SPECTRAL CLASSIFICATION OF B AND A STARS FROM THE LINE FEATURES OF S2/68 SPECTRA

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The experiment S2/68 has supplied a large number of early type spectra in the wavelength region 1350-2730 A. The resolution is 37 A, which is about equivalent to a reciprocal dispersion of 1850 A/mm. We had at our disposal about one thousand spectra of stars brighter than 6^m5.

The availability of such material has lead us to establish a spectral classification system based only upon features visible in the spectrum. A second step was to compare this system to the MK classifications.

It turned out to be easy to establish a temperature sequence based upon convenient intensity ratios of line features and somewhat more difficult to establish luminosity criteria. Among the B type stars it is possible to distinguish main sequence objects, supergiants and intermediate objects.

The scheme has been applied to all spectra available, except those where considerable reddening is present. The results show a satisfactory coincidence with MK classifications.

The possibility of detecting peculiar spectra was also examined and the following results seem well established: a) Be stars cannot be segregated from stars of intermediate luminosity ; b) Ap stars (except those of the Mn type) can be segregated ; c) Am stars can be detected.

The complete results will be published in Astronomy and Astrophysics.

Edith A. Müller (ed.), Highlights of Astronomy, Vol. 4, Part II, 303.