

PRELIMINARY LIST OF PHOTOELECTRIC CLASSIFICATION INDICES FOR 234 BRIGHT NORTHERN G AND K STARS

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ABSTRACT

A list is given of values for the classification indices k (K-line index), g (G-discontinuity index), and n (cyanogen index) for 234 bright northern G and K stars. The indices were determined through photoelectric photometry with interference filters made with a 10-inch reflector at the Sophienholm station of the Copenhagen Observatory.

In Table 1 are tabulated values for the classification indices k , n , and g as defined in B. Strömgren and K. Gyldenkerne (*Ap. J.*, in preparation), according to observations made by the author with a 10-inch reflector at the Sophienholm station of the Copenhagen Observatory.

The first four columns give the "Revised Harvard Photometry" or "Bright Star" number and the star name and co-ordinates of the star (1900.0). The remaining columns are: (5) visual magnitude; (6) spectral class and luminosity class in the Yerkes MK system. The sources are as follows: "JM," H. L. Johnson and W. W. Morgan, *Ap. J.*, **117**, 320, 1953; "MHJ," W. W. Morgan, D. L. Harris, and H. L. Johnson, *Ap. J.*, **118**, 92, 1953; "M," W. W. Morgan, private communication; (7) number of nights on which the star has been measured; (8) $k = 2.5 [\log I(3910) - \log I(4030)] + \text{const.}$, K-line index; (9) $n = 2.5 [\log I(4240) - \log I(4170)] + \text{const.}$, cyanogen index; (10) $g = 2.5 [\log I(4360) - \log I(4240)] + \text{const.}$, G-discontinuity index; (11) "hv" indicates that the star is a high-luminosity star according to P. C. Keenan and G. Keller, *Ap. J.*, **117**, 241, 1953.

The observations are discussed in the paper by B. Strömgren and K. Gyldenkerne, quoted above.

