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38

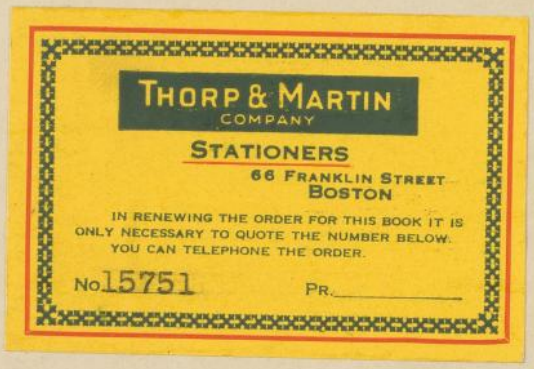
Long dispersion, internally reduced

ε Aurigae	C 10837	2	C 1724b, K field
	C 10815	8	[C4564, ε Aur,
	C 2446	14	reduced in Bk. 25]
α Cygni	C 11986	26	
Procyon	C 493	40	
α Centauri	X 7901	50	
α Lauri	X 7965	62	
α Persei	X 7933	72	
α Eridani		18	
α Carinae	X 7801, 7813	68, 69	
β Crucis	X 7632	Bk 40 p. 62.	
γ Carinae	X 7897 (3 pr)	20	

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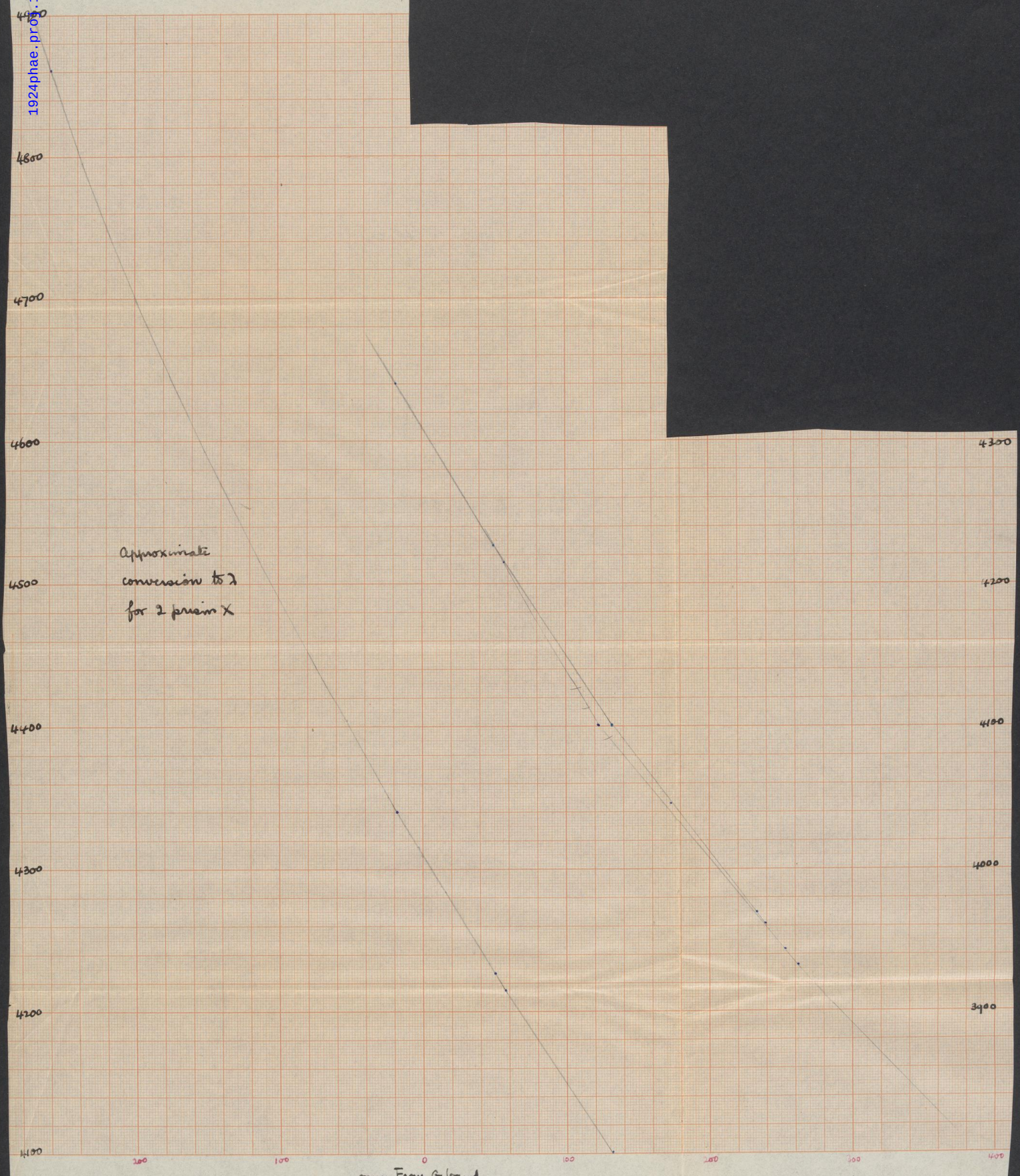
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Long dispersion spectra.

Internally reduced, using measured residual intensities of prominent lines, derived from short dispersion standardized plates, in constructing reduction curves.

Material for ε Aurigae: from c 19087, (std. Vega)

Line	dl	dm
β	32	42
γ	39	54
δ	43	61
ε	75	150
k	73	142
ζ	48	71

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2

C-16837 m φ 2390 Reduce to 500

ε Aurigae

Line	u	u+u	l+u+u	u	u+u	[u]	[u+u]	dev	dl	[n]	[n+n]	dn	dl
3889	110	245	480	115	255	17	58	48	71	94	169	75	50
3900	170	265	480	175	275	34	64	30	24	126	184	58	41
3903	230	270	480	240	280	54	66	12	10	161	192	31	25
3906	220	270	480	230	280	50	66	16	14	158	192	34	27
3913	190	280	480	195	290	40	69	29	23	136	197	61	43
k 3933	50	305	485	50	315	1	78	(77) 73	142	57	201	144	73
3936	245	310	485	250	320	57	79	22	18	166	204	38	30
3945	300	330	485	310	340	76	88	12	10	198	216	18	15
3961	315	330	485	325	340	81	88	7	6	207	216	9	8
3964	310	335	485	320	345	79	90	11	10	204	220	16	14
ε 3970	85	340	485	90	350	11	92	[81] 75	150	80	222	142	73
3973	290	340	490	295	350	71	92	21		189	222	33	26
3982	315	350	490	320	360	79	96	17		204	229	25	21
3992	340	350	490	350	360	92	96	4		222	229	7	6
4003	340	360	490	350	370	92	101	9		222	237	15	13
4005	335	365	490	345	375	90	104	14		220	240	20	17
4012	340	370	490	360	380	96	107	11		229	244	15	13
4024	350	380	490	360	390	96	112	16		229	253	22	18
4028	360	380	490	370	390	101	112	11		237	253	14	12
4030	360	380	490	370	390	101	112	11		237	253	14	12
4033	360	380	490	370	390	101	112	11		237	253	14	12
4035	360	380	490	370	390	101	112	11		237	253	14	12
4046	350	380	490	360	390	96	112	16		229	253	22	18
4053	350	385	490	360	395	96	115	19		229	257	26	21
4064	360	390	490	370	400	101	117	16		237	262	25	21
4071	370	390	490	380	400	107	117	10		244	262	18	15
4077	360	390	490	370	400	101	117	16		237	262	25	21
4087	380	390	495	385	395	109	115	6		248	257	07	6
4101	380	390	495	385	395	75	115	[40] 43	61	195	257	60	42

wrong reduction curve

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Fila	u	u+u	l+u+u	v	v+v	L/T	L+v	dv	dl
4110	370	390	500	370	390	237	253½	14	12
4122	375	390	500	375	390	240	253½	11	10
4128	360	390	500	360	390	229	253½	22	18
4132	350	390	500	350	390	222	253½	29	23
4137	360	390	500	360	390	229	253½	22	18
4163	360	390	500	360	390	229	253½	22	18
4167	360	390	500	360	390	229	253½	22	18
4173	330	400	500	330	400	210	258 ~~262~~	48	36
4178	330	400	500	330	400	210	258 ~~262~~	48	36
4198	370	400	500	370	400	237	258 ~~262~~	21	18
4204	370	400	500	370	400	237	258 ~~262~~	21	18
4205	370	400	500	370	400	237	258 ~~262~~	21	18
4215	370	400	500	370	400	237	258 ~~262~~	21	18
4227	370	400	500	370	400	237	258 ~~262~~	21	18
4233	350	400	500	350	400	222	258 ~~262~~	36	28
4242	386	410	500	380	410	244	265 ~~272~~	21	18
4247	370	410	500	370	410	237	265 ~~272~~	28	23
4251	380	410	500	380	410	244	265 ~~272~~	21	18
4254	385	410	500	385	410	248	265 ~~272~~	17	14
4259	385	410	500	385	410	248	265 ~~272~~	17	14
4271	375	410	500	375	410	240	265 ~~272~~	25	21
4275	385	410	500	385	410	248	265 ~~272~~	17	14
4280	380	410	500	380	410	244	265 ~~272~~	21	18
4294	380	410	500	380	410	244	265 ~~272~~	21	18
4300	370	410	500	370	410	237	262 ~~272~~	28	23
4308	~~365~~ 390	415	500	390	415	253½	268	17	14
4315	360	415	500	360	415	229	258 ~~268~~	29	23
4321	~~390~~ 400	415	500	400	415	258 ~~265~~	268	10	9
4326	390	415	500	390	415	253½	268	17	14

