

VISUAL MULTIPLES. VIII. 1000 MK TYPES

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ABSTRACT

In the second of three papers giving MK spectral types for all the stars brighter than $B = 8.0$ mag in the Aitken double star catalog, we present 1000 new classifications. Among the newly discovered unusual stars are 12 Ap, eight λ Bootis, one Ba II, one SB2, and 60 Am stars.

Subject headings: stars: spectral classification — stars: visual multiples

Although much work has been done on the separations and angles of stars in visual multiple systems, we lack information on their spectral types and photometry. For instance, in Aitken's (1932) catalog (ADS) of 17,180 systems, two-dimensional, or MK (Morgan-Keenan), types are available for less than 5% of the components. However, physical multiple systems are often as useful as clusters for providing ages, evolutionary stages, and luminosities of individual stars. Although the multiple systems are not as rich in components as are open clusters, the former are nearly 1000 times more prevalent and therefore include stars that are too infrequent to occur in the known open clusters.

There are several reasons for obtaining MK types, namely (1) to provide spectroscopic distances that are good to a factor between 1.25 and 2.5, depending upon location in the H-R diagram, (2) to identify stars that are of unusual interest, such as Ba II, Be, Ap, λ Bootis, weak-lined, composite stars, etc., (3) to give information on physical or optical association of components, and (4) to obtain statistical information on various types of stars. These classifications based on slit spectra do not duplicate results from objective prism surveys because (1) of problems with overlapping spectra in the latter and (2) these spectra have better densities, resolution, and grain and are classified more carefully (i.e., comparison with an average of three to four standards).

So far we are concentrating on the ADS stars because Aitken (1) limited pairs to separations mostly less than $30''$ and therefore these systems have a higher fraction of physical systems than do wider systems and (2) included the systems with the longest record of astrometric measures and therefore with the best information on relative motions. We are trying to include all components brighter than $B = 8.0$ mag. Because of the well-known low quality of and the systematic errors in the visual magnitudes of double stars, we probably are erring on the side of including more stars that are fainter than the limit than we are missing stars that are brighter than the limit. This is the second of at least three lists of types; the first, in Abt (1981), includes 865 classifications.

All the present spectra were of $128 \text{ \AA} \text{ mm}^{-1}$ reciprocal dispersion, 2.6 \AA resolution, and 1.2 mm wide. The Kodak IIa-O plates were overexposed and underdeveloped in D76 to reduce grain. They are of the same quality as those in the atlas by Morgan, Abt, and Tapscott (1978). The spectra were classified on a Boller & Chivens spectracomparator against standards by Morgan, Abt, and Tapscott (1978) and Morgan and Keenan (1973), with guidance given by the atlas by Keenan and McNeil (1977). All classifications were made without knowledge of the star names or previous classifications; our classifications were not changed after that knowledge was obtained. The average exposure times and classifications are each 10–15 minutes.

The new classifications are listed in Table 1. The first column gives the ADS number, and therefore the ordering is by 1950 coordinates. If two components are on the slit and the magnitude difference is less than 2.0 mag, both components are listed (e.g., ADS 475 AB). In Table 1 72% of the types are for primaries, 3% for secondaries, and 25% for blends of the two. The IDS designation is the 1900 position taken from the ADS as $00^{\text{h}}00^{\text{m}}0 \pm 00^{\circ}00'$. The Henry Draper (HD) numbers are for the appropriate components. Our types follow. The last column gives the HR numbers, star names, and some published MK types, mostly taken from the 1978 list of selected MK types by Mercedes Jaschek, the *Bright Star Catalogue* (BSC) (Hoffleit and Jaschek 1982), and the *Supplement to the Bright Star Catalogue* (SBSC) (Hoffleit, Saladyga, and Wlasuk 1983).

For 35 stars also classified by Morgan or Keenan, our types show a systematic difference of less than 0.1 subclasses and a standard error of ± 1.1 subclasses; our luminosity classes are $+0.2 \pm 0.8$ luminosity classes fainter.

At this time we will not discuss the classifications in detail except to comment upon several unusual classes. The λ Bootis stars are stars near A0 with underabundances of metals and normal (i.e., often large) rotational velocities. As noted by Abt (1984), these stars can most easily be recognized at low dispersions by their weak Mg II $\lambda 4481$ lines. Table 1 lists eight such stars, two of which seem to be above the main sequence. The latter might possibly be Population II weak-lined horizontal-branch stars. Also among the newly discovered stars in Table 1 are 12 Ap stars, one Ba II star, one SB2, and 60 Am stars.