Table 1

Photoelectric Classification Indices for 234 Bright Northern G and K Stars

HR		(1900)		m	Sp		N	k	n	g	
163	ϵ And	0 ^h 33 ^m 3 ^s	+28 ^o 46'	4.5	G8 III p	M	3	0 ^m 432	0 ^m 081	0 ^m 220	hv
165	δ And	0 34.0	30 19	3.5	K3 III	M	3	.149	.300	.393	
166	ζ Psc	0 34.2	20 43	6.1	K0 V	JM	2	.344	.117	.256	
168	α Cas	0 34.8	55 59	2.5	K0 II-III	M	10	.222	.281	.318	
175	β And	0 35.7	38 55	5.4	G8 III		2	.365	.144	.240	
244		0 47.1	60 34	4.9	F8 IV		1	.603	.083	.155	
253	ν^1 Cas	0 49.1	58 26	4.9	K2 III		1	.200	.245	.352	
265	ν^2 Cas	0 50.7	58 38	4.8	G8 III-IV		2	.341	.121	.256	
285		0 55.0	85 43	4.5	K2 III	M	2	.180	.288	.348	
294	ϵ Psc	0 57.7	7 21	4.4	K0 III		3	.327	.138	.267	
321	μ Cas	1 1.6	54 26	5.3	G5 V p	JM	1	.552	.045	.190	hv
351	χ Psc	1 6.1	20 30	4.9	G8 III	M	2	.309	.211	.270	
352	τ Psc	1 6.1	29 34	4.7	K0 III-IV		2	.245	.215	.309	
360	ϕ Psc	1 8.3	24 03	4.6	K0 III		3	.291	.214	.296	
390	ξ And	1 16.4	45 00	5.0	K0 III-IV		2	.238	.224	.312	
430	η And	1 24.1	46 30	5.3	G9 III	M	4	.293	.207	.274	
434	μ Psc	1 24.9	5 38	5.1	K4 III	M	2	.085	.248	.396	
437	η Psc	1 26.1	14 50	3.7	G8 III	JM	2	.339	.190	.250	
442	γ Cas	1 27.4	58 43	4.9	G8 III	M	2	.321	.160	.251	
458	ν And	1 30.9	40 54	4.2	F8 V	JM	2	.606	.079	.150	
464	ζ And	1 31.9	48 07	3.8	K3 III	JM	3	.165	.288	.366	
469	χ And	1 33.3	43 52	5.2	G8 III		4	.393	.143	.242	
483		1 35.7	42 07	5.1	G2 V	JM	1	.562	.075	.175	
489	ν Psc	1 36.2	4 59	4.7	K3 III		2	.124	.270	.425	
493	107 Psc	1 37.1	19 47	5.3	K1 V	JM	2	.372	.071	.248	
510	σ Psc	1 40.1	8 39	4.5	G8 III	M	2	.335	.187	.255	
511		1 40.5	63 22	5.7	K0 V	MHV	2	.420	.084	.246	
549	ξ Psc	1 48.4	2 42	4.8	K0 III		3	.312	.178	.272	
592	η Cas	1 56.0	75 38	5.3	G8 III		3	.348	.180	.258	
617	α Ari	2 1.5	22 59	2.2	K2 III	JM	4	.208	.211	.324	
643	60 And	2 6.9	43 46	5.1	K4 III		2	.125	.292	.444	hv
645		2 6.9	50 36	5.4	K0 III		2	.354	.201	.254	
694	64 And	2 17.8	49 33	5.5	G8 III	M	3	.316	.187	.262	
743		2 28.5	72 23	5.3	G8 III		3	.371	.161	.234	
800	14 Per	2 37.6	43 52	5.6	G0 Ib	M	3	.447	.146	.203	
824	39 Ari	2 41.9	28 50	4.6	K1 III	M	2	.216	.235	.319	
843	17 Per	2 45.3	34 39	4.7	K5 III		1	.138	.268	.462	
882	24 Per	2 52.9	34 47	5.0	K2 III	M	2	.188	.246	.351	
918		2 58.0	56 19	5.1	K0 II-III		2	.290	.192	.272	
941	κ Per	3 2.7	44 29	4.0	K0 III		3	.292	.210	.283	
947	ω Per	3 4.8	39 14	4.8	K0 III	M	2	.245	.230	.311	
951	δ Ari	3 5.9	19 21	4.5	K2 III		2	.282	.198	.292	
969		3 9.0	50 34	5.3	G5 II	M	4	.354	.198	.253	
999		3 14.3	28 41	4.7	K4 III	M	2	.121	.315	.434	
1017	α Per	3 17.2	49 30	1.9	F5 Ib	JM	21	.610	.100	.112	
1030	σ Tau	3 19.4	8 41	3.8	G8 III	JM	2	.364	.154	.252	
1052	σ Per	3 23.5	47 39	4.5	K3 III	M	3	.128	.257	.402	
1135	ν Per	3 38.4	42 16	3.9	F5 II	M	2	.656	.099	.089	
1256	37 Tau	3 58.8	21 49	4.5	K0 III		2	.248	.228	.311	
1303	μ Per	4 7.5	48 09	4.3	G0 Ib	M	1	.460	.160	.208	
1327		4 11.3	64 54	5.4	G5 III	M	2	.428	.135	.210	
1343	54 Per	4 13.9	34 20	5.1	G8 III		2	.336	.195	.270	
1346	γ Tau	4 14.1	15 23	3.9	K0 III	JM	2	.359	.180	.252	
1348	ϕ Tau	4 14.2	27 07	5.1	K1 III		2		.184	.335	
1373	δ Tau	4 17.2	17 18	3.9	K0 III	JM	5	.292	.216	.266	
1396	π Tau	4 20.9	14 29	4.9	G8 III	M	2	.325	.189	.252	
1407	75 Tau	4 22.7	16 08	5.3	K2 III	M	2	.222	.221	.320	
1409	ϵ Tau	4 22.8	18 58	3.6	K0 III	JM	5	.292	.225	.291	
1411	θ^1 Tau	4 22.9	15 44	4.0	K0 III	M	2	.349	.198	.257	
1523		4 41.6	81 02	5.3	K3 III		2	.146	.258	.385	

Table 1 (continued)