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C-10837

ε Aurigae

Date	u	v	w	u	v	w	[u]	[v]	dv	dw
4331	405	415	500	405	415	261	268	7	6
4340	340	420	500	340	420	216	273	39	54
4352	390	420	500	390	420	251	273	22	18
4367	405	420	500	405	420	261	273	12	10
4375	400	420	500	400	420	258	273	15	13
4385	380	420	500	380	420	244	273	29	23
4395	380	425	500	380	425	244	276	32	26
4400	400	430	500	400	430	258	279	21	18
4417	380	430	500	380	430	244	279	35	28
4444	400	430	500	400	430	258	279	21	18
4450	415	430	500	415	430	268	279	11	10
4469	410	430	500	410	430	265	279	14	12
4482	410	435	500	410	435	265	279	18	15
4489	415	435	500	415	435	268	283	15	13
4501	420	435	500	420	435	273	283	10	9
4508	425	435	500	425	435	276	283	7	6
4515	425	440	500	425	440	276	288	12	10
4520	430	440	500	430	440	273	288	15	13
4528	430	440	500	430	440	279	288	9	8
4534	420	440	500	420	440	273	288	15	13
4546	430	440	500	430	440	279	288	9	8
4549	420	440	500	420	440	273	288	15	13
4556	410	440	500	410	440	265	288	23	19
4564	420	440	500	420	440	273	288	15	13
4572	420	440	500	420	440	273	288	15	13
4576	430	440	500	430	440	279	288	09	8
4584	410	440	500	410	440	265	288	23	19
4619	420	440	500	420	440	273	288	15	13
4629	430	440	500	430	440	279	288	9	8
4654	430	440	500	430	440	279	288	9	8

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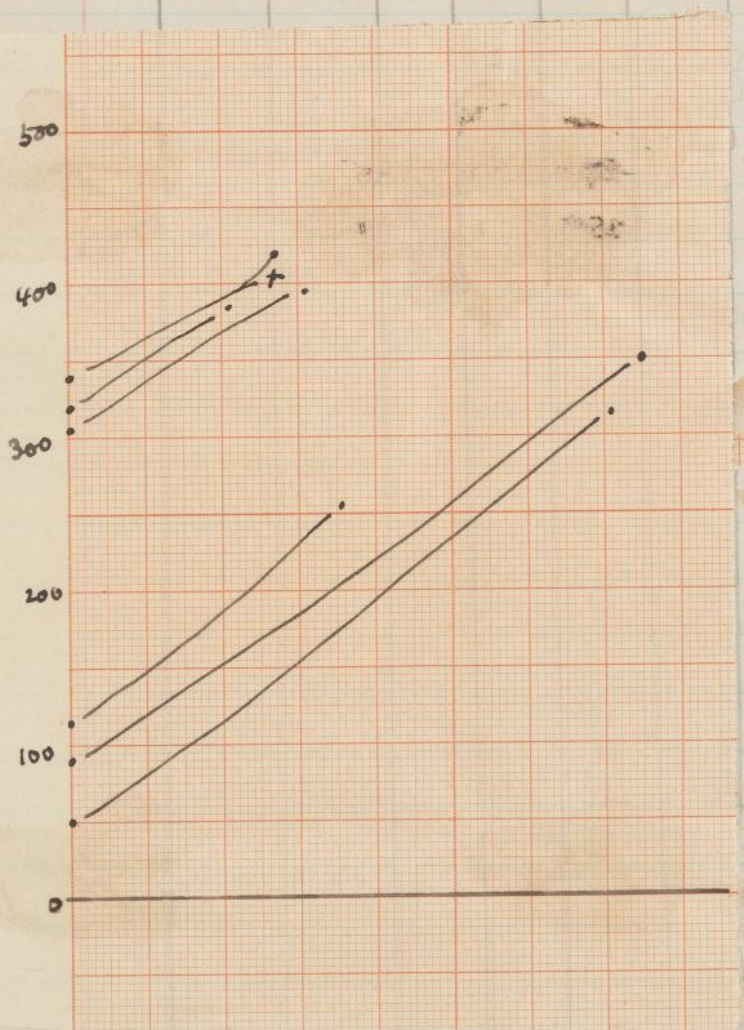
Line	u	wt u	l then u	wt u	Ls	Ls wts	Dec	dl
4824	380	400	500	380	400	244	258	14	12
4855	386	390	500	380	390	244	251	7	6
4861	326	385	500	320	385	204	247	43 32	42



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1924phae.proj.1124p

Line	u	meter	Distance	u	meter	Distances		Diff	diff
4824	380	400	500	380	400	244	258	14	12
4855	380	390	500	380	390	244	251	7	6
4861	326	385	500	320	385	204	247	43 32	42



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8

C-10815
m φ 2411
ε Aurigae

Reduced to 500

Final reductions are in red.

Finis	u	m+u	l+m+u	u	m+u	l+m+u	S	l+m+u S	den	dll			
3814	160	205	475	170	215	19	54	35	89	118	29	23	
3835	140	230	475	145	240	0	70	70	74	134	60	42	
3850	240	280	475	250	295	76	105	29	140	165	25	21	
3872	280	310	480	290	325	102	123	21	162	184	22	18	
~~3878~~	285	320	480	~~300~~ 295	335	105	129	24	165	189	24	20	
~~3889~~	205	330	480	215	~~350~~ 345	54	134	80 48	118 71	196	78 43	51 33	
3900	280	340	480	290	355	102	140	38	162	205			
3903	315	345	480	330	360	126	142	17	186	210	24	20	
3906	320	350	480	335	365	129	146	17	189	213	24	20	
3913	300	355	480	315	370	117	149	32	177	218	41	31	
3933	160	370	485	165	380	15	155	140 73	85 142	230 229	144	73	
3936	320	375	485	330	385	126	158	32	186	235	49	36	
3945	370	390	485	380	400	155	168	13	230	254	24	20	
3961	380	390	485	390	400	161	168	07	241	254	13	11	
3964	380	395	485	390	405	161	172	11	241	260	19	16	
3970	~~300~~	400	490	305	410	47	177	130 75	112 150	265	153	76	
3973	360	400	490	370	410	149	177	28	218	265	47	35	
3982	390	405	490	400	415	168	180	12	254	272	18	15	
3982	400	415	490	410	425	177	191	14	265	283	18	15	
4003	400	420	490	410	430	177	197	20	265	288	23	19	
4005	400	430	490	410	430	177	197	20	265	288	23	19	
4012	400	430	490	410	430	177	197	20	265	288	23	19	
4014	415	430	490	425	430	191	197	6	283	288	05	4	
4024	400	425	490	410	435	177	~~176~~ 204	27	265	295	30	24	
4028	410	430	490	420	440	186	210	24	277	301	24	20	
? 4030	460	430	490	470	440	?186	210	24	?277	301	24	20	
4033	420	430	490	430	440	197	210	13	288	301	13	11	
4035	430	430	490	430	440	197	210	13	288	301	13	11	
4046	415	430	490	425	440	191	210	19	283	301	18	15	
4053	420	435	490	430	445	197	220	23	288	308	20	17	
4067	430	435	490	440	445	210	220	10	301	308	7	6	