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TABLE 1
IDENTIFICATIONS AND MK CLASSIFICATIONS

ADS	IDS	HD	MK Type	Other Identifications and MK Types
361 A	00218+4926	2301	B9 III	B9.5 V (SBSC)
366 A	00226-1657	2394	F6 V	
410 A	00249-0431	2637	M1 III	HR 117 = 12 Cet, M0 III (Buscombe 1962)
420 A	00256+1529	2714	A2.5 V	
426 A	00259-1038	2760	A5 IV-V	
443 A	00268+5747	2851	F3 V	
451 A	00274+2238	2925	G5 IV	G8 III-IV (Harlan and Taylor 1970)
452 A	00274+1945	2910	G9 III	HR 131 = 52 Psc, K0 III (Harlan 1969)
454 A	00275+3518	2933	B9.5 V	
455 A	00276+2744	2942	G8 III	HR 134, G8 II (Harlan 1969)
458 A	00277+1537	2954	F5 V	F6 III (Harlan and Taylor 1970)
475 AB	00294-0506	3125	G1 IV	
486 A	00298+3617	3165	K4 IIIb	K4 III (Stephenson 1960)
492 AB	00303+3356	3212	Am (K/H/M=A6/A7/F0)	
493 AB	00303+4828	3211	B4 V + K3: III	
515 AB	00316+5728	3377	B9 III	
516 A	00316+7221	3366	B2 V	
534 A	00330-0103	3512	K2 III	K2 III (Roman 1955)
538 A	00332+4624	3531	G9 IIIb	
546 A	00336+4848	3574	K4 III	HR 164, K7 III (BSC)
558 A	00347+2053	3690	K2 IIIa	HR 167 = 55 Psc, K0 II-III (Stephenson 1960)
561 A	00348+5559	3712	K0 III CN+1	HR 168 = α Cas, K0 II-III (Roman 1952)
562 A	00350+2330	3743	A4 III	
566 A	00357-0747	3821	G1 V	
587 A	00369+5703	3941	B8 V	
616 AB	00386+4541	4134	F6 V	
618 AB	00390+3304	4163	A5 IV	
636 A	00407-1658	4338	F2 V	HR 206, F1 IVn (Cowley and Fraquelli 1974)
659 AB	00423+5054	4536	B9.5 IVn + A0 Vs	
664 AB	00431-2053	4623	F3 V	F0 III (Wayman 1961)
679 A	00443-2441	4732	G9 IIIb	HR 228, K2 III (BSC)
680 A	00444-1406	4730	K3 IIIb	HR 227, K5 III (Appenzeller 1967)
702 A	00464+1214	4935	F2 IV	
710 A	00464+6819	4947	Am (K/H/M=A2.5/A5/F0)	
716 AB	00473-2309	5058	F8 V	
721 A	00470+6034	5015	F7 V	HR 244, F8 V (Slettebak 1955)
723 A	00472+5641	5032	B8 V	
726 A	00478-2433	5098	K1 IIIb	HR 247, K2 III (BSC)
732 AB	00480+0333	5143	F1 V	
915 A	01012+5258	6540	K2 III	HR 318
923 A	01021-0216	6651	F9 V	
936 AB	01031+4440	6757	A0 Vp(Si, Sr)	
948 A	01041+3735	6859	F3 IV	
949 A	01041+3505	6860	M1 IIIa	HR 337 = β And, M0 IIIa standard (Morgan and Keenan 1973)
955 AB	01042+2316	6886	F0 IV	
963 A	01047+5029	6918	F5 V	
972 A	01057+0901	7047	G1 V	
988 A	01074+3133	7215	A0 V	A0 V (Palmer et al 1968)
B		A3 IV	
990 A	01075+2932	7229	G8 III	HR 356, G9 III (Stephenson 1960)
995 A	01083+2403	7318	G8 III	HR 360 = ϕ Psc, K0 III (Roman 1952)
1000 A	01088+3001	7384	B9.5 IV	
1003 A	01094-0828	7439	F6 V	HR 366 = 37 Cet, F5 V (Cowley and Fraquelli 1974)
B		7438	G9 V	
1007 AB	01094+5846	7432	B9 III	K1 V (Appenzeller 1967)
1016 A	01106+0915	7564	F4 V	A2 V (Fehrenbach et al 1961)
1030 AB	01097+8020	7471	F3 V	
C		7507	B9.5 IV-V	
1040 AB	01119+4829	7710	B9.5 V	
1081 ABC	01147-0101	8036	A2: V + G4: III	HR 385 = 42 Cet, A7 V (Bidelman 1958)
1083 A	01146+5104	8027	B8 IV	
1087 AB	01150-1620	8071	G0 IV	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
1097 AB	01160+1101	8187	F1 III	
1099 A	01160+4645	8161	A8 II-III	
1105 AB	01170+5737	8272	F5 V	HR 391, F4 V (BSC)
1106 A	01177-1936	8350	F6 IV	HR 394
1107 A	01166+7219	8226	Am (K/H/M/G=A2/A7/F2/F5)	
1113 AB	01188-2453	8487	A8 III	A7 V (Wayman 1961)
1118 A	01190-0842	8512	G8 IV	HR 402 = θ Cet, K0 IIIb (BSC)
1129 A	01189+6736	8491	K0 III	HR 399 = ψ Cas, K0 III (Roman 1952)
1131 A	01200-0628	8627	Am (K/H/M=A3/A9/F2)	
1139 A	01207+0953	8703	A0 IV	
1152 A	01217+4453	8799	F4 V	HR 417 = ω And, F4 IV (Herbig and Spalding 1955)
1158 AB	01225+0450	8875	G1 IV-V	G0 V (Edwards 1976)
1162 A	01228-1125	8921	K4 III-IV	HR 425
1171 A	01232-1747	8957	F2: III	
1183 AB	01242+2219	9071	A2 V	A2 V (Christy and Walker 1969)
1193 A	01257-2643	9228	K4 III	HR 436, K4 III (BSC)
1199 A	01261+1450	9270	G8 III	HR 437 = η Psc, G8 III (Johnson and Morgan 1953)
1202 A	01267+1626	9312	K0 IIIb	
1209 A	01266+6010	9311	B7 Ib	B5 Ib (Morgan, Code, and Whitford 1955)
1211 A	01271+3520	9370	K3 III	
1214 A	01281+0742	9496	K0 III	
1233 A	01286+6234	9546	G9 IIIb	K1 V (Boulon, Duflo, and Fehrenbach 1958)
1238 A	01295+1203	9656	A6 V	A3 V (Levato 1975)
1254 AB	01308+0708	9817	F6 V	
1262 A	01309+5808	9812	B3 IV	
1268 A	01305+7232	9774	G8 III	HR 456 = 40 Cas, G8 II-III (Roman 1952)
1286 A	01329+5405	10031	A2 V	
1288 A	01316+7728	9899	B9 IV	
1300 AB	01339+1607	10113	G3 III	
1303 A	01345-1818	10186	Am (K/H/M=A8/F1/F2)	F0 III (Wayman 1961)
1309 AB	01342+5426	10146	B8 III	
1326 A	01357+2514	10308	F6 V	HR 484, F2 III (Harlan 1969)
1339 AB	01368-1149	10453	F5 V	HR 492, F5 V + F7 V (BSC)
1353 A	01373+5522	10495	A5 V	
1354 A	01373+5223	10497	F0 III-IV	A7 II (Hardorp et al 1959)
1376 A	01397-0716	10725	G5 III	
1394 A	01410-2533	10830	F2 V	HR 514, F0 V (Edwards 1976)
1411 AB	01388+8023	10648	A0 V	
1457 A	01446+2147	11154	G3 III	HR 530 = 1 Ari, G0 III (Roman 1949)
B		11155	A3 IV	A3 V (Palmer et al 1968)
1473 AB	01456+2409	11284	F1 V	
1487 A	01467+1019	11386	F1 V	
B		...	Am (K/H/M=A7/F1/F2)	
1500 A	01473+3650	11430	F2 V	
1717 A	02079+5802	13633	B8 III	B7 III (Pesch and McCuskey 1974)
1723 A	02089+2956	13746	A0 V	A0 V (Murphy 1969)
1739 A	02108+3346	13974	F9 V	HR 660 = δ Tri, G0 V (Johnson and Morgan 1953)
1752 A	02116+2817	14082	F7 V	F5 V (Harlan 1969)
1753 A	02110+5703	13994	G7 III	HR 662, G7 III (Appenzeller 1967)
1754 A	02086+8016	13714	B9.5 IV	
1759 A	02111+6358	14010	B9 Ia	B9 Ia (Morgan, Code, and Whitford 1955)
1763 A	02124+3949	14159	F4 V	
1766 A	02122+5642	14143	B0 III	B2 Ia (Morgan, Whitford, and Code 1953)
1795 AB	02152+4408	14477	Am (K/H/M=A2/F0/F2)	
1820 A	02169+5454	14662	F8 Ib-II	HR 690, F7 Ib (Morgan and Roman 1950)
1829 A	02182+5448	14827	A0 II	
1833 AB	02182+6106	14817	B8 IV	B8 V (Pesch and McCuskey 1974)
1849 A	02212-1549	15144	A6 Vp(Sr v. st; Cr, Si st; Ca wk)	HR 710, A6p(Sr) (Cowley et al 1969)
1864 A	02220+3824	15218	F1 V	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
1881 A	02230+3653	15333	Am (K/H/M=A5/A5/F0)	
1896 A	02242+0907	15453	K0 IV	HR 725, K2 III (BSC)
1901 A	02238+5506	15407	F5 IV	F3 V (Fehrenbach 1966)
1904 A	02248+2448	15524	F4 V	HR 728, F6 IV (Harlan 1969)
1911 A	02247+5715	15497	B7 Ia	B6 Ia (Morgan and Roman 1950)
1913 AB	02251+4207	15561	A2 V	
1920 A	02251+6101	15558	O5 IIIf	O5 f (Conti and Alschuler 1971)
1924 A	02264+0039	15695	Am (K/H/M=A2/A8/F0)	Am (Levato 1975)
1931 A	02271-2757	15783	Am (K/H/M=A2/F1/F3)	
1932 A	02258+5933	15640	A1 III-IV	A0 IV (Pesch and McCuskey 1974)
1933 AB	02258+5801	15641	A3 V	A3 III (McCuskey 1974)
1937 A	02263+5706	15690	B2 Ib	B2 Ib (Slettebak 1968)
1938 AB	02264+5152	15703	A2 IV	
1954 A	02295-2840	16046	B9.5 IV	HR 749 = ω For, B9.5 V (Levato 1975)
1964 A	02295+3652	16028	K3 IIIb	HR 748, K3 III (BSC)
1970 A	02294+5927	16038	B9.5 IV	B8 V (Boulon, Duflot, & Fehrenbach 1958)
1971 A	02306+0509	16161	G3 III	HR 754 = ν Cet, G8 III (Roman 1952)
1978 AB	02314-2150	16263	G2 IIIp(Ca wk)	
1996 A	02321+3718	16327	F5 IV	HR 768, F6 III (BSC)
2040 AB	02345+5503	16576	A2.5 V	
2046 A	02361-0107	16765	F6 V	HR 790 = 84 Cet, F7 IV (BSC)
2050 A	02361+0400	16763	Am (K/H/M=A2/F1/F2)	
2058 A	02357+5828	16718	A0 Vs	A1 III (Fehrenbach 1966)
2059 A	02359+5306	16735	G8 III	HR 787, K0 II-III (BSC)
2060 A	02363+4223	16782	B9 III	B8 V (Ianna 1970)
0264 A	02363+4750	16780	G5 II	HR 792
2080 A	02381+0249	16970	A1 V	HR 804 = γ Cet, A3 V (Cowley et al 1969)
2087 A	02361+7459	16758	A7 III	
2091 A	02387+2902	17007	F0 IV	
2094 A	02381+5608	16965	A0 V	
2098 A	02398-2555	17134	G1 V	
2117 A	02409+3508	17240	F0 IV	HR 820, A9 V (BSC)
2122 A	02418+1857	17232	G0 V	
2126 A	02417+2916	17330	B7 IIIp(Si st, He wk)	
2135 A	02404+7230	17179	B2.5 V	
2139 A	02420+4846	17359	Ao Vs	
2142 A	02418+6413	17327	B8 II-III	B8 II (Hardorp et al 1959)
2451 A	03121+0717	20430	F9 IV-V	
2455 A	03105+6922	20273	B9.5 IV	
2463 A	03140-2253	20610	G8 IV	HR 994 = 15 Eri, G6 III (Bsc)
2465 A	03141-1855	20631	Am (K/H/M=A9/F2/F2)	HR 997, Fo IV (Malaroda 1975)
2472 A	03151-2207	20720	M3 III	HR 1003 = τ^4 Eri, M3.5 III Ca-1 (BSC)
2473 A	03145+2320	20655	A7 IV	
2475 AB	03146+1922	20682	A2 V	
2478 AB	03149+1849	20695	A2.5 V	
2483 A	03147+4502	20676	B9.5 Ib-II	
2507 A	03185-0809	21019	G2 V	HR 1024, G2 V (BSC)
2509 A	03184+0432	21018	G3 II	HR 1023, G5 III (BSC)
2510 A	03171+6008	20898	B1 V	B2 III (Morgan, Code & Whitford 1955)
2513 A	03182+4024	20987	B2 V	
2523 A	03197-1421	21160	A2 V	
2525 A	03188+4510	21060	B7 V	
2546 A	03222+2007	21437	Am (K/H/M/G=A3/F2/F2/F7)	
2551 A	03230-1443	21513	A1 Vn	
2552 A	03226+2227	21467	G9 IV	HR 1048 = 66 Ari, K0 IV (BSC)
2559 AB	03224+4442	21448	B2 IV	B1 V (Stephenson 1960)
2561 A	03231+1103	21524	G9 III	
2576 A	03227+6715	21476	Am (K/H/M=A8/F1/F1)	
2579 A	03245+4731	21641	B8 V	B8.5 V (Morgan, Hiltner, & Garrison 1971)
