

INFRARED PHOTOMETRY FOR STARS IN THE HYADES MAIN SEQUENCE

Braulio Iriarte Erro

The Hyades main sequence stars have been used as "standard stars" and provide the basis for comparison with other objects, therefore, it is of great importance to determine with high precision their infrared colors.

Already Johnson, MacArthur, and Mitchell (1968) have reported the result of their broad band photoelectric observations of a group of stars in the Hyades main sequence. In an effort to increase the accuracy of the colors for this group of objects they were re-observed by the author in the infrared filters JHKL of effective wavelengths of 1.25 μ , 1.62 μ , 2.2 μ and 2.4 μ , respectively, at the Catalina Station of the Lunar and Planetary Laboratory, with Johnson's photometric equipment attached to the 60" reflector. In this note the weighted mean values of the new and the previous observations are given in Table 1. The columns contain: (1) the van Bueren number (van Bueren 1952); (2) the spectral type from Morgan and Hiltner (1965); (3)-(7) UBVRI photometry from Johnson, MacArthur and Mitchell (1968); (8)-(11) JHKL photometry.

In the course of the observations the giant stars van Bueren 28, 41, 70 and 71 were also observed and the results appear in Table 1 together with the main sequence stars.

TABLE 1
Observational Data

No.	Sp	V	U-V	B-V	V-R	V-I	V-J	V-H	V-K	V-L
15	G3 V	8.09	.86	.66	.56	.89	1.17	1.50	1.58	1.66
25	K3 V	9.60	1.79	.99	.78	1.26	1.57	2.13	2.24	2.48
28	K0 III	3.65	1.80	.99	.73	1.20	1.59	2.08	2.09	2.29
30	F0 V	5.59	.36	.28	.28	.43	.55	.64	.69	.81
32	F2 V	6.11	.40	.37	.37	.57	.77	.94	.95	1.04
33	A9 V	5.26	.32	.22	.23	.35	.40	.50	.54	.54
34	F6 V	6.17	.48	.46	.42	.67	.79	.99	1.04	1.05
41	K1 III	3.76	1.81	.99	.73	1.20	1.57	2.01	2.14	2.33
43	K2 V	9.40	1.52	.91	.74	1.26	1.69	2.14	2.29	2.40
50	G1 V	7.62	.72	.60	.52	.89	1.11	1.40	1.51	1.52
52	G1 V	7.80	.73	.60	.52	.86	1.13	1.33	1.43	1.46
54	A7 V	4.22	.26	.14	.16	.21	.29	.33	.32	.28
65	F8 V	7.42	.60	.54	.47	.75	.90	1.17	1.23	1.25
69	G8 V	8.64	1.08	.75	.58	.95	1.15	1.56	1.58	1.68
70	K1 III	3.54	1.88	1.01	.73	1.23	1.61	2.08	2.16	2.33
71	G9 III	3.83	1.67	.95	.71	1.18	1.54	2.03	2.11	2.18
72	A7 IVn	3.39	.30	.18	.18	.27	.24	.36	.43	.44
78	F6 V	6.92	.45	.45	.41	.66	.86	1.09	1.15	1.15
79	K0 V	8.96	1.32	.83	.65	1.06	1.44	1.82	1.95	2.02

REFERENCES

- Bueren, H. G. van 1952. *B. A. N.*, **II**, No. 432.
 Johnson, H. L., MacArthur, J. W., and Mitchell, R. I. 1968. *Ap J.*, **152**, 465.
 Morgan, W. W., and Hiltner, W. A. 1965. *Ap J.*, **141**, 177.