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line	u	u+u	l+u+u	u	u+u						
4071	425	440	490	435	450	204	228	~~315~~ 265	315	50	37
4077	420	440	490	430	450	197	228	288	315	27	22
4087	430	440	490	440	450	210	228	301	315	14	12
4101	390	440	490	400	450	168	228	254 43	315 61	61	43
4110	435	440	490	445	450	220	228	308	315	07	6
4122	446	445	495	445	450	220	228	308	315	07	6
4128	435	445	495	440	450	210	228	301	315	14	12
4132	420	445	495	425	450	191	228	283	315	32	26
4137	430	445	495	435	450	204	228	295	315	20	17
4163	440	450	495	445	455	220	239	308	326	18	15
4167	430	450	495	435	455	204	239	295	326	21	18
4173	415	450	495	420	455	186	239	278	326	38	36
4178	430	450	500	430	450	197	239	288	326	38	30
4198	440	455	500	440	455	210	239	301	326	25	21
4201	440	455	500	440	455	210	239	301	326	25	21
4205	440	455	500	440	455	210	239	301	326	25	21
4215	440	460	500	440	460	210	250	301	338	37	29
4227	440	460	500	440	460	210	250	301	338	37	29
4233	440	460	500	440	460	210	250	301	338	37	29
4242	445	460	500	445	460	220	250	308	338	30	24
4247	450	460	500	450	460	228	250	315	338	23	19
4251	450	460	500	450	460	228	250	315	338	23	19
4254	455	465	500	455	465	239	267	326	348	22	18
4259	450	465	500	450	465	228	267	315	348	33	26
4271	450	470	500	450	470	228	282	315	360	45	34
4275	450	465	500	450	465	228	267	315	348	33	26
~~4275~~	~~450~~	~~465~~									
4289	440	470	500	440	470	210	282	301	360	59	42
4294	460	470	500	460	470	250	282	338	360	22	18

only useful so far. Burnt out

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10

C – 10815 in φ 2411
ε Aurigæ

Lior	u	u+u	l+u+u	ū	u+u	[u]	[u+u]	date	dl
4300	430	470	505	455	465				
4308	450	470	505	445	465				
4315	460	470	505	455	465				
4321	470	475	505	465	470				
4326	465	475	505	460	470				
4331	460	475	505	455	470				
4340	465	475	505	450	470			39	54
4352	460	475	505	455	470				
4367	450	480	510	440	470				
4375	470	480	510	460	470				
4383	475	480	510	465	470				
4393	475	480	510	465	470				
4400	465	480	510	455	470				
4417	470	480	510	460	470				
4444	465 480	480	510	455	470				
4482	480	485	510	470	475				
4489	470	485	510	460	475				
4501	480	485	510	470	475				
4508	480	490	510	470	480				
4515	480	490	510	470	480				
4520	480	490	515	465	475				
4522	480	490	515	465	475				
4528	485	490	515	470	470				
4534	480	490	515	465	475				
4541	475	490	515	460	475				
4549	480	490	515	465	475				
4556	480	490	515	465	475				
4564	475	490	515	460	475				
4572	490	495	515	475	480				
4584	490	495	515	475	480				
4609	485	495	515	470	480				

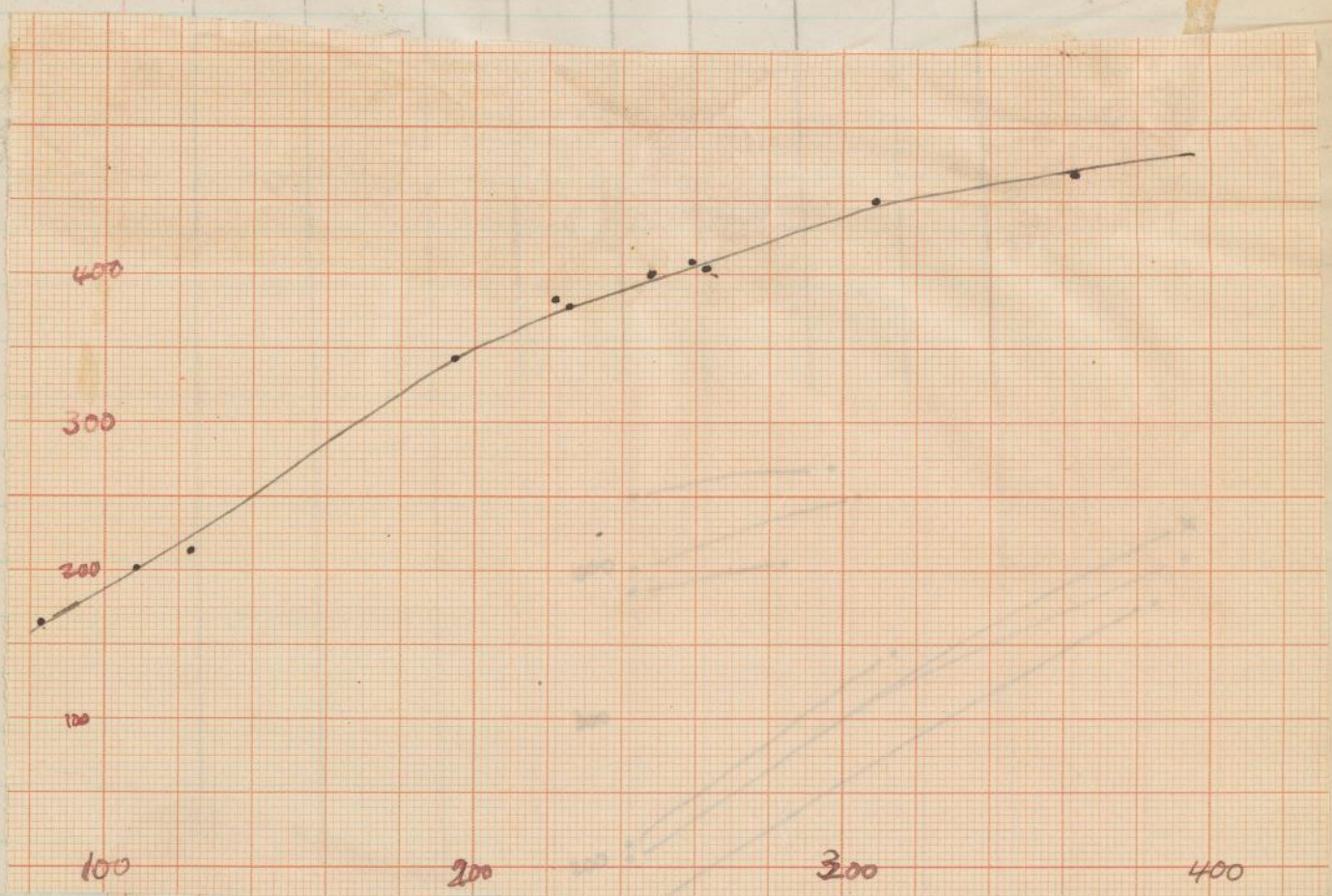
This part of the plate too much burned out to be of use.

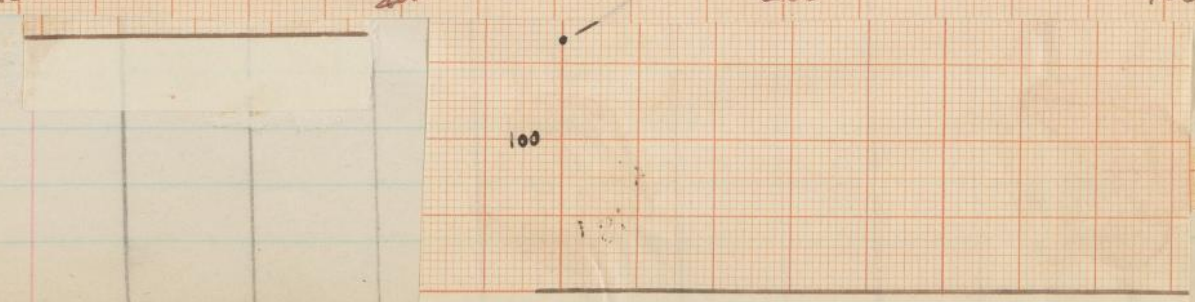
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ε Aurigae

Line u	u+u	l+u+u	u	u+u	[u]	[u+u]	dev	dl
4629	485	495	515	470	480			
4634	490	500	520	470	486			
4824	430	460	520	405	440			
4855	400	430	520	405	415			
4861	400	420	520	385	405		32	42



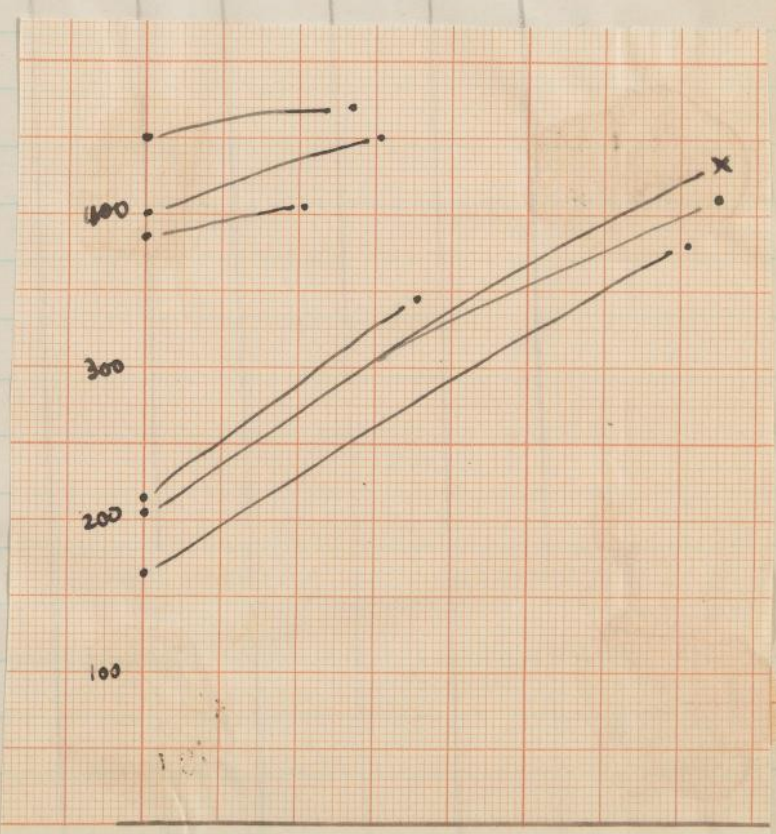


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ε Aurigae

Line	u	u+v	l+u+v	v	u+v	[u]	[u+v]	dev	dl
4629	485	495	515	470	480				
4634	490	500	530	470	486				
4824	430	460	520	405	440				
4855	490	430	520	405	440				