2581 AB	03257-0437	21789	Am (K/H/M=A7/F1/F2)	
2591 A	03267+1112	21915	A1 V	
2609 A	03272+4817	21931	B9.5 V	B9 V (Morgan, Hiltner, & Garrison 1971)
2622 A	03288+3141	22124	F5 V	F2 IV-V (Thomsen, Abt, & Kron 1955)
2628 AB	03294+3121	22195	F4 V	
2633 A	03300+2939	22280	Am (K/H/M=A1/A3/A3)	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
2644 A	03317+0016	22468	G8 Vp(HI wk, Ca II em st)	HR 1099 = V711 Tau, G9 (BSC)
2650 A	03312+6333	22399	F7 V	
2661 A	03338+1613	22695	G8 III	K0 III (Harlan 1969)
2668 AB	03338+3348	22692	F9 V	
2673 A	03345+2105	22767	Am (K/H/M=A0/F0/F0)	
1677 A	03342+3848	22733	A7 IV	
2678 AB	03327+6931	22553	A5 IV	
2679 A	03345+2827	22766	A1 V	
B		...	A2 V	
2681 A	03352+0448	22878	K2 III	
2690 A	03361-1256	22968	F5 IV	
2691 A	03345+5939	22764	K4 IIa	HR 1112, K4 Ib (Appenzeller 1967)
2701 A	03362+3237	22963	F5 IV	
2708 A	03371+2522	23075	F3 V	
2712 A	03369+4812	23049	K4 III	HR 1127, K4 III (Bidelman 1957)
2718 A	03356+7118	22912	G9 III	
2735 A	03385+2735	23245	F4 V	
3086 A	04080+6650	26669	B9.5 V	
3088 A	04097+3437	26860	A6 III	
3093 A	04108-0749	26965	G9 V	HR 1325 = o ² Eri A, K1 V (Roman 1955)
3095 A	04109+0012	26991	A1 V	
3097 A	04093+6140	26801	A0 III (λ Boo?)	
3098 AB	04095+5832	26839	A2 V	
3103 A	04118-1020	27093	A3 III	
3105 AB	04100+6015	26882	B8 Vn	
3131 A	04138+2320	27335	B9.5 V	
3135 AB	04142+1617	27383	F9 V	F9 V (Edwards 1976)
3137 A	04142+2707	27382	K2 III	HR 1348 = ϕ Tau, K1 III (Roman 1952)
3140 A	04156-1640	27528	B9.5 Vn	
3145 A	04164-1934	27629	G5 IV	
3152 A	04163-0020	27611	K3 III	HR 1366
3158 AB	04165+2035	27639	B3 V + K3 II	HR 1370, M0 IIIab (BSC)
3159 AB	04174-2558	27710	F2 V	HR 1374, F1 V + F3 V (Christy and Walker 1969)
3163 AB	04172-0455	27699	A7 IV	
3169 AB	04171+1449	27691	F9 V	F8 V (Harlan 1969)
3174 AB	04178+1109	27762	A5 III	
3185 A	04179+3405	27770	B8 V	B8 V (Murphy 1969)
3188 A	04181+3344	27786	F4 IV-V	HR 1379 = 56 Per, F4 V (BSC)
3207 AB	04187+5525	27856	F4 IV	
3226 A	04213+1759	28150	A0 V	
3238 A	04226+0951	28283	A3 V	
3243 A	04226+3008	28271	F7 V	HR 1406, F7 V (BSC)
3247 AB	04236-2144	28396	F6 V	
3248 AB	04233+1556	28363	F7 V	F7 V (Christy and Walker 1969)
3279 A	04257+0635	28630	K0 IV	
3284 A	04268-1351	28763	A2 Vs	HR 1438, A3 V (Cowley et al 1969)
3311 A	04288+2229	28976	F5 III	
3316 AB	04298+1941	29104	F2: + G0: III	HR 1455, G5 II-III + A, F (Cowley 1973)
3324 A	04297+4052	29096	B9 IV	
3325 A	04297+4812	29093	B7 IV	
3329 AB	04307+1933	29193	Am (K/H/M=A2.5/A8/F2)	
3342 A	04325-2715	29377	F6 V	
3353 A	04323+2644	29364A	F2 V	F2 V: (BSC)
B		29364B	F2 V	
3355 A	04334-1314	29482	B9.5 IV	A0 V (Levato 1975)
B		...	A2 V	
3359 A	04320+5253	29317	G9 III	HR 1467 = 3 Cam, K0 III (Blaauw & Morgan 1953)
3380 AB	04361-1952	29755	M3 II-III	HR 1496 = 54 Eri, M4 III (BSC)
3383 A	04358+0046	29728	A0 IV	
3395 AB	04370+0248	29839	A1 V	
3400 A	04370+4214	29833	B8 II	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
3409 A	04388-0859	30021	G5 III	HR 1506, G8 III (BSC)
3659 AB	04580+4647	32416	F7 IV	
3662 AB	04594-0610	32622	A0 II	
3678 AB	04595+3954	32632	A2 III	
3681 A	04565+7533	32230	A2 III	
3684 A	04596+5010	32653	B8 II	
3689 AB	04597+5451	32652	B9.5 V	
3701 AB	05015+1831	32923	G1 V	HR 1656 = 104 Tau, G4 V (Christy and Walker 1969)
3715 A	05015+4889	32903	A7 V	
3723 A	05012+6328	32893	Am (K/H/M=A6/F1/F1)	
3728 AB	05037+0305	33236	Am (K/H/M=A0/A3/A3)	B8 V (Kazanamas 1973)
3737 A	05046+0803	33340	F7 IV	
3742 A	05055-2237	33495	F3 IV	
3764 AB	05066+0055	33646	A + G2: III	HR 1691
3781 A	05064+4651	33601	B9 II	
3797 A	05081+0245	33856	K2 II	HR 1698 = ρ Ori, K3 III (Roman 1952)
3812 A	05078+4703	33798	G8 IV	
3822 AB	05092+1225	34021	A1 V	
3824 C	05089+3234	...	F3 V	
3827 A	05097+0819	34081	A9 IV	
3839 A	05098+2551	34096	A1 V	
3841 Aa	05093+4554	34029	G3 III	HR 1708 = α Aur, G5 IIIe + G0 III (BSC)
3843 A	05097+3412	34078	O9.5 III	HR 1712 = AE Aur, O9.5 V (Morgan, Code, & Whitford 1955)
3853 AB	05106+3313	34021	A3 V	
3854 A	05109+1820	34251	B3 V	B3 V (Guetter 1968)
3864 A	05061+7907	33564	F6 V	HR 1686, F6 V (Roman 1952)
3866 A	05115+2001	34335	F5: V	CD Tau, F7 V (Harlan 1969)
3872 A	05116+3316	34334	K3.5 III	HR 1726 = 16 Aur, K3 III (Roman 1952)
3877 A	05128-0657	34503	B5 III	HR 1735 = τ Ori, B5 III (Lesh 1968)
3883 A	05132-1519	34527	B9.5 Vn	B9 V (Levato 1975)
3886 A	05121+4001	34411	G1 V	HR 1729 = λ Aur, G0 V (Johnson & Morgan 1953)
3888 A	05126+3447	34477	B5 IV	
3894 A	05133+2002	34579	K0 III	HR 1741, G8 II-III (Stephenson 1960)
3899 A	05144-1814	34721	F9 V	HR 1747, G0 V (BSC)
3932 AB	05149+4459	34788	B8 III	
3949 A	05168+0518	35066	F6 V	
3954 AB	05177-2452	35163/4	A7: V + G8: III	
3968 A	05179+0058	35192	B9 Vn	
B		...	B9.5 Vn	
3969 A	05178+1557	35173	B7 Vn	
3982 A	05146+7428	34740	A2 V	A0p (Bertaud 1958)
3984 A	05179+3718	35186	K3 III CN+2	HR 1773 = σ Aur, K4 III (Roman 1952)
3991 A	05188-0058	35317	F6 V	HR 1782, F7 V (Christy and Walker 1969)
3993 A	05194-2224	35430	A7 V	
4000 A	05186+3446	35295	K2 III CN+1	HR 1779, K1p III-IV (Bidelman 1958)
4004 A	05188+3757	35313	A1 V	
4033 AB	05213+0252	35673	B9.5 V	B9 V (Sharpless 1952)
4034 A	05217-1947	35736	F5 IV	HR 1812, F2 V (Malaroda 1975)
4687 A	06009+1046	41580	A0 Vp (λ Boo)	
4691 A	06007+3617	41523	B9 II	
4696 AB	06007+4241	41541	B6 V	
4709 A	06013+3759	41637	A2 V	
4728 AB	06028+1359	41943	B1 IV	B1 V (Murphy 1969)
4734 A	06026+3117	41889	A2 V	
4741 A	06037-1108	42116	A5 IV	
4742 A	06041-2524	42163	Am (K/H/M=A3/F0/F2)	
4768 AB	06044+2301	42216	B9 II	B9 V (BSC)
4773 A	06040+4844	42127	A1 V	HR 2176 = 41 Aur A, A3 V (Cowley et al'69)
B		42126	A6 V	HR 2175 = 41 Aur B, A8 V (Cowley et al'69)
4774 A	06043+4311	42196	G8 IV	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
4789 AB	06058+1724	42476	B9.5 III	A0 IV (Duflot et al 1957)
4806 A	06077-2754	42815	F5 V	
4840 AB	06090+1437	43044	B9.5 V	B8 V (Fehrenbach et al 1961)
4841 A	06088+2232	42995	M3.5 Ib-II	HR 2216 = η Gem, M3 III (Keenan & Hynek 1945)
4842 A	06090+1912	43042	F6 V	HR 2220 = 71 Ori, F6 V (Roman 1952)
4849 A	06089+3611	43017	F4 IV	HR 2217
4853 A	06100-0615	43232	K2 III CN+1	HR 2227 = γ Mon, K3 III (Roman 1952)
4858 A	06106-2934	43363	B9.5 IV	
4863 A	06102+0359	43286	B5 Vn	
4881 A	06106+1903	43355	F6 V	F7 IV (Duflot et al 1957)
4891 AB	06120-1201	43628	F2 V	
4908 A	06135-2424	43879	F3 V	
4910 A	06134-0537	43857	A2 V	
4918 A	06133+1112	43841	B9.5 V	
4922 A	06128+3829	43739	F2 IV	
4924 A	06138+1328	43931	F6 V	F7 V (Fehrenbach et al 1961)
4929 AB	06136+2828	43885	A6 V	
4939 A	06141+1220	43983	B8 V	
4841 A	06147-1231	44080	B8 V	
4951 AB	06149+0746	44109	B9 V	
4962 A	06153+2111	44171	B8 III	
4970 A	06150+4614	44124	A2 III	
4990 A	06169+2234	44478	M3 II	HR 2286 = μ Gem, M3 IIIab (Keenan & Pitts 1980)
4991 A	06170+1737	44496	A0 Vn	
4997 A	06174+1634	44584	B9 III	
5029 AB	06195-0121	44948	B8 Vp(Si st, He wk)	
5034 A	06199-1610	45016	A6 V	
5035 A	06195+1034	44944	Am (K/H/M=A2/A7/F2)	
5036 A	06181+5828	44708	K4 III	HR 2293 = 5 Lyn, K4 III (Roman 1952)
5042 A	06195+2231	44941	A6 V	
5062 A	06209+1535	45180	B9.5 IV	B9 V (Fehrenbach et al 1961)
5080 A	06218+2051	45352	K2 III	15 Gem
5087 A	06231-1515	45566	B5 V	
5088 AB	06219+4011	45372	A1 IV	
5814 AB	07034-1533	54336	F2: + G2: III	
5820 A	07027+3643	54159	B9 IV	
5823 A	07041-2042	54519	K4 III	K5 II (Moore & Paddock 1950)
5827 A	07034+2554	54371	G5 V	G8 V (Harlan 1969)
5846 A	07048+3025	54719	K2 II-III CN+1	HR 2697 = τ Gem, K2 ⁻ III (Keenan & Pitts 1980)
5858 A	07060+2227	55005	F7 IV	
5863 A	07071-2138	55271	B3 Vne	B8 Vne (Buscombe 1969)
5875 AB	07071+1521	55283	B9.5 IV	
5877 A	07076-0803	55417	B8 IV	B7 V (Claria 1974)
5879 A	07064+4840	55078	A2 V	
5884 A	07071+3219	55225	A8 V	
5893 AB	07076+2840	55356	B9.5 IV	
5896 AB	07069+5243	55199	Am (K/H/M=A8/F1/F1)	
5904 A	07089-0845	55736	B8: Vp(Si, Cr, Sr st, He wk)	B9.5 V (Claria 1974)
5909 A	07086+2504	55621	M1 III	HR 2725, M1 III (Roman 1955)
5911 A	07092-0341	55775	M1 IIIa	HR 2731, K5 III (BSC)
5922 A	07095+1914	55822	Am (K/H/M=A2/F2/F5)	
5925 AB	07103-1518	56012	F5 V	
5932 A	07090+4749	44725	A4 V	
5933 A	07102+0001	56003	G5 III	HR 2744 = 24 Mon, G5 III (BSC)
5945 A	07107+2443	56152	Am (K/H/M=A1/A2/A2)	
5951 A	07124-2308	56577	K3 Ib	HR 2764, K3 Ib (BSC)
B		56578	Am (K/H/M=A8/F0/F2)	
5956 AB	07124-1151	56593	F5 V	
5957 A	07125-1349	56597	B4 IV	
5958 AB	07122+0929	56515	G0 IV-V	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
5968 A	07117+5506	56385	A0 V	
5977 A	07146-2446	57061	O9 II	HR 2782 = τ CMa, O9 Ib (Hiltner, Garrison, & Schild 1969)
5985 A	07151-2446	57192	B3 IV	B3 IV (Thackeray, Tritton, & Walker 1973)
5986 A	07151-2152	57190	A4 V	
5988 AB	07150-1542	57189	B8 IV	