HR		(1900)	m	Sp	N	k	n	g			
1577	ϵ Aur	4 ^h 50 ^m 5	+33°00'	2.9	K3 II	M	3	0 ^m 14 ^s 7	0 ^m 32 ^s 0	0 ^m 43 ^s 2	hv
1603	10 Cam	4 54.5	60 18	4.2	G0 Ib	M	1	.461	.152	.196	
1729	λ Aur	5 12.1	40 01	4.9	G0 V	JM	2	.558	.065	.170	
1739	109 Tau	5 13.3	22 00	5.1	G8 III		2	.359	.172	.256	
1907	ϕ^2 Ori	5 31.4	9 14	4.4	G8 III p	M	2	.371	.105	.244	
1963	51 Ori	5 37.3	1 26	5.2	K0 III	M	2	.224	.184	.308	
1995	τ Aur	5 42.2	39 09	4.6	G8 III		2	.371	.161	.251	
2002	132 Tau	5 42.9	24 32	5.0	G8 III		2	.354	.234	.289	
2012	ν Aur	5 44.6	39 07	4.2	K0 III		2	.230	.248	.320	
2047	χ^1 Ori	5 48.5	20 16	4.6	G0 V	M	2	.595	.062	.178	
2077	δ Aur	5 51.3	54 17	3.9	K0 III	JM	9	.286	.190	.275	
2152	37 Cam	6 1.2	58 57	5.4	G8 III		2	.300	.185	.274	
2219	κ Aur	6 9.0	29 32	4.4	G8 III		3	.300	.154	.260	
2289	ψ^1 Aur	6 17.2	49 20	5.1	M0 Iab	M	1	.192	.349	.474	
2427	ψ^2 Aur	6 32.2	42 35	5.1	K3 II-III	M	2	.178	.266	.345	
2459	ψ^4 Aur	6 35.8	44 37	5.2	K5 III	M	2	.104	.292	.472	
2473	ϵ Gem	6 37.8	25 14	3.2	G8 Ib	M	3	.174	.350	.379	
2477	13 Lyn	6 38.3	57 16	5.5	K0 III-IV	M	2	.332	.148	.260	
2478	30 Gem	6 38.4	13 20	4.6	K1 III		2	.202	.239	.336	
2487	ψ^6 Aur	6 40.0	48 54	5.3	K1 III		2	.236	.246	.308	
2506	18 Mon	6 42.6	2 31	4.7	K0 III		2	.235	.220	.344	
2516	ψ^7 Aur	6 43.7	41 54	5.0	K3 III	M	2	.174	.279	.349	
2527		6 45.5	77 06	4.7	K4 III		2	.128	.321	.432	
2649		6 58.1	11 06	5.2	K3 III		2	.103	.302	.426	
2697	τ Gem	7 4.8	30 25	4.5	K2 III		2	.172	.272	.380	
2715	18 Lyn	7 7.2	59 49	5.3	K2 III		2	.249	.215	.316	
2793	65 Aur	7 15.4	36 57	5.2	G8 III		2	.284	.181	.302	
2805	66 Aur	7 17.2	40 52	5.3	K0 III	M	2	.216	.235	.341	
2808	57 Gem	7 17.4	25 15	5.1	G8 III		2	.390	.125	.248	