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1924phae.proj.1124P

C-5416 mp 2412
ε Aurigae

Reduced to 680

Line		extra	Intensity							
3889	00	60	680	00	60	45:	111	48	71
3900	10	80	680	10	80	64	122	58	41
3903	25	80	680	25	80	82	122	39	30
3906	30	90	680	30	90	87	126	39	30
3913	30	100	680	30	100	87	129	42	32
3933	00	135	680	00	135	45:	140	73	142
3936	40	150	680	40	150	96	144	48	36
3945	110	175	680	110	175	131	150	19	16
3961	130	190	680	130	190	138	154	16	14
3964	130	200	680	130	200	138	156	18	15
3970	00	215	680	00	215	45:	159	75	150
3973	110	220	680	110	220	131	160	29	23
3982	140	240	680	146	240	141	165	24	20
3992	210	275	680	210	275	158	171	13	11
4003	195	280	680	195	280	155	173	18	15
4005	180	290	680	180	290	152	175	23	19
4012	190	300	680	190	300	154	177	23	19
4014	250	305	680	250	305	166	178	12	10
4024	175	320	680	175	320	150	181	31	25
4028	230	325	680	230	325	163	182	19	16
4030	260	325	680	260	325	168	182	14	12
4033	270	330	680	270	330	170	183	13	11
4035	260	330	680	260	330	168	183	15	13
4046	240	345	680	240	345	165	186	21	18
4053	245	355	680	245	355	166	187	21	18
4064	270	365	680	270	365	170	189	19	16
4071	320	365	680	320	365	180	189	09	8
4077	300	370	680	250 325		167	191	24	20
4087	325	370	680	325	370	182	190	08	7

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1924phae.proj.1124P

C -2416 ~~m~~ φ 2412
ε Aurigae

4101	100	380	680	100	380	129	192	43	61
4110	320	380	680	320	380	180	192	12	10
4122	340	385	680	340	385	185	193	8	7
4135	240	390	680	240	390	165	194	29	23
4137	300	390	680	300	390	177	194	17	14
4163	340	395	680	340	395	185	195	10	9
4167	280	400	680	280	400	173	196	23	19
4173	190	400	680	190	400	154	196	42	32
4178	180	400	680	180	400	151	196	45	34
4198	340	410	680	340	410	185	198	13	11
4201	300	410	680	300	410	177	198	21	18
4205	310	410	680	316	410	178	198	20	17
4215	300	410	680	300	410	177	198	21	18
4227	290	415	680	290	415	175	199	24	20
4233	270	415	680	270	415	170	199	29	23
4247	350	420	680	350	420	186	200	14	12
4247	310	420	680	310	420	178	200	22	18
4251	310	420	680	310	420	178	200	22	18
4259	350	425	680	350	425	186	201	15	13
4271	325	425	680	325	425	182	201	19	16
4275	390	425	680	355	425	188 ~~194~~	201	13 ~~07~~	11 ~~6~~
4280	320	430	680	320	430	180	202	22	18
4294	320	430	680	320	420	180	202	22	18
4300	265	430	680	265	430	169	202	33	26
4308	350	435	680	350	435	186	203	17	14
4315	240	435	680	240	435	165	203	38	30
4321	360	435	680	360	435	188	203	15	13
4328	340	440	680	340	440	185	204	19	16
4331	380	440	680	380	440	192	204	12	10

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C-2416

ε Aurigae

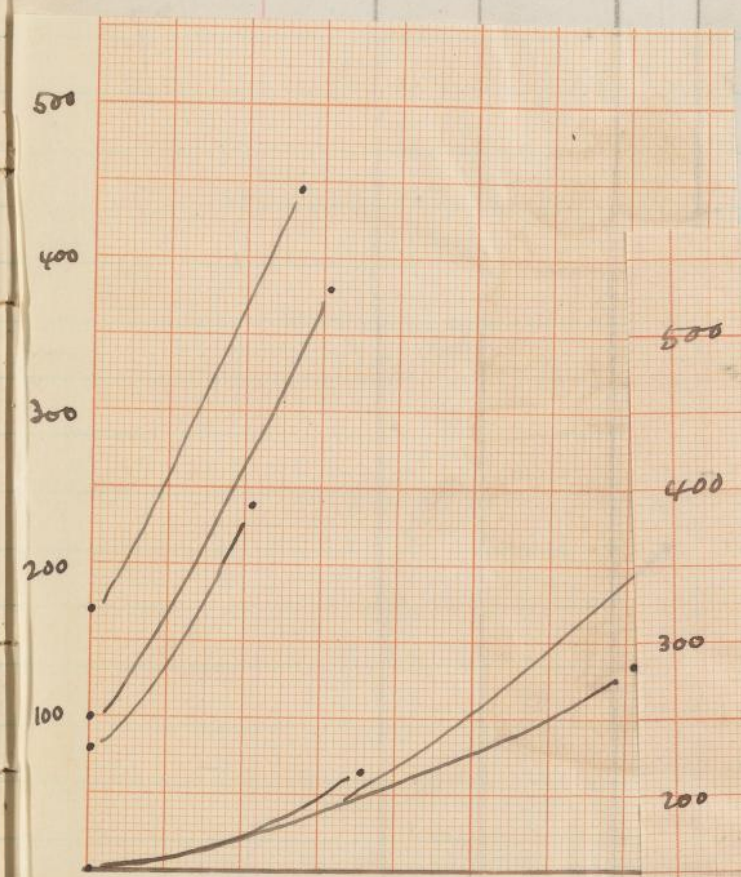
									56	40
4340	170	450	685	170	445	149	205	39	54
4352	240	455	690	335 240	45 450	184 ~~167~~	205	21 ~~41~~	18 ~~31~~
4367	390	453	690	85 390	45 ~~450~~	193	205	12	10
4375	~~350~~	460	690	345	450	186	206	20	17
4383	275	460	685	275	~~455~~	171	206	35	28
4393	290	465	685	290	460	174	207	33	26
4400	340	470	685	340	465	185	208	23	19
4417	250	470	685	250	465	167	208	41	31
4444	~~330~~	485	685	~~330~~	480	183	211	28	23
4450	410	485	685	405	480	197	211	14	12
4469	370	490	690	365	480	189	211	22	18
4482	400	495	690	390	~~485~~	194	212	18	15
4489	400	495	690	390	~~485~~	194	212	18	15
4501	430	500	690	415	~~490~~	199	213	14	12
4508	440	500	690	435	490	203	213	10	9
4515	430	505	690	420	495	201	214	13	11
4520	410	505	690	405	495	197	214	17	14
4528	450	505	690	445	~~495~~	205	214	9	8
4534	420	510	690	415	500	199	215	16	14
4546	460	510	690	450	500	206	215	9	8
4549	400	510	690	395	500	190	215	19	16
4556	380	510	690	375	500	191	215	24	20
4564	420	510	690	415	500	199	215	16	14
4572	430	510	690	425	500	201	215	14	12
4576	470	510	690	460	500	207	215	08	7
4584	380	510	690	375	500	191	215	24	20
4619	420	510	690	415	500	199	215	16	14
4629	430	505	690	425	490	201	214	13	11
4657	440	500	690	400	440	203	213	10	9

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G Aurigae C-2416 - mp2412

4824	250	315	690	245	310	166	179	13	11
4835	200	270	690	195	270	155	170	15	13
4861	80	245	690	80	240	122	164	42 32	32 42