5992 A	07151-0448	57213	F0 IV	
5996 AB	07154+0036	57275	B9.5 V	
6000 A	07154+0951	57270	F5 IV	
6001 AB	07155-0125	57293	B9 III-IV	
6002 A	07155+1023	57290	A1 IV	
6004 A	07146+5020	57066	A6 II	
6611 A	08028-0104	67452	A1 Vn	
6612 A	08027+2746	67402	G8 III-IV	K0 III (Heard 1952)
6617 A	08036-0242	67594	G2 Ib	HR 3188 = ζ Mon, G2 Ib (Morgan & Keenan '73)
6618 A	08040-2320	67698	B5 IV	B5 Ve (Thackeray, Tritton & Walker 1973)
6620 AB	08023+5606	67317	Am (K/H/M=A1/F1/F2)	Am (Cowley & Cowley 1965)
6622 A	08041-1934	67670	B8 V	
B		67728	K0 III	
6623 AB	08032+3231	67501	F5 V	
6647 A	08066-1238	68290	G8 III	HR 3211 = 19 Pup, K0 III (Roman 1952)
6659 A	08074+0953	68483	A8 V	
6662 A	08078+2805	68542	F4 Vp (Sr, Cr, Eu)?	
6663 AB	08081+1109	68615	F7 V	
6670 AB	08090-2359	68821	A8 III	
6671 AB	08086+0217	68706	F8 V	F7 V (Moore & Paddock 1950)
6675 A	08080+4320	68562	A2 IV	
6698 A	08106+0306	69178	B9.5 IV	
6704 A	08111+0930	69267	K4 III	HR 3249 = β Cnc, K4 III (Johnson & Morgan 1953)
6707 A	08114-0255	69351	G0 V	
6714 A	08120-0842	69460	A0 V	
6724 A	08096+7243	68951	K4 III	HR 3236, M0 III (BSC)
6726 AB	08127+0246	69609	A2 V (SB2)	
6736 A	08101+7508	69054	G8 III	K0 III (Stephenson 1960)
6782 AB	08186-2602	70761	F0 Ib	HR 3291, F3 Ib (Malaroda 1975)
6787 A	08184+1057	70734	M2 III	HR 3290 = 21 Cnc, M2 III (BSC)
6794 A	08197-2839	70963	B9 IV	A0 V (SBSC)
6798 A	08196+0945	70935	K3 IIIb	
6800 A	08207-2343	71176	K4 III CN+1	HR 3315, K5 III (Stephenson 1960)
6805 A	08205+0753	71115	G5 II-III	HR 3306, G8 II (Roman 1952)
6816 A	08215+2329	71309	A1 V	
6825 AB	08227-0405	71499	F2 IV	
6830 A	08220+6103	71369	G5 III	HR 3323 = \circ UMa, G4 II-III (Slettebak '55)
6863 AB	08272-2521	72346	A1 V	
6866 A	08269+3346	72280	Am (K/H/M=F1/F3/F3)	
7329 A	09174-0039	80916	A2 V	
7331 A	09178-1728	80971	F4 V	
7341 AB	09189+1834	81163	K0 IV	G0 III (Harlan 1969)
7348 AB	09180+5200	81025	G0 IV	HR 3725, G2 III (BSC)
7350 A	09193-2314	81230	F5 V	
7351 A	09188+2637	81146	K3 III	HR 3731 = κ Leo, K2 III (Roman 1952)
7352 AB	09192+0647	81212	F7 V	
7354 A	09186+5428	81104	A2 Vnp (λ Boo)	
7373 A	09213+1456	81581	Am (K/H/M=A8/F1/F2)	
7380 AB	09220+0640	81670	F7 V	
7391 A	09232+0837	81873	G9 III	HR 3755 = 3 Leo, K0 III (BSC)
7399 A	09227+6759	81787	A3 V	
7405 A	09255-2609	82205	K3 III	HR 3770, K3 III (BSC)
7412 AB	09264+0154	82355	F9 III	
7416 A	09266+1009	82381	K3 III	HR 3779 = 6 Leo, K3 III (Roman 1952)
7427 A	09281-1333	82661	K0 IV	
7452 A	09316-2704	83196	A4 III	
7462 A	09325+0209	83329	G7 IV-V	
7464 AB	09328+0008	83363	A3 V	
7467 AB	09331+0810	83406	A9 V	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
7471 A	09334+1114	83452	A5 III-IV	
7477 AB	09352+3924	83698	G3 IV	
7500 A	09383+0305	84184	F7 V	
7520 A	09431+3433	84870	A7 V	
7524 A	09442-2557	85043	F5 V	
7534 A	09439+5931	84999	A9 IV	HR 3888 = υ UMa, F0 IV (Morgan & Abt 1972)
7539 A	09454+1219	85259	B9 V	
7554 A	09467+5105	85439	G8 IV	
7570 AB	09496-2732	85860	B4 Vne	
7576 A	09502-1543	85949	G0 IVp (Ca II wk)	
7596 A	09526-0128	86341	G8 IV	
7610 A	09566-2217	86916	A1 IV	
7615 AB	09573-1433	87036	A2 V	
7621 A	09579+3830	87127	F7 V	
7629 AB	09598-2754	87416	F6 V	
7633 A	09599+4004	87442	A9 V	
7635 AB	10007-2743	87556	A0 V	
8037 A	10582-1046	95808	G8 III-IV	HR 4305, G5 ⁻ III (BSC)
8038 A	10585-2659	95855	Am (K/H/M=A2/A6/F0)	
8043 AB	10588+0411	95899	Am (K/H/M=A6/F1/F4)	
8047 AB	10594+3857	96016	F7 V	
10094 A	16267+0539	148980	Am (K/H/M=A4/F0/F1)	
10104 A	16274-1021	149108	A9 V	
10105 A	16288+4549	149303	A2 Vnp (λ Boo)	HR 6162, A4 Vn (Cowley et al 1969)
10111 AB	16292+4019	149379	F9 IV	
10116 AB	16296+3043	149420	A9 IV	32 Her, F0 III (Floquet 1975)
10129 AB	16339+5308	150117/8	B9.5 Vn	HR 6185/6 = 17 Dra, B9 V (Cowley et al 1969)
C		150100	B9.5 Vs	HR 6184 = 16 Dra, B9.5 Vn (Cowley et al 1969)
10144 A	16360+4907	150450	M3 III	HR 6200 = 42 Her, M2.5 IIIab (BSC)
10149 A	16357+0425	150378	B9.5 V	HR 6195 = 37 Her, A1 V (Cowley et al 1969)
B		150379	Am (K/H/M=A1/A5/A7)	HR 6194 = 36 Her, A3 IV (Cowley et al '69)
10172 A	16400+6230	151067	B + B9 (SB2)	
10180 A	16392-0022	150935	A1 V	
10184 AB	16400+2342	151070	Am (K/H/M=F0/F2/F5)	F5 III (Harlan 1969)
10194 A	16411+2832	151237	F7 III	F8 II (Harlan 1969)
10203 A	16422+3549	151428	F6 V	
10214 A	16475+7741	152303	F5 IV	HR 6267, F4 V (BSC)
10224 A	16451+3606	152454	Am (K/H/M=A5/F1/F5)	
10229 AB	16464+0935	152113	F7 IV	F6 IV (SBSC)
10232 A	16461-2526	152071	B9.5 Vn	
10235 AB	16479+2850	152380	F5 IV	F4 V (Edwards 1976)
10242 A	16562+8212	153751	G5 III	HR 6322 = ϵ UMi, G5 III (Roman 1952)
10257 AB	16496-2124	152655	B8 IV:	
10259 A	16510+2554	152863	G8 III	HR 6292 = 56 Her, G5 III (Roman 1949)
10262 A	16510+1836	152879	K4 III-IV	HR 6293 = 54 Her, K4 III (Roman 1955)
10270 A	16521+1418	153064	G9 III	
10271 A	16517-2727	152989	A1 II-III	
10299 A	16588+7426	154181	F6 V	
10308 A	16566+1644	153809	A0 IV	
10323 A	16595+1950	154301	K4 III	HR 6343, K4p (BSC)
10531 AB	17207+3840	157853	F9 III	HR 6488, F8 IV (BSC)
10535 A	17210+3702	157910	G6 III	HR 6491, G5 III (Stephenson 1960)
10538 A	17198-2731	157736	A0 V	
10547 A	17206-2615	157865	B9 II	
10553 A	17224+2933	158116	Am (K/H/M=A7/F0/F2)	Am (Bertaud 1958)
10560 A	17231+1632	158251	Am (K/H/M=A7/F1/F2)	
10562 A	17232+1128	158263	A5 V	
10564 AB	17225-2526	158140	Am (K/H/M=F0/F2/F3)	
10583 A	17244-0549	158463	G8 IV	HR 6512, K0 III (BSC)
10597 AB	17266+5057	158868	A7 IV	
10607 AB	17264+0248	158837	G0 IVp (Ca II K wk)	HR 6524, G8 III (BSC)
10614 AB	17270+0254	158976	B5 V	
10630 A	17302+4757	159543	A2 Vn	
10633 A	17298+1314	159466	G8 III	G8 III (Harlan 1969)
10648 A	17308+1326	159673	A3 IV	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
10650 AB	17308+0104	159660	B8 IV	B8 V (Murphy 1969)
10659 AB	17318+0726	159857	Am (K/H/M=A4/A8/A7)	
10685 A	17338-1336	160254	F1 V	
10688 A	17345+0327	160385	K3 IIIb	
10690 AB	17372+6711	160862	Am (K/H/M=A3/A7/A9)	
10693 AB	17345-0455	160387/8	F3 V	
10696 AB	17348-0035	160438	B9 IV	
10699 AB	17368+5549	160780	F8 V	
10715 A	17370+2434	160835	K2 IIIa	HR 6592, K1 III (Stephenson 1960)
10722 AB	17381+4142	161016	A4 V	
10723 A	17375+1600	160910	F3 IV	HR 6594, F4 Vw (Barry 1970)
10728 AB	17397+6343	161285	F8 V	
10749 A	17397+1427	161321	Am (K/H/M=A2.5/A7/F0)	HR 6611, A3m (Cowley et al 1969)
10759 A	17437+7212	162003	F5 IV	HR 6636 = ψ^1 Dra A, F5 IV-V (Slettebak '55)
B		162004	F8 V	HR 6637 = ψ^2 Dra B, G0 V (BSC)
10782 A	17427+3922	161832	K3 III	HR 6626, K3 III (Stephenson 1960)
10807 A	17443+3419	162094	B3 V	B3 V (Walborn 1971)
10827 A	17462+2519	162485	A1 V	
10846 AB	17471+0725	162670	B7 IV	
10850 AB	17475+1521	162734	G8 III	HR 6665, K0 III (Halliday 1955)
10856 AB	17474-1337	162739	F8 V	
10861 A	17479-0554	162834	K2 IIIb	
10872 A	17486-1119	162956	K2 III CH+1	
10875 A	17500+4002	163217	K3 III CN+1	HR 6677 = 90 Her, K3 III (Roman 1952)
10878 A	17493-1137	163117	F3 V	
10905 AB	17520+1821	163640	A0 IV + F5: III:	A0 III + G8 II (Stephenson 1960)
10923 A	17543+5130	164058	K5 III	HR 6705 = γ Dra, K5 III (Johnson & Morgan 1953)
10934 A	17542+4552	164059	F7 IV	
10953 AB	17558+5214	164394	Am (K/H/M=A2.5/A7/F0)	
10955 AB	17552+3003	164252	G5 II	G8 II-III (Stephenson 1960)
10985 A	17587+6409	164983	F4 IV	
10991 A	17563-2302	164492	O8 V	O7 (Morgan, Code, and Whitford 1955)
10998 A	17579+3319	164824	K4 III	HR 6737, K5 III (BSC)
10999 A	17582+4019	164899	A0 Vs	
11010 AB	17596+4414	165170	F5 V	
11224 AB	18113-2754	167702	B9.5 III	
11228 AB	18117-1942	167815	B0 V	B1.5 V (Guetter 1968)
11232 A	18120-1851	167863	B8 IV	B8 V (Abt & Cardona 1983)
11254 A	18143+0713	168387	K2 III	HR 6857, K2 III-IV (BSC)
11262 A	18146-0801	168459	F2 V	
11264 A	18146-2052	168454	K3 III CN+1	HR 6859 = δ Sgr, K3 ⁻ IIIa CN+1, Ba 0.1, Fe 0.5 (Keenan & Pitts 1980)
11271 A	18159+0320	168656	G7 III-IV	HR 6866 = 74 Oph, G8 III (Roman 1952)
11273 A	18164+2245	168795	B8 III	
11275 A	18168+2729	168874	G1 V	G2 IV (Harlan & Taylor 1970)
11282 A	18165-1508	168815	G9 IV-V	K5 ⁺ II (Miskin 1973)
11287 AB	18176+2128	169031	B9.5 II	
11317 A	18204+3817	168617	A0 III	
11318 A	18193-0639	169392	G0 IV	G0 IV (Stephenson 1960)
11320 A	18206+3841	169646	K4 III	HR 6901
11323 A	18200+0711	169512	B9 V	
11325 AB	18194-2036	169420	A + K2 III	HR 6896 = 21 Sgr, K2 II (BSC)
11339 AB	18210+0043	169725	A7 III	
11343 AB	18225+4650	170074	B9.5 V	
11373 AB	18236+2438	170314	B9 Vn	
11420 A	18266+0623	170881	B9 IV-V	B9 Vn (Murphy 1969)
11424 A	18274+3210	171026	B9 IVn	
11429 A	18267-0926	170901	A0 II	A0p (Slettebak & Nassau 1959)
11432 AB	18272+0643	170987	F5 V	
11443 A	18304+6228	171549	Am (K/H/M=A9/F1/F2)	
11454 AB	18294+1739	171365	F2 V	F6 V (Harlan & Taylor 1970)