2821	ϵ Gem	7 19.5	28 00	3.9	K0 III	M	3	.293	.181	.274	
2864	6 CMi	7 24.2	12 13	4.8	K2 III		2	.165	.276	.382	
2990	β Gem	7 39.2	28 16	1.2	K0 III	JM	5	.292	.198	.279	
3149	χ Gem	7 57.4	28 04	5.0	K2 III		2	.235	.246	.334	
3176	μ Cnc	8 1.9	21 52	5.4	G2 IV		2	.519	.062	.176	
3249	β Cnc	8 11.1	9 30	3.8	K4 III	JM	4	.086	.285	.445	
3275	31 Lyn	8 16.0	43 31	4.4	K5 III		2	.078	.296	.472	
3403	π^2 UMa	8 31.5	64 41	4.8	K2 III	M	2	.207	.210	.330	
3418	σ Hya	8 33.5	3 42	4.5	K2 III		2	.195	.284	.355	
3461	δ Cnc	8 39.0	18 31	4.2	K0 III		2	.248	.220	.320	
3508	35 Lyn	8 45.3	44 06	5.2	K0 III		2	.332	.145	.245	
3547	ζ Hya	8 50.1	6 20	3.3	K0 II-III	M	5	.313	.196	.280	
3612		9 0.2	38 51	4.7	G8 Ib-III		2	.318	.209	.274	
3627	ξ Cnc	9 3.6	22 27	5.2	K0 III		2	.314	.215	.280	
3731	κ Leo	9 18.8	26 37	4.6	K2 III		2	.188	.249	.357	
3751		9 22.9	81 46	4.6	K3 III		2	.145	.341	.436	
3771	24 UMa	9 25.6	70 16	4.6	G2 IV	M	2	.476	.100	.209	
3773	λ Leo	9 26.0	23 25	4.5	K5 III		2	.110	.299	.498	
3800	10 LMi	9 28.1	36 51	4.6	G8 III		3	.375	.160	.243	
3815	11 LMi	9 29.7	36 16	5.5	G8 IV-V	JM	2	.416	.090	.225	
3839	27 UMa	9 33.8	72 42	5.4	K0 III		2	.272	.234	.284	
3851	43 Lyn	9 35.8	40 13	5.5	G8 III		2	.344	.184	.263	
3873	ϵ Leo	9 40.2	24 14	3.1	G0 II	M	3	.459	.127	.202	
3905	μ Leo	9 47.1	26 29	4.1	K2 III		2	.152	.318	.380	
4126		10 26.6	76 14	5.0	K0 III		2	.319	.189	.266	
4178	38 UMa	10 35.1	66 14	5.1	K2 III		2	.186	.285	.352	
4181		10 35.9	69 36	5.2	K3 III		3	.132	.268	.398	
4246	44 UMa	10 47.5	55 07	5.4	K3 III		2	.142	.280	.385	
4247	46 LMi	10 47.7	34 45	3.9	K0 III-IV	JM	2	.258	.184	.286	
4258	46 UMa	10 50.2	34 02	5.2	K1 III		2	.241	.205	.301	
4291	58 Leo	10 55.4	4 09	5.0	K1 III		3	.222	.211	.342	