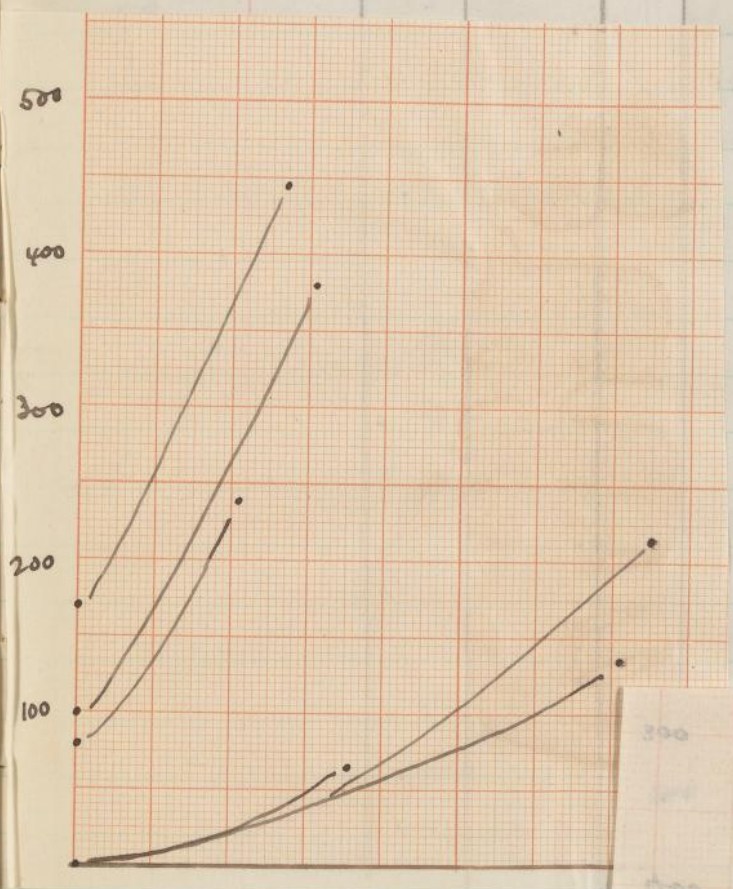


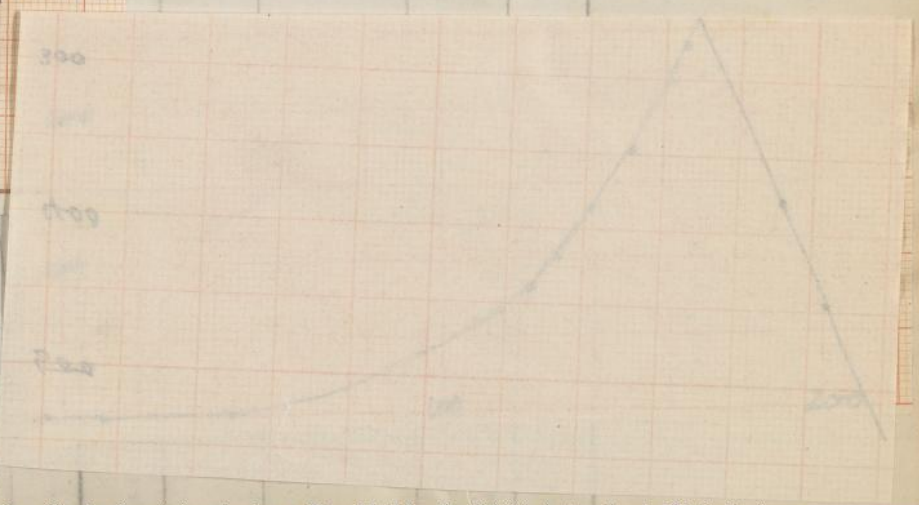
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α Aurigae C-2416 - mφ2412

4824	250	315	690	245	310	166	179	13	11
4835	200	270	690	195	270	155	170	15	13
4861	80	245	690	80	240	122	164	42 32	32 42





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α Eridani — Reduce to 770

λ7963 — μεφ 2576, 2577

2pr.	Line	n	mtn	ltmtn	[n]	[mtn]	[n]	[mtn]	dm	dl	λ7963	λ7943	λ7724	λ9916	λ7583
	β	700	770	845	640	700	298	337	39	30		28			33
	γ	815	860	880	715	755	354	430	76?	50		48?			41
	δ	750	835	870	665	740	311	400	89	56		44			37
	ε	570	740	830	530	685	257	324	67	46		42			38
	ζ	220	490	800	210	470	154	239	85	54		48	40		46
	η	40	170	780	40	170	64	136	72	48		46	40	39	37
	θ	10	50	780	10	50	34	72	38	30		40	44	45	42
												ι	41	44	34
λ7943												κ	37	39	26
2 prism	β	750	820	915	630	690	293	328	35	28		λ	32	30	
	γ	860	920	960	690	740	328	400	72	48		μ	25	19	
	δ	815	915	980	640	720	298	360	62	44		ν	18	14	
	ε	640	835	970	510	665	251	311	60	42					
	ζ	270	545	960	215	435	156	228	72	48					
	η	65	220	950	55	180	75	141	66	46					
	θ	15	90	940	10	75	34	89	55	40					

λ7984 curve used for reduction

Means.		1pr.		2pr.	Ratio	3pr.	
~~λ7724~~	β	19		30	1.58		
	γ	20		(41 44)	2.05		
	δ	23		40	1.74	Mean Ratio 1pr/2pr	
	ε	..		40	-	13,68	
	ζ	..		45	-	1.51	
	η	..		40	-		
	θ	32		43	1.34	Mean from violet lines	
	ι	26		40	1.54	8.26	
	κ	26		34	1.31		
	λ	20	3 10	31	1.55	1.38	
	μ	16	0 6	22	1.38		
	ν	14		16	1.14		

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1924phae.proj.11249

Very faint & weak

α Eridani to 770 *

	×6184	n	m+n	l+m+n	ñ	m+n	[n]	[m+n]	dm	dl	×5442 p81	×4498 p78
	prism β	875	890	900	750	760	420?	440?	–	–		19
33	61 30 γ	895	905	905	760	770	440?	–	–	–		20
41	89 44 δ	880	910	910	745	770	410?	–	–	–		23
37	81 40 ε	850	895	910	720	755	360	430?	70?	48?		27
38	80 40 ζ	785	855	910	665	725	311	367	56	40		24
46	134 45 η	715	830	910	605	700	282	337	55	40		26
37	162 40 θ	670	790	910	565	670	268	314	46	34		30
									65	45		45
42	171 43 ι	640	745	915	540	625	260	291	31	25		28
34	119 40 κ	600	690	915	505	580	250	272	22	18	36	25
26	102 34 λ	565	620	915	475	520	240	254	14	12	33	14
	62 31 μ										24	7
	44 22 ν										14	
	32 16										10	
											6	

Summary of plates; revised

dl = 45 at β

	2 prism: ×7963	×7943	to ×7729	×9996	×7983	Σ	Mean	FINAL MEANS:
β	24	26			33	83	28 31	30
γ	41	45			41	127	42 33	38
δ	46	40			37	123	41 37	39 β
ε	37	39			38	114	38 44	41 γ
ζ	45*	45*	45		46	181	45 39	42 δ
η	40	42	45	39	37	203	41 41	42 ε
θ	~~23~~	~~37~~	49	46	42	136	45 48	46 ζ
ι			46	44	~~34~~	90	45 45	45 η
κ			42	39	26		40 40	θ
λ			37	30			34 37	36 ι
μ			29	19			24 ~~28~~	26 κ
ν			21	14			18 17	18 λ
							12	12
							07	7

6184	prism 5442	4498	5442
		31	
		33	
		37	
		44	
		39	
		42	
45		45	
		40	40
		23	37
		09	28
			17
			12
			07

* ×7984 curve for reduction

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20

X1897

α Car 2579,80 C – 24.6 ~~Wolf 1~~

Canopus

Reduced to 770

3 prisms	Line	u	ue+u	l+u+u	u	ue+ue	Lu's	Lue's	due	dff	Mean. 2 prism	Ratio
	β	700	820	880	610	720	284	360	76	50	56	0.90
	γ	{770 745	885 855	900 885	{660 650	760 745	{308 303	440 410	{132 107	{70 63	58	1.14
	δ	675	860	900	575	735	271	384	113	65	66	1.00
	ε	85	830	915	70	700	85	337	252	90	84	1.03
	ζ	25	775	920	20	650	46	303	257	91	80	1.14
	3	110	620	920	90	520	98	254	156	76	62	1.22
	7	-	-	-	-	-					3.39	6.43
										Last 3	1.13	all 1.07

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μ Sp 2584 Canopus

X6163 Lines

		u	mean	l	u	mean	l	Distances		dd	Mean 2pr.	Ratio
1pm.	η	815	870	885	710	755	348	430?	82?	53	69	1.30
	θ	775	860	885	675	750	317	420?	103?	61	64	1.05
	ι	750	840	885	650	730	303	376	73	49	54	1.10
	κ	700	800	885	610	695	284	332	48	36	44	1.22
	λ	670	760	885	585	660	274	308	34	27	38	1.40
	μ	655	715	885	570	620	270	288	18	15	28	1.86
	ν	610	670	885	530	585	257	274	17	14	19	1.36
	ξ	535	610	885	460	530	236	257	21	18	18	1.00
	ο	505	540	885	435	470	228	239	11	10	12	1.20
												11.49
												1.28