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
11477 A	18307+0451	171586	A1 Vp(Sr,Cr,Si st; Ca wk)	A2p (Babcock 1958)
11484 AB	18313+1139	171728	A7 V	
11487 A	18307-2024	171611	B4 IV	
11494 A	18316+0452	171767	K2 IIIa CN+1	K1 III (Schmitt 1971)
11496 A	18318+0636	171834	F3 V	HR 6987, F3 V (BSC)
11498 A	18324+2201	171948	A0 Vp(λ Boo)	
11500 A	18330+4112	172068A	A1 V	
B		172068B	A0 V	
11513 A	18321-2530	171878	B9.5 IV	
11526 A	18337+0446	172190	K2 III	
11534 A	18349+3558	172394	Am (K/H/M=A8/F1/F2)	
11546 A	18350+2051	172421	B5 IV	B4 III (Murphy 1969)
11552 A	18346-0753	172348	K4 III	HR 7007
11555 A	18350+0716	172424	G8 III	HR 7010, G8 III (Halliday 1955)
11558 AB	18366+5215	172712	Am (K/H/M/G=A5/A8/F1/F4)	
11559 A	18377+6326	172923	K2 III CN+1	
11579 AB	18374+3012	172865	G3 IV	G5 IV (Christy and Walker 1969)
11581 A	18368-0909	172748	F5 III	HR 7020 = δ Sct, F2 IIIp(δ Del) (Cowley & Fraquelli 1974)
11584 AB	18423+7735	173831	F0 IV	
11595 A	18373-2230	172854	B4 III	
11601 A	18381-0822	173009	G8 II	HR 7032 = ϵ Sct, G8 II (Roman 1952)
11609 A	18389+1922	173171	B9.5 IV-V	
11616 A	18400+4450	173399	G8 III CN-1	G5 IV (Stephenson 1960)
11652 A	18403-2230	173460	K5 III	HR 7046 = 28 Sgr, K4 III (BSC)
11661 A	18431+6057	173949	G8 III CN-1	HR 7075, G7 IV (BSC)
11669 A	18422+3425	173815	A7 V	
11670 A	18412-1014	173638	F1 III	HR 7055, F2 Ib-II (Morgan and Roman 1950)
11685 A	18434+3118	174022	G3 III	G8 II (Stephenson 1960)
11695 A	18433-0607	174005	A2 II	A5 III (SBSC)
11698 AB	18449+4919	174344	F0 III	
11713 A	18437-2026	174116	K3 III	HR 7078 = 29 Sgr, K4 III (BSC)
11715 A	18447+2103	174261	B3 Vn	B3 III (Murphy 1969)
11719 A	18443-0602	174208	K1 II	HR 7083, K2 Ib (BSC)
11724 A	18444-2653	174229	A8 III	
11733 A	18459+2619	174549	A3 V	
11735 AB	18456+1124	174485	A1 Vs + G: III	
11741 A	18462+2942	174586	A0 III	
11750 A	18460+1052	174569	K5 III	HR 7099, K5 III (Bidelman 1958)
11773 A	18478+1425	174897	G9 III	K1 III-IV (Stephenson 1960)
11774 AB	18469-2753	174742	A9 V	
11776 A	18472-1846	174802	K2 III	
11777 A	18486+3724	175081	B8 V	
11779 A	18497+5915	175306	G7 III-IV	HR 7125 = o Dra, G9 IIIb CN-0.5 (Keenan & Pitts 1980)
B		K3 IIIb	K3 IIIp (BSC)
11783 A	18477-1128	174887	Am (K/H/M=A2/A6/A6)	
11794 A	18481-2252	174974	G2 Ib	HR 7116 = ν^1 Sgr, K2 I (BSC)
11816 AB	18502+2029	175427	A0 IV	
11820 A	18505+2231	175492	A8: + G8: III	HR 7133 = 113 Her, A5 + G5 III (Slettebak 1955)
11834 A	18512+3350	175635	A8 + G5 III	HR 7140, G8 III + A2 (Cowley 1973)
C		175634	B8 V	B8 V (BSC)
11840 A	18517+4128	175740	K0 III	HR 7146
11842 AB	18508+0319	175543	A5: Vp(Si,Sr st; Ca wk)	A5 V (Christy and Walker 1969)
11846 A	18521+4844	175824	F5 V	HR 7154, F3 III (BSC)
11863 AB	18529+4406	176003	Am (K/H/M=A0/A1 V/A2)	
11869 AB	18531+2588	176005	A2 IV	
11872 A	18522-2033	175876	O8 Vf	O6 (Morgan, Code, and Whitford 1955)
11883 A	18551+5637	176409	F2 V	
11884 A	18538+1714	176155	F8 II	HR 7165 = FF Aql, F8 Ib (Harlan and Taylor 1970)
11901 A	18563+6216	176668	G8 III	HR 7191, G5 IV (Stephenson 1960)

