The H.D. magnitude of the combined light of the components is 8m.5, while four photovisual plates taken with the Leiden 33 cm refractor by the writer and measured in a Schilt photometer gave 7m.83 ± 0m.08 (m.e.). Two gratings giving a difference of nearly one and four magnitudes between the central image and the first order spectra were used respectively. The magnitudes of the comparison stars (17 Cygni and B.D. + 33°3602) were taken from *Publ. Ap. Obs. Potsdam*, Bd. 13, 421, 1899. Considering both components equally bright with a combined magnitude of 7m.83 and with spectra K5 we derive by means of Russell’s tables (A.J. No. 930, 39, 1929) the dynamical parallax 0°117. It is to be noted that this value differs significantly from the adopted trigonometric parallax 0°048 ± 0°008 (m.e.). Burbham suggested that this star is physically connected with the neighbouring double star 17 Cygni (52° following, 7° north), which has a trigonometric parallax of 0°045 ± 0°006 (m.e.) and a dynamical parallax of 0°050 (cf. the following paper). However, since a parallax of 0°050 would lead to an impossible value of the combined mass of Σ 2576 this physical connection must be questioned; moreover a difference of 0°020 in their annual proper motions is present.

According to the ephemeris stated above the pair will become very close in 1940. The equality of the brightness of the components will make it an excellent object for interferometer measures near periastron.

It should be of interest to get determinations of the radial velocities during the same period, although the close approach will disturb the accuracy of the measures. From the accompanying diagram, which has been computed for a parallax of 0°100, it is seen that there will be a jump of 35 km/sec in the relative radial velocities in the year of the periastron passage.

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The difference in radial velocity between the components.

The dynamical parallax of 17 Cygni, by K. Aa. Strand.

Σ 2580 = Bu.G.C. 9617 = A.D.S. 12913
R.A. (1900): 19h42m.6
Decl. (1900): + 33°30'
Spectra: F3, K6 (Mt. Wilson Contr. No. 511)

During the preparation of the preceding paper on the orbit of Σ 2576 it was of interest to get a new determination of the dynamical parallax of 17 Cygni. The observations from 1832 to 1926 were taken from the lists given by Lewis (Memoirs R.A.S. Vol. 56, 1906) and Arken (Catalogue of double stars) and combined into 10 normal places. An eleventh place was obtained from the measures on two photovisual plates taken by the writer with the Leiden 33 cm refractor in 1937. A coarse grating

position angle: 71°45' ± 0°049 (t − 1900) − 0°0004 (t − 1900)^2
(mean error) (± 0°09) (± 0°002)
distance: 25°82 ± 0°028 (t − 1900) + 0°002 (t − 1900)^2
(mean error) (± 0°03) (± 0°009)

From this motion, the combined visual magnitude 5m.00 and the spectra F3 and K6, we get by means of Russell’s tables (A.J. No. 930, 39, 1929) the dynamical parallax 0°050, which value is somewhat larger than that derived by Russell and Miss Moore (I.C. p. 200), viz. 0°044.