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C-11986 m φ 2427

α Cygni

Reduce to 750 / 660

Line	m	m+n	l+n+m	n	m+n	[n]	[m+n]	diff	dl		
β	670	710	755	665	705						
						[n]	[m+n]	[n]	[m+n]	dm	dl
δ	675	730	740	685	720	605	640				
4233	~~675~~ 700	720	740	710	720	625	640				
4178	700	715	745	~~715~~	720	630	635				
4173	700	715	745	~~715~~	720	630	635				
4132	710	715	745	~~715~~	720	630	635				
4128	710	715	745	~~715~~	720	630	635				
4122	710	715	745	~~715~~	720	630	635				
ζ	640	715	745	645	720	570	635				
ε	530	690	750	580	690	485	610				
κ	570	660	750	570	660	500	580				
ζ	420	600	750	430	600	370	530				
η	240	450	750	240	450	210	395	113	158	45	34
θ	150	325	750	150	325	130	285	82	137	55	40
ι	110	250	750	110	250	~~97~~ 100	220	70	116	46	34
κ	90	200	755	90	200	~~79~~ 80	180	60	101	41	31
λ	~~765~~ 70	165	755	70	165	60	145	48	88	40	31
μ	60	145	755	60	145	55	130	42	82	40	31
ν	40	105	755	40	105	35	95	10	67	57	
ξ	40	85	755	40	85	35	75	10	58	48	

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Reduced to 770 and using X 7984

650	690	303	328	25	21	8
670	690	314	328	14	12	
675	690	317	328	11	10	
675	690	317	328	11	10	
685	690	324	328	04	4	
685	690	324	328	04	4	
685	690	324	328	04	4	
620	690	288	328	40	31	8
515	670	252	314	52	38	
555	640	265	298	33	26	
410	585	220	274	54	39	
235	440	164	230	66	46	
150	315	128	191	63	44	
110	245	108	168	60	42	
90	200	98	150	52	38	
70	165	85	134	49	36	
60	145	78	125	47	35	
40	105	64	106	42	32	
40	85	64	94	30	24	

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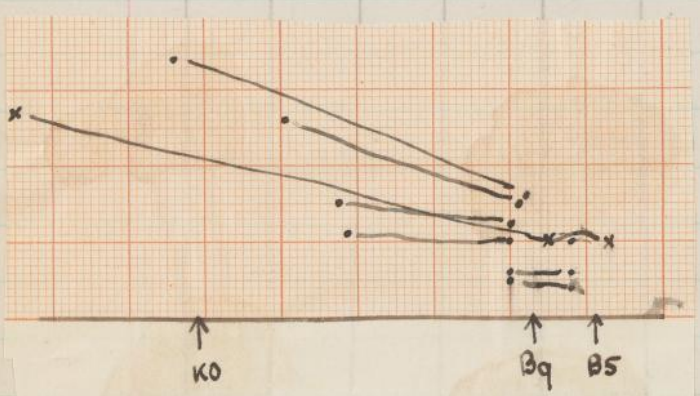
1924phae.proj..112P

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1924phae.proj.1124P

C-17246 in ℓ 2378 Reduce to 260 This plate is of low weight
#2 0 Dra, 5.78, K0

Line	u		Spectra	u		[illegible]	[illegible]	den	dl
B	120 ~~40~~	140 ~~50~~	270 ~~250~~	115	135	108	83	25	21
γ	145 ~~45~~	180 ~~80~~	270 ~~260~~	140	170	78	54	24	20
χ	150 ~~35~~	175 ~~80~~	270 ~~260~~	145	165	73	57	16	14
G	120	175	270	115	165	108	57	51	37
4227	110	160	270	105	150	120	68	52	38
4215	120	160	270	115	150	108	68	40	31
δ	95	135	270	90	120	137	90	47	35
4046	70	110	270	65	105	186	120	66	46
ε	10	80	270	10	75	—	180	-	
k	10	60	270	10	55	—	212	-	



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1924phae.proj.1124P

C-17246 - mφ 2378

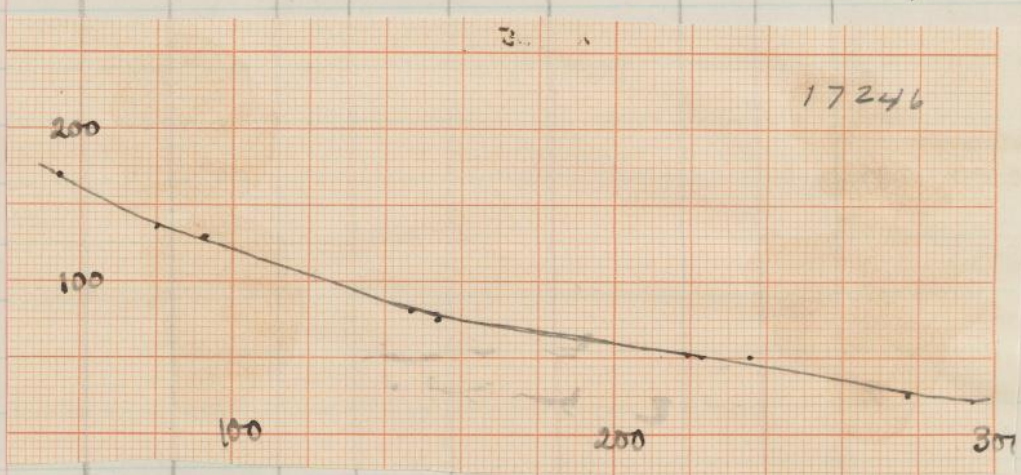
#2 6.66, Bq, +59°1926 260

Lin									
β	10	50	250	10	50	–	225		
γ	45	80	260	45	80	238	153	85	54
δ	35	75	260	35	75	262	180	82	53
ε	20	60	265	20	60	294	200	94	58
ζ	10	50	265	10	50	–	225		
η	10	30	265	10	30	–	270		
Q	05	30	270	05	30	–	270		

+59°1929, 6.82, B5

mφ 2379 #3

β	30	50	255	30	50	270	225	45	34
γ	60	90	250	60	95	200	132	68	46
δ	50	70	250	50	75	225	180	45	34
ε	30	60	240	35	65	262	186	76	50
ζ	30	45	240	35	50	262	225	37	29
η	10	30	240	10	35	–	262	–	
Q	05	20	240	05	20	–	294	–	



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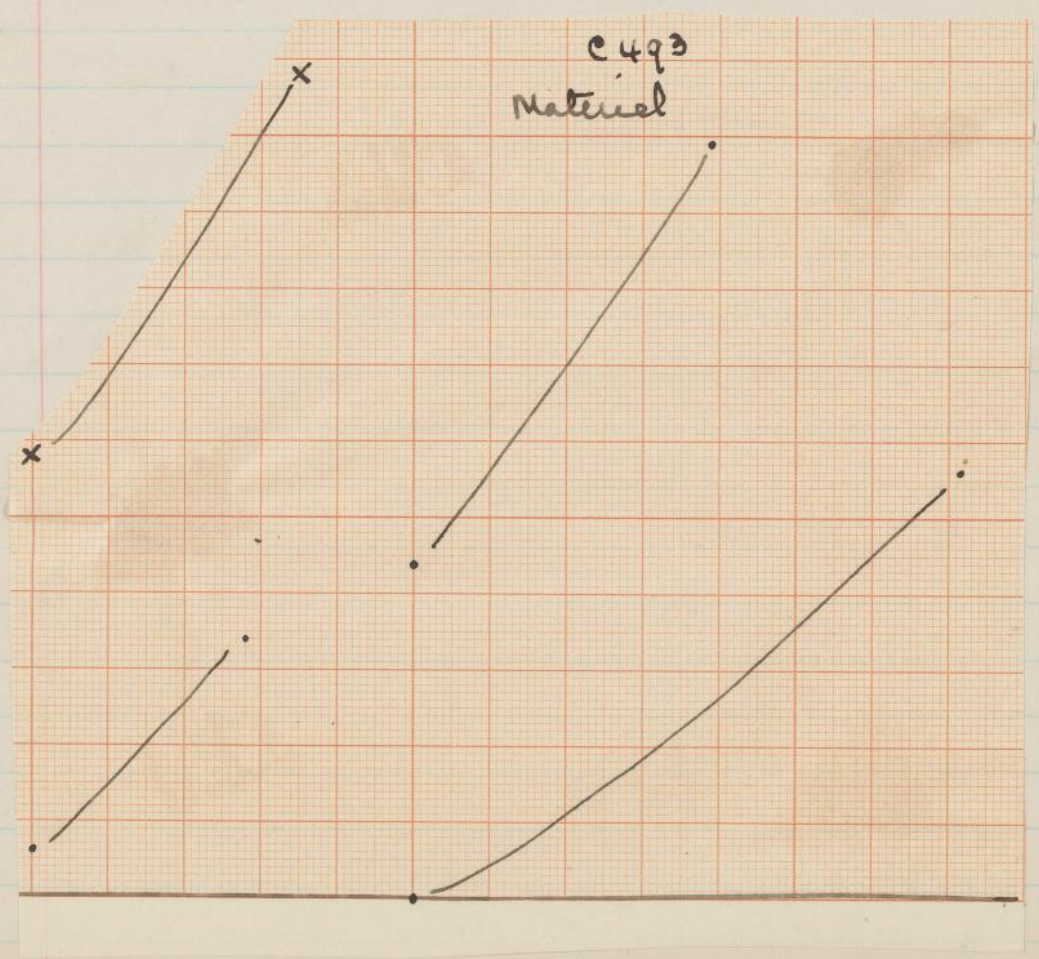
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Procyon MP 2458
C - 493