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
11902 A	18545+1329	176303	F6 IV	HR 7172 = 11 Aql, F8 V (Roman 1949)
11916 A	18553+1241	176485	A5 V + K2 III	
11952 A	18572+1224	176873	B8 IV	
11957 A	18576+1859	176973	G9 III	K0 III (Harlan & Taylor 1970)
11958 A	18575+1417	176978	B9.5 IV	
11972 A	18572-1923	176884	G5 II-III	HR 7203, G6 III (BSC)
11979 A	18598+5207	177483	G8 III	HR 7229
11987 A	18582-2303	177120	A0 Vp(Mg II wk) (λ Boo)	
11989 AB	18584-2141	177166	F8 V	F7 V + F8 V (SBSC)
11996 A	18587-2153	177241	G9 III	HR 7217 = o Sgr, G8 III (BSC)
12263 A	19130+3257	180844	B5 V	
12266 A	19119-1609	180562	A3 V	
12271 A	19124-1608	180695	B9.5 V	
12281 A	19128-0107	180783	A8 IV	
12289 A	19134+0054	180972	G9 III	HR 7319 = 23 Aql, K2 II-III (Roman 1952)
12296 AB	19159+6302	181566	F6 V	
12310 A	19156+3905	181469	A7 III	
12329 AB	19156+0245	181527	Am (K/H/M=A3/A5/F2)	
12336 A	19166+1857	181752	F5 V	
12355 AB	19177+2219	182032	B4 V	B2.5 V (Guetter 1968)
12366 AB	19192+5211	182353	A8 III	
12397 A	19204+4700	182614	A2 V	
12400 A	19188-2930	182286	K3	HR 7360
12412 A	19212+4615	182754	B9.5 II	
12425 A	19211+1936	182762	G9 III	HR 7385 = 4 Vul, K0 III (Roman 1952)
12432 A	19206-2631	182649	A0 V	
12445 A	19221+1942	182955	K5 III	HR 7391, M0 III (Duflot et al 1957)
12451 A	19225+2058	183014	B3 V	B4 V (Abt & Cardona 1983)
B	B7 Vn	B6 Vn (Abt & Cardona 1983)
12452 A	19223+1152	182991	A1 IV	
12470 A	19241+4956	183361	F6 V	
12478 A	19241+3620	183363	B9 III	
12504 AB	19251+3659	183559	A6 IV	
12505 AB	19240-1251	183347	F5 IV-V	
12506 A	19237-2711	183275	K2 III	HR 7398, K3 III (Evans et al 1961)
12508 A	19245+0253	183442	B5 V	
12515 AB	19249+1212	183512	A3 V	
12518 A	19249-0039	183518	A3 V	
12520 A	19252+0242	183589	M1 III	HR 7412, K5 Ib (BSC)
12529 A	19255-0643	183658	G0 V	
12538 A	19260-0220	183794	B5 Vn	V822 Aql, B8 V (BSC)
12552 AB	19282+5626	184195	A0 V	
12567 AB	19284+4716	184242	Am (K/H/M=A3/A8/A9)	
12568 A	19274+0907	184061	B9.5 IV-V	
12569 A	19273+0617	184026	A0 II	
12608 A	19342+7803	185497	F0 IV	
12661 A	19313+0547	184853	G8 III	G8 III (McCuskey 1949)
12670 A	19322+1103	185018	G0 Ib-II	HR 7456, G0 Ib (Cowley 1973)
12688 A	19320+3006	185224	B7 III	
12690 AB	19354+7123	185713	Am (K/H/M=F2/F4/F5)	F5 V (Nassau & van Albada 1947)
12693 A	19328+1614	185194	G9 III Ba+0.5	HR 7463 = ϵ Sge, G8 III (Roman 1952)
12694 A	19322-1013	185068	Am (K/H/M=A5/A8/A8)	
12695 A	19338+4959	185395	F4 V	HR 7469 = θ Cyg, F4 V (BSC)
12708 A	19332+0007	185297	A7 IV	
12711 A	19337+1701	185354	A0 Vn	
12715 A	19332-1023	185298	A9 III	
12723 A	19340+1702	185418	B0.5 V	B0.5 V (Morgan, Code, and Whitford 1955)
12728 A	19334-1708	185344	A8 III	F1 IV (Levato 1975)
12731 A	19344+2249	185529	B8 IV	
12743 AB	19340-2217	185447	A3 V	
12748 A	19342-1504	185514	B5 Vn	
12752 AB	19351+2202	185661	F4 IV	F6 IV (Edwards 1976)
12759 A	19356+2931	185756	B8 Vn	
12767 A	19350-1631	185644	K2 III	HR 7476 = 54 Sgr, K2 III (Bidelman 1958)
12786 A	19373+3029	186098	A3 V + F6: III	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
12798	AB 19378+2709	186179	B5 III	
12803	AB 19393+6226	186453	F8 V	
12808	AB 19379+1135	186203	A3 V + G0: III	HR 7497 = χ Aql
12813	A 19379+0509	186226	F8 V	F8 IV-V (SBSC)
12831	AB 19396+4029	186465	B9.5 V	
12848	A 19394+1208	186455	A2 Vn	
12850	A 19398+2654	186518/9	B7 V + G1: III	HR 7508 = PS Vul, G4 III (BSC)
12851	AB 19402+3805	186605	B5 V	
12864	AB 19402+1032	186587	B3 IV-V	B2 V (Guetter 1968)
12882	A 19410+0400	186704	G0 V	
12887	A 19406-2146	186666	Am (K/H/M=A8/F1/F3)	
12900	A 19421+3446	186927	G9 III CN+1	HR 7530, M0 III-III (Stephenson 1960)
12904	A 19424+4019	186978	B7 IV	
12906	AB 19425+3939	186996	B9 IIIIn	
12913	A 19426+3330	187013	F5 V	HR 7534 = 17 Cyg, F5 V (Roman 1950)
12920	A 19428+3239	187038	K3 III	HR 7535
12956	A 19430-2902	187098	F3 V	HR 7538, F2 V (Malaroda 1975)
12962	AB 19440+1134	187260	A3 V + F9 III	
12964	A 19444+2443	187343	B8 V	
12965	AB 19446+3655	187375	A1 III	
12986	A 19458+4408	187613	B8 III	
12992	A 19459+3828	187638	G3 II-III	HR 7555, G5-8 III (BSC)
13012	A 19462+1010	187691	F9 V	HR 7560 = θ Aql, F8 V (Harlan 1969)
13014	A 19470+3828	187849	M2 III	HR 7566 = 19 Cyg, M2 IIIa (BSC)
13019	AB 19465+0350	187734	A5: V + K2: III	
13028	AB 19465-1036	187774	Am (K/H/M=A7/F0/F2)	
13038	A 19478+3053	187981	F0 IV	
13042	A 19481+3127	188035	B9 IV	
13050	A 19482+2536	188060A	B9.5 V	
	B	188060B	B9.5 V	
13072	A 19483-2411	188088	K3 IV	HR 7578, K2 V (Ungren et al 1972)
13076	A 19494+2244	188285	B7 V	B7 V (Murphy 1969)
13082	AB 19494+1502	188328	F8 V	F8 III (Harlan 1969)
13410	A 20040+3218	191292	B8 III	
13424	A 20062+6601	191700	A1 V	
13442	A 20055+2037	191570	F3 V	HR 7705 = θ Sge, F5 IV (Harlan 1969)
	C	191571	K2 III	
13443	A 20053+0809	191533	F7 V	
13447	AB 20067+5123	191807	A0 V	
13449	AB 20074+6147	191940	A0 V	
13461	AB 20069+4339	191854	G3 V	G4 V (Christy & Walker 1969)
13493	AB 20069-0823	191841	F5 V	
13508	AB 20082+3411	192124	Am (K/H/M=A3/A7/F0)	A5 III (Dufloc et al 1960)
13511	A 20076-0318	192007	A0 V	
13515	A 20086+3809	192182	G8 II CN+1	G8 III (Barbier 1962)
13518	A 20083+2521	192144	F5 V	
13535	A 20098+5110	192439	K2.5 III	HR 7726
13545	A 20102+4853	192494	B9.5 Vn	
13553	A 20097+2155	192424	A2 Vp(λ Boo)	
13554	A 20105+4626	192577/8	B2.5 V + K2 II	HR 7735 = 31 Cyg, K2 II + B3 V (Bidelman 1954)
	C	192579	B5 IV	B5 V (SBSC)
13555	A 20104+4305	192535	K3 III	HR 7733, K4 III (Bidelman 1957)
13560	A 20110+5249	192679	F5 V	
13574	A 20100-0348	192461	F2 V	F1 V (SBSC)
13590	A 20108+0730	192622	A7 III	
13595	A 20116+4100	192803	B9 II-III	
13596	A 20115+3326	192787	G8 III	HR 7743, K0 III (BSC)
13630	A 20129+3112	193010	A0 III	
13632	A 20121-1249	192876	G2 Ib	HR 7747 = α^1 Cap, G3 Ib (Morgan and Roman 1950)
13636	A 20132+3923	193063	A0 IIP(λ Boo)	B9 IV (Barbier 1963)
13645	A 20125-1251	192947	G9 III	HR 7754, G9 III (Roman 1952)