Table 1 (continued)

HR		(1900)	m	Sp	N	k	n	g	
4301	α UMa	10 ^h 57 ^m 26 ^s +62° 17'	2.0	K0 III	JM	13	0 ^m 33 ^s 4 ^s	0 ^m 22 ^s 6 ^s	0 ^m 27 ^s 3 ^s
4335	ψ UMa	11 4.0	45 02	3.1	K1 III	JM	2	.238	.240
4365	73 Leo	11 10.6	13 51	5.5	K3 III		2	.326	.225
4377	ν UMa	11 13.1	33 38	3.7	K3 III	JM	2	.164	.279
4461	2 Dra	11 30.2	69 53	5.4	K0 III		3	.322	.164
4495	92 Leo	11 35.6	21 54	5.4	K0 III		2	.321	.172
4496	61 UMa	11 35.8	34 46	5.5	G8 V	JM	2	.482	.064
4504	3 Dra	11 36.9	67 18	5.5	K3 III		3	.172	.267
4518	χ UMa	11 40.8	48 20	3.8	K0 III		2	.210	.209
4521		11 41.6	56 11	5.4	K3 III		2	.164	.315
4608	ϕ Vir	12 0.1	9 17	4.2	G8 III		3	.385	.132
4667	7 Com	12 11.3	24 30	5.1	K0 III		2	.334	.149
4668		12 11.5	33 37	5.1	K1 III		2	.219	.202
4695	16 Vir	12 15.3	3 52	5.1	K0 III		3	.207	.189
4697	11 Com	12 15.7	18 21	4.9	G8 III		3	.325	.142
4716	5 CVn	12 19.2	52 07	5.0	G7 III		2	.370	.151
4728	6 CVn	12 20.9	39 34	5.2	G8 III-IV		2	.335	.182
4737	15 Com	12 21.9	28 49	4.6	K1 III-IV		2	.208	.279
4783		12 28.7	33 48	5.4	K0 III		2	.299	.181
4785	8 CVn	12 29.0	41 54	4.3	G0 V	JM	1	.602	.052
4883	31 Com	12 46.8	28 05	5.1	G0 III	M	1	.592	.078
4928	9 Dra	12 56.1	67 08	5.5	G8 III		2	.205	.210
4932	ϵ Vir	12 57.2	11 30	2.9	G9 II-III	M	3	.350	.186
4954	41 Com	13 2.4	28 10	4.9	K5 III		3	.110	.302
4983	β Com	13 7.2	28 23	4.3	G0 V	JM	1	.595	.065
4997		13 9.2	40 41	5.0	K0 III		3	.278	.243
5072	70 Vir	13 23.5	14 19	5.2	G5 IV-V		1	.508	.068
5200	ν Boo	13 44.6	16 18	4.3	K5 III		2	.109	.300
5201	6 Boo	13 45.0	21 46	5.1	K4 III		2	.118	.286
5247	9 Boo	13 52.0	27 59	5.2	K3 III		4	.099	.283
5330	15 Boo	14 9.9	10 34	5.4	K0 III		2	.319	.181
5340	α Boo	14 11.1	19 42	0.2	K2 III p	JM	12	.174	.207
5370	20 Boo	14 15.0	16 46	5.0	K3 III		2	.171	.285
5429	ρ Boo	14 27.5	30 49	3.8	K3 III	JM	2	.125	.258
5430	5 UMi	14 27.7	76 08	4.4	K4 III		2	.112	.284
5480	31 Boo	14 36.7	8 35	5.0	G8 III		2	.348	.214
5502	ϕ Boo	14 40.6	17 23	4.7	K0 III		2	.329	.174
5541		14 46.5	37 41	5.5	K0 III-IV		4	.301	.154
5563	β UMi	14 51.0	74 34	2.2	K4 III	MHJ	2	.100	.288
5600	ω Boo	14 57.7	25 24	4.9	K4 III		3	.108	.298
5601	110 Vir	14 57.9	2 29	4.6	K0 III		2	.282	.175
5602	β Boo	14 58.2	40 47	3.6	G8 III	MHJ	6	.336	.177
5616	ψ Boo	15 0.2	27 20	4.7	K2 III		3	.173	.240
5635		15 3.4	54 56	5.2	G8 III		3	.347	.144
5681	δ Boo	15 11.5	33 41	3.5	G8 III	JM	2	.351	.124
5714	11 UMi	15 17.2	72 11	5.1	K4 III		2		.308
5744	ι Dra	15 22.7	59 19	3.5	K2 III	JM	3	.195	.258
5823	ϕ Boo	15 34.2	40 41	5.4	G8 IV		2	.404	.110
5854	α Ser	15 39.3	6 44	2.8	K2 III	JM	10	.207	.286
5901	κ CrB	15 47.5	35 58	4.8	K0 III-IV		2	.285	.181
5947	ϵ CrB	15 53.4	27 10	4.2	K3 III	JM	2	.162	.231
5966	5 Her	15 56.8	18 06	5.3	K0 III		2	.326	.144
6018	τ CrB	16 5.3	36 45	4.9	K0 III	MHJ	2	.300	.181
6103	ξ CrB	16 18.2	31 07	4.7	K0 III		2	.301	.202
6126		16 22.0	69 20	5.4	K2 III		2	.229	.265
6132	η Dra	16 22.6	61 44	2.9	G8 III	MHJ	5	.348	.170
6199		16 36.0	56 13	5.4	K1 III		2	.308	.209
6220	η Her	16 39.5	39 07	3.6	G7 III-IV	M	2	.365	.140
6299	κ Oph	16 52.9	9 32	3.4	K2 III	MHJ	2	.205	.250
6603	β Oph	17 38.5	4 37	2.9	K2 III	JM	2	.201	.278

Table 1 (continued)

