths will be available.

BESSELL: Concerning IR standards, the AAT-CTIO values of Koorneef are available.

HAYES: I said that because the major systems are very filter dependent and they differ from observatory to observatory. There are several of them and certainly the Kitt Peak system is a major one. But the filter transmissions and list of stars has not been published. The others, as you say, are available and have been published. Koorneef's is a compiled system and attempts to reproduce the Johnson system, so it is different from the others. I have been encouraging my colleagues to prepare the data for publication.

BOHLIN: How about including UV spectrophotometric standards in the microfiche of standards? I suggest the use of the stars which have been well observed during the first year of IUE operations. The data obtained during this time period was used to define the IUE calibrations, so that the question of IUE sensitivity changes is not relevant. These data cover the range 1160 to 3250 Å. The appropriate stars are:

HD 60753	B3
HD 93521	O9 Vp
BD +28° 4211	Op
BD +75° 235	sd0
BD +33° 2642	B2 IV

Extension of fluxes to shorter wavelengths might be provided by Polidan for the hotter of these sources. Errors in these fluxes should not exceed about 10% for the wavelengths longward of 1250 Å.