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
13648 A	20134+2850	193094	G8 III	HR 7760, G9 III (Halliday 1955)
13662 A	20137+1801	193161	A3 III	Am (Floquet 1975)
13675 A	20136-1926	193150	K3 III	HR 7761 = σ Cap, K3 II (Floquet 1975)
13686 AB	20152+3758	193443	O9 II-III	O9 III (Morgan, Whitford, and Code 1953)
13688 A	20147+1403	193350	B9.5 V + F III	
13690 A	20153+3842	193469	K4 II	K5 Ib (Bidelman 1957)
13708 A	20202+8013	194375	B9.5 IV	
13723 AB	20166+4503	193701	F5 IV	F5 V (Christy & Walker 1969)
13743 A	20178+5317	193944	K4 III	HR 7791
13753 A	20178+4316	193926	B9.5 V	
13755 A	20172+1316	193819	B7 III	
13769 A	20198+6340	194298	K4 III	HR 7805, K5 III (BSC)
13783 A	20193+3853	194206	B6 III	B8 V (Barbier 1962)
13786 A	20196+4240	194220	G8 III	HR 7802, K0 III (Halliday 1955)
13795 A	20201+5306	194354	A0 Vs	
13807 A	20200+2841	194358	A9 IV	
13808 A	20199+1915	194318	A2 V	
13810 A	20196+0511	194262	B8 V	
13831 A	20215+4822	194614	B7 V	
13833 AB	20212+3950	194558	K3 IIIb	K2 III (Bidelman 1957)
13857 AB	20231+5449	194907	A2 Vn	
13864 A	20237+5951	195013	F0 Ib	
13868 A	20223-0226	194765	F7 V	F8 V (SBSC)
13886 A	20237+1826	195019	G1 V	G3 IV-V (Keenan and Keller 1953)
13887 A	20232-1809	194943	F3 V	HR 7822 = ρ Cap, F2 IV (Malaroda 1975)
13921 A	20257+1905	195358	B7 IV	
13944 AB	20265+1528	195481	A2 V	A3 V (Christy & Walker 1969)
13946 BC	20264+1055	195482	Am (K/H/M=A7/A9/F0)	Am (Levato 1975)
13949 A	20272+3636	195593	F5 Ib	HR 7847 = 44 Cyg, F3 Iab (Johnson & Morgan 1953)
13956 A	20268-0535	195535	G8 III	
13960 A	20269-1012	195564	G2 V	HR 7845, G2.5 IV (BSC)
13961 AB	20269-1657	195536	A7 III	
13997 AB	20286+0506	195823	A2 V	
14016 A	20301+3420	196120	B7 V	
14017 A	20296+0632	196025	B3 IV	B2 IV-V (Walborn 1971)
14027 A	20307+3210	196197	K2 III	K1 II-III (Stephenson 1960)
14072 A	20337+5032	196670	A2 V	
14081 A	20332-0127	196574	G8 III	HR 7884 = 71 Aql, G8 III (Roman 1952)
14100 A	20351+4743	196865	G9 III	
14101 A	20343+0944	196755	G3 V	HR 7896 = κ Del, G5 IV (Bidelman 1958)
14102 A	20357+6024	196988	G3 III	
14108 A	20343+0008	196758	K0 III	HR 7897 = 1 Aqr, K1 III (Roman 1952)
14119 A	20357+4720	196989	A4 IV	
14124 AB	20355+3009	196954	A2.5 V	
14142 A	20365+4659	197118	B8 Vn	
14148 AB	20362+2134	197075	B9.5 IV-V	
14158 A	20370+3157	197177	G2 III	HR 7921 = 49 Cyg, G8 IIb (BSC)
14170 A	20374+2022	197228	A7 II-III	
14196 AB	20398+5702	197168	A4 IV	
14233 AB	20402+1157	197684	A3 IV	
14258 A	20405-2714	197746	F3 V	
14259 A	20415+3021	197912	G9 III	HR 7942 = 52 Cyg, K0 III (Roman 1952)
14273 A	20426+5018	198039	F3 IV	
14280 AB	20414-2647	197889	Am (K/H/M=A2.5/A8/F0)	
14290 A	20432+3400	198134	K3 III	HR 7956, K3 III (Roman 1952)
14295 AB	20436+4202	198195	B7 Vp(Si st; He wk)	B9 III (Murphy 1969)
14298 A	20439+4513	198237	M2 III	HR 7966, K3 III (Fehrenbach et al 1961)
14299 A	20427-1834	198063	G8 III-IV	G9 III (Stephenson 1960)
14306 AB	20440+4142	198253	A0 V	
14314 A	20442+3855	198287/8	A3 Ibpe	V367 Cyg, A7 Iape + F5 (SBSC)
14318 A	20445+4728	198345	K4 III	HR 7969, K5 III (Bidelman 1957)
14322 A	20449+5203	198387	G7 IV	HR 7972
14334 A	20453+3925	198436	B9 IVnp(λ 4481 sharp)	
14355 A	20464+3032	198626	A8 III	
14370 AB	20480+5102	198834	A9 IV	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
14649 A	21032+4715	201251	K3 III	HR 8089 = 63 Cyg, K4 II (Roman 1952)
14702 A	21055+0944	201601	A9 Vp(Sr,Cr,Eu st; Ca wk)	HR 8097 = γ Equ, F0 IIIp (Oke '54)
14708 AB	21059+1933	201672	F4 V	
14715 AB	21061+0908	201686	A3 IV	
14876 AB	21167+5254	203379	B9.5 V	
14889 AB	21166+3202	203358	G4 V	HR 8166, G8 IV (Stephenson 1960)
14893 AB	21165+0955	203345	F7 V	F8 V (Christy & Walker 1969)
14898 A	21178+6016	203551	F6 III	
14909 A	21175+1923	203504	K0.5 IIIb	HR 8173 = 1 Peg, K1 III (Keenan & Pitts 1980)
14916 AB	21215+7955	204129	F6 V	
14944 AB	21202+4644	203938	B0 V	B0.5 IV (Stebbins & Kron 1956)
14945 AB	21206+5452	204000	A1 V	
14954 AB	21202+0857	203944	A5 IV-V	
14960 AB	21204+0137	203993	A1 IIIp(Si,Sr st, Ca wk)	
14974 A	21227+5748	204321	A1 V	
14977 A	21219+1315	204215	A2 V	
14989 A	21232+5219	204401	B9.5 Vn	
14998 A	21246+5916	204599	M3 IIIa	HR 8224, M3 IIIa Ba 0.2 (Keenan & Pitts 1980)
15007 AB	21240+1039	204509	F4 IV	F4 II (Harlan 1969)
15027 A	21254+2312	204724	M1 III	HR 8225 = 2 Peg, M1 III (Buscombe 1957)
15035 A	21266+5229	204905	B9.5 IV-Vn	
15040 A	21274+6637	205022	A0 III	
15045 A	21267+4146	204919	A7 V	
15046 A	21258-1941	204779	F0 V	
15050 A	21263-0601	204867	G0 Ib	HR 8232 = β Aqr, G0 Ib (Johnson & Morgan 1953)
15057 A	21274+3937	205024	F3 V	
15058 AB	21279+4750	205085	A1 V	A3 V (Weaver 1953)
15067 A	21275+0426	205053	A6 III	
15076 A	21284+2016	205160	F5 V	F6 IV (Harlan 1969)
15080 A	21282-1638	205132	F6 V	
15085 A	21289-0449	205244	Am (K/H/M=A8/F0/F0)	
15094 A	21308+5953	205522	A2 V	
15108 A	21317+6334	205664	A2 V	
15109 A	21306+2057	205497	F5 V	
15126 A	21319+2936	205688	G8 III	HR 8261, G8 III-IV (Heard 1952)
15135 A	21326+5003	205795	A2: Vp(Cr,Si,Sr st; Ca wk)	Ap(Cr,Eu) (Cowley & Cowley 1965)
15176 AB	21344-0030	206058	F6 V	F7 V (Christy and Walker 1969)
15191 A	21358+3904	206261	Am (K/H/M=A3/A7/F2)	
15208 A	21363+4249	206330	M2 IIIb	HR 8284 = 75 Cyg, M1 III (Blanco 1954)
15214 A	21372+5707	206482	F5 V	
15223 A	21363-2343	206356	G8 III	HR 8285 = 41 Cap, G9 III (BSC)
15249 A	21385+4158	206673	Am (K/H/M=A0/A1/A2)	
15251 AB	21385+4035	206656	F2 V	
15268 A	21393+0925	206778	K2 II	HR 8308 = ϵ Peg, K2 Ib (Morgan and Roman 1950)
15270 D	21397+2817	206874	F2 V	ADS 15275 A
15311 A	21418+2143	207147	A7 IV	
15325 A	21421-1746	207188	A1 IIIp(Si st, Mg wk)	
15337 A	21433-0643	207373	A3 V	
15355 A	21456+5002	207661	B9 IV	
15365 A	21450-2824	207603	B8.5 V	
15366 A	21468+6619	207826	F4 V	F3 IV (Bidelman 1951)
15386 A	21470+1850	207859	F5 IV	F6 V (Harlan 1969)
15602 A	22002+3228	209693	G3 II	HR 8412, G5 Ia (BSC)
15630 A	22012+0936	209845	Am (K/H/M=A1/A3/F0)	
15645 AB	22027+3536	210087	A5 III	
15646 A	22026+3402	210073	F5 IV	
15659 A	22043+4919	210289	K4 III	HR 8445, K5 III (BSC)
15662 A	22042+3853	210290	A0 V	
15670 A	22052+5848	210432	B9.5 V	
BC		210433	A1 Vp(Cr,Si,Sr)	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
15672 A	22048+3241	210354	G8 IIIb	HR 8449 = π^1 Peg
15679 A	22052+4421	210405	B9 IV	B9 V: (SBSC)
	D	210387	B9 III	
15690 A	22055+1408	210461	K0 III	HR 8456, K0 III (BSC)
15716 A	22069+0624	210686	A7 IV	
15719 A	22084+6938	210884	F2 V	HR 8474, F2 V (BSC)
15725 A	22073-0830	210733	F2 V	
15727 A	22080+4942	210819	F0 II	
15742 AB	22091+6315	211014	B9 IV	
15753 A	22088-2134	210992	G4 IV	
15758 A	22096+3914	211073	K3 IIIap(Ca IIK wk)	HR 8485, K3 III (Roman 1952)
15763 A	22095+1642	211076	K4 IV	K4 III (Roman 1955)
15764 A	22111+7249	211300	G8 III	HR 8493, K0 II-III (Bidelman 1958)
15767 AB	22095+0729	211048	B9 IV	
15769 AB	22098+1644	211139	F6 III	
15771 A	22101+2202	211153	G8 III	G8 Ib-II (Yoss 1961)
15783 A	22112+5059	211301	A0 V	
15794 AB	22116+4324	211405	B7 III	
15798 A	22118+3314	211419	F8 V	
15814 A	22134+4838	211660	G8 III	
15828 A	22146+3716	211797	A8 III	HR 8510, A9 IIIp (Cowley & Fraquelli '74)
15848 A	22161+3437	212003	A9 III	
15870 A	22180+6628	212278	A7 IV	
15874 A	22176+4010	212212	K3.5 III	
15881 AB	22188+6612	212391	A7 V + G0 III	G5 III + A2 V (Stephenson 1960)
15896 A	22188+2021	212395	F7 IV	HR 8532 = 33 Peg, F7 V (Harlan & Taylor 1970)
15924 A	22207+2204	212638	A7 III	
15926 A	22203-2045	212600	G5 III	
15934 A	22211-1715	212698	G0 V	HR 8545 = 53 Aqr A, G1 V (BSC)
	B	212697	G0 V	HR 8544 = 53 Aqr B, G2 V (BSC)
15935 A	22215+0353	212754	F8 IV-V	HR 8548 = 34 Peg, F7 V (BSC)
15941 A	22226+5336	212898	B8 Vn	
15968 A	22238+4336	213061	M1 III	
15990 A	22250-0022	213247	B9 III	
15993 A	22259+5154	213388	G8 III	G5 III (McCuskey 1955)
15994 A	22253-0838	213293	F0 V	
15996 A	22258+4027	213391	F4 V	
16001 A	22265+5643	213470	A3 Ia	A3 Ia (Morgan and Roman 1950)
16011 AB	22270+6107	213530	B8 V	
16020 AB	22272+5021	213557	A1 V	
16034 A	22280+3343	213661	A7 IV-V	
16058 A	22301+6759	213989	A7 V	
16069 A	22295+0342	213892	B9.5 V	
16073 AB	22302+5334	213990	A0 Vn	
16130 AB	22331-0825	214448	F2 + K0 III	HR 8612, F0 V + G0 III (BSC)
16138 AB	22344+4347	214608	F9 V	F9 V (Christy & Walker 1969)
16140 A	22347+5616	214665	M4 III	HR 8621, M4 III (Morgan & Keenan 1973)
16143 A	22346+3651	214652	B2 V	B2 V (Blaauw & Morgan 1953)
16149 A	22342-2852	214599	K0 IIIb	HR 8619, K0 IV (Evans et al 1964)
	BC	214600	F5 IV	F5 V (Evans et al 1964)
16154 A	22350+3704	214714	G0: IIIp(CH,CN st; met wk)	HR 8626, K1 Ib CN-3, Ba 2.5, CH+2 (Keenan & Pitts 1980)
16201 A	22378+0042	215129	A6 III	
16203 A	22383+5343	215178	A0 Vn	
16211 A	22383+2942	215182	G2 III	HR 8650 = η Peg, G2 II-III (Johnson & Morgan 1953)
16220 A	22391+4530	215324	F6 V	
16227 A	22396+4117	215373	G8 III	HR 8656 = 13 Lac, K0 III (Roman 1952)
16228 A	22396+3856	215359	K4 III	HR 8654, K5 III (Stephenson 1960)
16238 A	22401-1010	215449	A7 III	
16243 AB	22422+7759	215730	A0 II-III	
16248 A	22409+2956	215549	G9 V	K1 III-IV (Kron 1958)