~~Lois de variation multiple~~

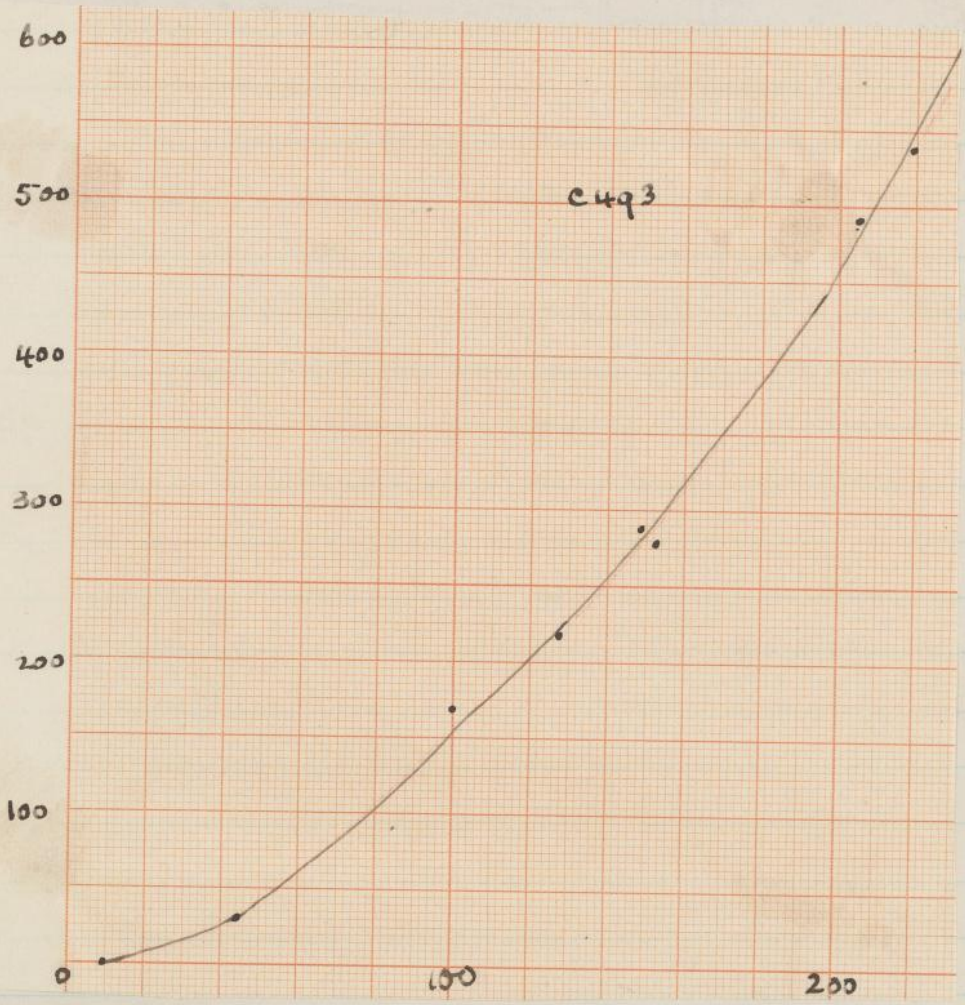
Standard is taken from H.C. 306

Raie	dλ	dm
Hε	42	60
Hη	47	70
	51	78
Hζ	48	71
k	75	150
Hε	73	143
Hδ	51	78
Hγ	47	70
Hβ	40	56



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C - 493 α Ø 3458 Reduce to 590
Procyon

Line	u	u+v	l+u+v	u	u+v	[u]	[u+v]	d	en d
1	85	110	585	85	110	72	84	12	10
2	100	120	585	100	120	79	88	09	08
3	110	130	585	110	120	84	92	08	07
4	125	140	585	125	140	90	96	06	05
Hβ 5	30	170	590	30	170	44	107	63 56	44
6	170	200	590	170	200	107	120	13	11
7	200	220	595	200	220	120	128	08	07
8	240	240	595	240	240	134	134	<	
9	240	250	595	240	250	134	138	04	04
10	240	265	595	240	265	134	143	09	08
11	290	300	595	290	300	152	155	03	03
12	310	315	595	300	310	155	158	03	03
13	310	325	595	310	320	158	160	02	02
14	320	330	595	315	325	159	162	03	03
15	340	370	600	335	365	165	174	09	08
16	345	375	600	340	370	167	176	09	08
17	365	380	600	360	375	173	178	05	04
18	370	390	600	365	385	174	180	06	05
19	370	400	600	365	395	174	183	09	08
20	370	410	600	365	405	174	186	12	10
21	400	430	600	395	420	183	190	07	06
22	410	430	600	405	420	186	190	04	04
23	430	450	600	420	440	190	196	06	05
24	435	460	600	425	450	192	198	06	05
25	440	470	600	430	460	193	200	07	06
26	470	490	600	460	480	200	205	05	04
27	470	500	600	460	490	200	207	07	06
28	470	505	600	460	495	200	208	08	07
29	490	510	600	480	500	205	209	04	04

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30	510	530	600	570	520	209	214	05	04
31	490	540	605	475	525	264	215	11	10
32	530	540	605	515	525	212	215	03	03
33	530	550	605	515	535	212	217	05	04
34	510	550	605	505	535	210	217	07	06
35	540	555	605	525	540	215	218	03	03
36	540	560	605	525	545	215	219	04	04
37	530	560	605	515	545	211	219	08	07
38	550	560	610	530	540	216	218	02	02
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50	545	570	610	525	550	215	220	05	04
51	560	570	610	540	550	218	220	02	02
52	560	570	610	540	550	218	220	02	02
53	560	580	610	540	560	28	222	04	04
54	545	580	610	525	560	215	222	07	06
55	550	580	610	530	560	216	222	06	05
56	560	580	610	540	560	218	222	04	04
57	570	580	610	550	560	220	222	02	02
58	570	580	610	550	560	220	222	02	02

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1924phae.proj.1124P

C-493
Procyon

Line	u	m+u	l+m+u	ū	m+u	[u]	t+u+g	d+u	d
59	570	580	610	550	560	220	222	02	02
60	570	580	610	550	560	220	222	02	02
61	560	580	615	535	555	217	221	04	04
62	540	580	615	515	535	212	221	09	08
63	575	580	620	545	550	219	220	01	01
64	560	580	620	530	550	216	220	04	04
65	550	580	620	520	550	214	220	06	05
66	560	580	620	530	550	216	220	04	04
67	550	580	620	520	550	214	220	06	05
68	570	580	620	540	550	218	220	02	02
69	570	580	620	540	550	218	220	02	02
70	550	580	620	520	550	214	220	06	05
71	550	580	620	520	550	214	220	06	05
72	565	580	620	535	550	217	220	03	03
73	560	580	620	530	550	216	220	04	04
74	560	580	620	530	550	216	220	04	04
75	550	580	620	520	550	214	220	06	05
76	560	580	620	530	550	216	220	04	04
77	550	580	620	520	550	214	220	06	05
78	545	580	620	515	550	212	220	08	07
79	550	580	620	520	550	214	220	06	05
80	560	580	620	530	550	216	220	04	04
81	520	580	620	490	550	207	220	13	12
82	540	580	620	510	550	211	220	09	08
83	560	580	620	530	550	216	220	04	03
84	560	580	620	530	550	216	220	04	03
85	510	580	625	480	545	205	219	14	12
86	490	580	630	460	540	200	218	18	15
Hx 87	310	580	620	~~310~~ 490	~~580~~ 540	152	218	66 70	46

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Line	u	u+u	l+u+u	u	u+u	l+u+u	l+u+u	dev	dev
88	550	580	630	516	540	212	218	06	05
89	520	575	630	485	540	206	218	12	10
90	560	575	620	525	540	215	28	08	03
91	500	535	590	570	535	209	217	08	07
92	490	535	590	490	535	207	217	10	09
93	500	535	590	500	535	209	217	08	07
94	485	535	590	485	535	206	217	11	10
95	480	535	590	480	535	205	217	12	10
96	480	535	590	480	535	205	217	12	10
97	515	530	590	515	530	212	216	04	04
98	510	530	590	510	530	211	216	05	04
99	495	530	590	495	530	208	216	08	07
100	490	530	590	490	530	207	216	09	08
101	510	530	590	510	530	211	216	06	05
102	495	530	590	495	530	208	216	08	07
103	490	530	590	490	530	207	216	09	08
104	510	530	590	510	530	211	216	05	04
105	490	530	590	490	530	207	216	09	08
106	490	525	590	490	525	207	215	08	07
107	490	525	590	490	525	207	215	08	07
108	420	525	590	420	525	190	215	25	21
109	495	520	590	495	520	208	214	06	05
110	470	520	590	470	520	203	214	11	10
111	490	520	590	490	520	207	214	07	06
112	470	520	590	470	520	203	214	11	10
113	450	520	590	452	520	198	214	16	14
114	480	520	590	480	520	205	214	09	08
115	480	520	590	480	520	205	214	09	08
116	460	520	590	460	520	200	214	14	12