HR		(1900)	m	Sp	N	k	n	g	
6688	ξ Dra	17 ^h 51 ^m 38 ^s +56°53'	3.9	K2 III	MHJ	2	.0178	.0239	.0354
6703	ξ Her	17 53.9 29 16	3.8	G9 III	M	2	.365	.166	.265
6705	γ Dra	17 54.3 51 30	2.4	K5 III	JM	3	.112	.301	.469
6872	κ Lyr	18 16.3 36 01	4.3	K2 III		1	.200	.265	.346
6895	109 Her	18 19.4 21 43	3.9	K2 III		2	.204	.228	.335
6945	42 Dra	18 25.7 65 30	5.0	K2 III		2	.224	.218	.321
7180	v Dra	18 55.6 71 10	4.9	K0 III		2	.226	.246	.337
7295	53 Dra	19 9.8 56 41	5.2	G8 III		2	.319	.222	.274
7309	54 Dra	19 12.1 57 32	5.3	K2 III		3	.227	.243	.339
7310	8 Dra	19 12.5 67 29	3.2	G9 III	MHJ	2	.301	.174	.275
7328	κ Cyg	19 14.8 53 11	4.0	K0 III	MHJ	2	.318	.192	.266
7352	τ Dra	19 17.5 73 10	4.6	K3 III		2	.174	.314	.395
7462	σ Dra	19 32.5 69 29	4.8	K0 V	MHJ	3	.424	.067	.242
7468		19 33.5 44 28	5.2	K0 III		3	.325	.167	.285
7615	η Cyg	19 52.5 34 49	4.0	K0 III		3	.270	.193	.302
7685	ρ Dra	20 2.4 67 35	4.7	K3 III		2	.148	.299	.394
7796	γ Cyg	20 18.6 39 56	2.3	F8 Ib	JM	3	.533	.128	.178
7806	39 Cyg	20 19.9 31 52	4.6	K3 III		2	.122	.280	.419
7949	ϵ Cyg	20 42.2 33 36	2.6	K0 III	JM	3	.271	.167	.282
7955		20 42.9 57 13	4.6	F8 V	M	1	.595	.078	.148
7957	η Cep	20 43.2 61 27	3.6	K0 IV	M	9	.348	.123	.255
8085	61 Cyg A	21 2.4 38 15	5.6	K5 V	JM	2	.248	.162	.427
8173	1 Peg	21 17.5 19 23	4.2	K1 III	JM	2	.234	.215	.316
8228	71 Cyg	21 25.8 46 06	5.3	K0 III		2	.310	.183	.272
8232	β Aqr	21 26.3 - 6 01	3.1	G0 Ib	JM	2	.448	.145	.199
8252	ρ Cyg	21 30.2 45 09	4.2	G8 III		3	.398	.142	.246
8255	72 Cyg	21 30.7 38 05	5.0	K0 III	M	1	.260	.234	.304
8308	ϵ Peg	21 39.3 9 25	2.5	K2 Ib	JM	2	.167	.346	.421
8313	9 Peg	21 39.8 16 53	4.5	G5 Ib	JM	2	.282	.251	.292
8317	11 Cep	21 40.4 70 51	4.8	K0 III		2	.224	.262	.331
8324		21 41.8 71 52	5.4	K1 III		3	.262	.235	.310
8414	α Aqr	22 0.6 - 0 48	3.2	G2 Ib	JM	2	.380	.168	.244
8465	ζ Cep	22 7.4 57 42	3.6	K1 Ib	M	5	.176	.356	.418
8468	24 Cep	22 7.9 71 51	5.0	G8 III		3	.376	.172	.242
8475		22 8.4 34 07	5.4	K2 III		2	.222	.248	.328
8485		22 9.6 39 13	4.6	K3 III		3	.238	.293	.380
8538	3 Lac	22 19.6 51 44	4.6	G9 III		2	.306	.159	.275
8551	35 Peg	22 22.8 4 12	4.9	K0 III-IV	M	2	.281	.158	.291
8632	11 Lac	22 36.1 43 45	4.6	K3 III	M	4	.162	.250	.376
8656	13 Lac	22 39.6 41 18	5.2	K0 III		2	.314	.212	.271
8684	μ Peg	22 45.2 24 04	3.7	G8 III	MHJ	3	.338	.148	.268
8694	32 Cep	22 46.1 65 40	3.7	K1 III		2	.265	.202	.301
8702		22 47.9 82 37	5.0	K3 III	MHJ	2	.128	.319	.442
8752		22 55.9 56 24	5.5	G0 Ia	JM	2	.418	.162	.210
8779		22 59.7 66 40	5.5	K3 III		2	.180	.318	.371
8780	3 And	22 59.7 49 30	4.9	K0 III		2	.278	.178	.288
8832		23 8.5 56 37	5.6	K3 V	JM	1	.275	.150	.345
8852	γ Psc	23 12.0 2 44	3.8	G7 III	M	2	.382	.119	.222
8874	11 And	23 14.8 48 05	5.4	K0 III		3	.314	.171	.275
8905	v Peg	23 20.4 22 51	4.6	F8 IV	JM	1	.592	.082	.164
8923	70 Peg	23 24.1 12 13	4.7	G8 III		3	.345	.171	.258
8930	14 And	23 26.4 38 41	5.3	K0 III	M	2	.288	.169	.274
8974	γ Cep	23 35.2 77 04	3.4	K1 IV	JM	3	.250	.197	.317
9008	τ Cas	23 42.2 58 06	5.1	K1 III		3	.229	.211	.311

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