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
16261 A	22417+1139	215648	F6 V	HR 8665 = ξ Peg, F7 V (Johnson & Morgan 1953)
16270 AB	22427-0445	215812	G2 V	G5 V (Roman 1955)
16278 AB	22438+3034	215955	A1 Vs	
16291 A	22456+6802	216172	F4 V	HR 8687, F5 V (BSC)
16294 A	22479+8237	216446	K3 III	HR 8702, K3 III (Roman 1952)
16314 AB	22466+2552	216285	A9 V	A7 IV-V (SBSC)
16317 AB	22474+6109	216380	G4 IV	HR 8696, G8 III-IV + G2 IV (BSC)
16321 A	22473+4047	216369	B8 V	
16325 A	22475+4246	216397	M1 III	HR 8699 = 15 Lac, M0 III (BSC)
16334 A	22488+6023	216572	A0: V + G0: III	
16339 A	22488+3013	216562	A6 V	
16365 AB	22500-0532	216718	G4: III	HR 8716, K0 III-IV (BSC)
16511 A	23013-2417	218240	G7 IV	HR 8789 = 86 Aqr, G9 III (BSC)
16518 AB	23030+6017	218439	A5 IVp(Sr,Si)	A2p (Slettebak & Nassau 1959)
16526 A	23031+4550	218452	K4 III	HR 8804 = 4 And, K5 III (Roman 1949)
16562 A	23057+4828	218790	G1 V	
16599 A	23083+3927	219127	A7 III	
16603 A	23084+1031	219139	G8 III	HR 8833
16613 A	23090-0311	219200	Am (K/H/M=A2.5/F0/F2)	
16618 A	23095-1114	219279	K4 III-IV	HR 8836, K5 III (BSC)
16633 A	23106-0938	219449	K1 IIIb	HR 8841 = ψ Aqr, K0 III (Roman 1952)
16650 AB	23126+1746	219675	Am (K/H/M=A5/F2/F3)	
16656 A	23131+4828	219734	M2 III	HR 8860 = 8 And, M2 III (Morgan & Keenan 1973)
16661 A	23137+4643	219813	B9 II	
16672 A	23139-1400	219834	G5 IV	HR 8866 = 94 Aqr, G5 V (Roman 1952)
16673 A	23143+4756	219890	A8 II	
16676 A	23142-0540	219877	F3 V	HR 8868 = 96 Aqr, F3 IV (Malaroda 1975)
16688 AB	23157-1905	220065	G8 IV	
16690 A	23162+6139	220130	K1 II-III	HR 8886, K2 III (BSC)
16692 A	23165+6152	220140	B8: IIIp(Si,Sr st; He wk)	
16707 A	23176+2521	220288	K3.5 III	K3 III (Heard 1952)
16713 A	23178+2001	220334	G2 V	G2 V (Harlan & Taylor 1970)
16715 AB	23180+1146	220363	K3 III	HR 8893 = 66 Peg, K3 III (Roman 1952)
16725 A	23186-0900	220436	K0 III-IV	
16727 A	23188-2219	220466	F5 IV	
16728 A	23187-2750	220455	A1 V	
16730 A	23192+0310	220512	K2 III CN-2	K2 III (Stephenson 1960)
16731 AB	23196+5659	220562	B2 V	B2 V (Guetter 1968)
16753 A	23213-2217	220766	K1 IIIa	
16754 A	23220+7007	220841	Am (K/H/M=A3/F0/F2)	
16758 AB	23217-1548	220811	A4 V	
16759 A	23244+8552	221142	F0 IV	
16775 AB	23237+7333	221071	F1: V	
16800 AB	23255+3017	221264	F7 V	F7 V (Christy & Walker 1969)
16803 A	23256+0442	221272	A8 III	
16808 AB	23261+1814	221327	A6 IV	
16810 A	23266+5152	221377	F6 Vwl (met: A9; CH: F4)	F7 Vwl (Bond 1970)
16819 AB	23271+0632	221445	F7 V	F7 V (Christy & Walker 1969)
16821 A	23274+1651	221479	F4 IV	F3 IV-V (Harlan 1969)
16830 A	23285+1715	221627	G1 IV	G2 IV (Harlan & Taylor 1970)
16843 A	23298+3729	221776	K7 III	HR 8950
16850 AB	23304-2802	221839	F9 V	F7 V (Christy & Walker 1969)
16878 A	23325-1337	222093	G9 IIIb	HR 8958, K0 III (BSC)
16890 A	23335+4158	222207	B9 II-III	
16894 A	23336+3429	222221	Am (K/H/M=A1/A2/A7)	
16898 A	23341+6135	222275	A5 IIIs	A3 II (Hardorp et al 1959)
16904 AB	23344+4510	222326	Am (K/H/M=A2/A9/F0)	
16911 A	23352+6311	222407	A3 V	A3 V (SBSC)
16928 AB	23363+3201	222529	A1 V	
16957 A	23390+2849	222842	G8 IIIb	HR 8997 = 78 Peg, K0 III (Roman 1952)
16963 A	23393-2648	222872	F7 V	HR 8999, F8 V (Evans et al 1964)
16965 A	23396+4550	222900	B8 Vn	
16970 A	23404+1952	222978	G8 III	

TABLE 1—Continued

ADS	IDS	HD	MK Type	Other Identifications and MK Types
17004 A	23425+4845	223228	B7 III	
17009 A	23428+1629	223248	A6 III	
17010 A	23432+6316	223288	A2 V	
17019 A	23436+3544	223331	G2 III-IV	
17030 AB	23448+2707	223486	F1 V	F1 V (Christy & Walker 1969)
17037 AB	23455+4252	223570	A0 II-III	
17038 A	23456+5339	223582	F6 IV-V	
17047 A	23464+4712	223660	B7 IIIp(Si st, He wk)	
17050 AB	23465+4132	223672	A6 V	
17054 AB	23468+3720	223718	F5 V	
17062 A	23474+7500	223778	K3 V	HR 9038, K3 V (Wilson 1962)

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