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REPORT OF THE COMMITTEE ON STANDARD VELOCITY STARS

A suitable number of Standard Velocity Stars of spectral types F to M appears to be provided by the lists in the report of (former) sub-commission 30a (*Trans. IAU*, **9**, 411, 1955). It is worthwhile however, to continue surveillance of these stars and additional observations should be made, if possible, with very high dispersion. The coude spectrograph at Victoria will be used to obtain additional radial velocities for some of the stars. Radial velocities of four standards have been determined by F. Gutmann at Victoria with coude dispersion of 5.5 Å/mm. The results are:

β Geminorum	+ 3.1 \pm 0.2 km/sec
α Bootis	- 5.4 \pm 0.2 ,,
γ Aquilae	- 1.4 \pm 0.3 ,,
ι Piscium	+ 5.5 \pm 0.2 ,,

Solar wavelengths are used for the stellar lines and iron arc standards as recommended by Commission 14 (*Trans. IAU*, **9**, 218, 1955) for comparison lines. The radial velocity of γ Aquilae, above, is not in good agreement with the recommended value and may be variable.

The emphasis on velocity standards is now shifting to the important matter of the inter-comparison of results obtained in the southern, and northern, hemispheres. An investigation by D. S. Evans on 'Radial Velocity Measures of Standard Stars with the Radcliffe Coude Spectrograph' (in press) has shown that no systematic difference exists between northern and southern stars. W. Buscombe and P. M. Morris similarly have found agreement between Mt. Stromlo velocities (*M.N. RAS*, **118**, 609, 1958) of southern solar-type stars and those previously published. Radial velocities of thirty-five B stars observed at Pretoria and Victoria show excellent agreement between the two sets (*Publ. Dom. astrophys. Obs.*, **12**, 1, 1962). There is thus reason to believe that the northern and southern radial-velocity systems agree, but comparisons should be continued.

Evans and Heard have begun velocity determinations of the stars HD 171391, and HD 212943, from Pretoria and Toronto, respectively. This joint program should produce valuable information concerning values obtained for stars at low altitudes compared with those observed near the zenith.

The Mt. Stromlo group has proposed the inclusion of B- and A-type stars in the list of Standard Velocity stars. They remark that, because of blending effects, solar-type spectra are unsuitable when observed with very low dispersion. The problem has been discussed in previous reports and early-type stars were not recommended as standards because (*a*) their spectra do not ordinarily lend themselves to accurate measurement, and (*b*) variable velocity is very common in the B, and A, stars. The problem should be discussed again at the forthcoming meeting and a list of proposed standards prepared. A cooperative observing plan should be instituted before deciding upon definite recommendations if it is decided that early-type stars should be included among the standard velocity stars.

J. F. HEARD

President of the Committee