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C-493

117	470	515	590	470	515	203	212	9	08
118	460	515	590	460	515	200	212	12	10
119	430	510	590	480	510	193	211	18	15
120	480	510	590	480	510	205	211	06	05
121	490	510	590	490	510	207	211	04	04
122	480	510	590	480	510	205	211	06	05
123	470	510	590	470	510	203	211	08	07
124	470	510	590	470	510	203	211	08	07
125	490	510	590	490	510	207	211	04	04
126	460	510	590	460	510	200	211	11	10
127	490	505	590	490	505	207	210	03	03
128	470	505	590	470	505	203	210	07	06
129	460	500	590	460	500	200	209	09	08
130	465	500	590	465	500	202	209	07	08
131	480	500	590	480	500	205	209	04	04
132	465	500	590	465	500	202	209	07	06
133	470	500	590	470	500	203	209	06	05
134	450	500	590	450	500	198	209	11	10
H5 135	220	495	590	220	495	128	208	80 78	52
136	410	490	590	410	490	187	207	20	17
137	460	490	590	460	490	200	207	07	06
138	450	490	590	450	490	198	207	09	08
139	410	490	590	410	490	187	207	20	17
140	445	485	590	445	485	197	206	09	08
141	450	480	590	450	480	198	205	07	06
142	420	480	590	420	480	190	205	15	13
143	435	480	590	435	480	195	205	10	09
144	440	480	590	440	480	196	205	09	08
145	370	470	590	370	470	176	203	27	22

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146	440	470	590	440	470	196	203	07	06
147	430	470	590	430	470	193	203	10	09
148	420	470	590	420	470	190	203	13	11
149	390	465	590	390	465	182	202	20	17
150	400	465	590	400	465	184	202	18	15
151	440	465	590	440	465	196	202	16	14
152	400	460	590	400	460	184	200	16	14
153	430	450	590	420	450	190	198	08	07
154	400	435	590	400	435	184	195	11	10
155	400	420	590	400	420	184	190	06	05
156	400	410	590	400	410	184	187	03	03
157	400	410	590	400	410	184	187	03	03
158	335	410	590	335	410	165	187	22	18
159	380	390	590	380	390	179	182	03	03
160	335	380	590	335	380	165	179	14	12
161	350	370	590	350	370	170	176	06	05
162	360	370	590	360	370	173	176	03	03
163	330	355	590	330	355	164	171	07	06
164	285	340	590	285	340	150	167	17	14
165	280	330	590	280	330	149	164	15	13
166	280	320	590	280	320	149	160	11	10
167	220	310	590	220	310	128	158	30	24
168	200	300	590	200	300	120	155	35	28
169	140	295	590	140	295	96	153	57	41
H ε 170	00	280	590	00	280	9	149	143	112
171	140	250	590	140	257	96	138	42	32
172	180	250	590	180	257	112	138	26	21
173	180	235	590	180	235	112	133	21	18
174	170	230	590	170	230	107	130	23	19

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C-493 Procyon

	Hour	u	meter	Hour	u	meter	[illegible]	[illegible]	dec	dl
	175	170	220	590	170	220	107	128	21	18
	176	155	200	585	155	200	100	120	20	17
	177	130	180	585	130	180	88	112	24	20
	178	120	175	585	120	170	88	107	19	16
12	179	00	160	585	00	160	09	102	93 150	58
3	180	00	40	585	00	40	09	50	41 71	31
	181									
	182									
	183									
	184									
	185									
	186									
	187									
	188									
	189									
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C - 493 — Reduction

00 — 9					
5 — 18	110 — ~~84~~	215 — 126	320 — 160	425 — 192	530 — 216
10 — 24	115 — ~~86~~	220 — 128	325 — 162	430 — 193	535 — 217
15 — 30	120 — ~~88~~	225 — 129	330 — 164	435 — 195	540 — 218
20 — 36	125 — ~~90~~	230 — 130	335 — 165	440 196	545 — 219
25 — 40	130 ~~92~~	235 — 133	340 — 167	445 197	550 220
30 — 44	135 — ~~94~~	240 134	345 — 168	450 198	555 — 221
35 — 47	140 — ~~96~~	246 — 136	350 — 170	455 199	560 — 222
40 — 50	145 — ~~97~~	250 — 138	355 — 171	460 200	565 — 223
45 — 52	150 — ~~99~~	255 — 140	360 — 173	465 202	570 — 224
50 — 55	155 — 100	260 — 142	365 — 174	470 203	575 — 225
55 — 58	160 — 102	265 — 143	370 — 176	475 204	580 — 226
60 — 60	165 — 104	270 145	375 — 178	480 205	585 — 227
65 — 62	170 — 107	275 — 147	380 — 179	485 206	590 — 228
70 — 65	175 — 109	280 — 149	385 — 180	490 207	595 — 229
75 — 68	180 — 112	285 — 150	390 — 182	495 208	600 230
80 — 70	185 — 114	290 — 152	395 — 183	500 209	
85 — 72	190 — 116	295 — 153	400 — 184	505 — 210	
90 — 74	195 — 118	300 — 155	405 — 186	510 211	
95 — 77	200 — 120	305 — 156	410 — 187	515 — 212	
100 — 79	205 — 121	310 — 158	415 — 189	520 214	
105 — 81	210 — 124	315 — 159	420 — 190	525 215	

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X 7901 α Centauri m p 2443 & 2444

Reduced to 780

Plate		Line	u	m+u	l	m+u	u	m+u	Lu-l	Lm+u-l	dm	dl	
326		1	285	330	700	315	370	191	208	17	14	The reduction	69
324		2	300	350	700	335	390	198	215	17	14	curve for Capella	59
322		3	330	360	700	370	410	208	218	16	09	X 7984 (Bk 39 p1)	53
320+		4	370	380	700	410	425	220	225	05	04	to be used	51+
319		5	360	390	700	400	435	218	228	10	09	provisionally for	47+
318		6	370	400	700	410	445	220	231	11	10	this plate	42
317		7	380	410	700	425	455	225	234	09	08		37
316		8	370	420	700	410	470	220	234	19	16		34+
314		9	390	430	700	435	480	228	242	14	12		(33+ 32+
312		10	420	450	700	470	500	239	248	09	08		28
310		11	450	470	700	500	525	248	255	07	06		26
304		12	470	520	700	525	580	255	272	17	14		24
303		13	500	525	700	555	585	265	274	09	08		18
298		14	540	550	700	600	610	280	284	04	04		9+
295		15	540	570	700	600	635	280	296	16	14		3
291		16	580	590	705	640	650	298	303	05	04		-1 0
288+		17	570	600	705	630	665	293	311	08	07		+3
283		18	590	620	705	650	685	303	324	21	18		4
281+		19	590	620	710	645	680	301	320	19	16		5
278		20	610	630	710	670	690	314	328	14	12		10+
275		21	630	640	710	690	700	328	337	09	08		13+
273		22	630	650	710	690	715	328	354	26	21		16
270		23	625	650	710	685	715	324	354	30	24		16+
263		24	635	660	710	695	725	332	367	35	28		19+
259+	Hβ 4861	25	615	665	710	675	730	316	366	50	37		22
223		26	690	700	720	750	760	—	—				26
217		27	700	710	730	760	760	—	—				28
181		28	705	715	735	750	760	—	—				32
172		29	710	720	740	760	760	—	—				34+
..													36

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		Prism a	extra	Grating a	extra							
69	4432	4431	/100	710	725	760	730	745	377	—		
59	4415	4415	/101	710	720	760	730	740	377	400	23	19
53	4404	4405	/102	695	720	760	715	740	354	400	46	34
51+	4401	4402	/103	710	720	760	730	740	377	400	23	19
47+	4393	4395	/104	700	720	760	720	740	360	400	40	31
42	4384	4384	/105	660	720	760	680	740	320	400	80	52
37	4375	4375	/106	700	720	760	720	740	360	400	40	31
34+	4369	4370	/107	710	720	765	725	735	367	384	17	14
(33)	4367	4367										
32+	4366	4363	/108	710	720	765	725	735	367	384	17	14
28	4358	4359	/109	710	720	770	720	730	360	376	16	14
26	4356	4355	/110	710	720	770	720	730	366	376	16	14
24	4351	4352	/111	695	720	770	705	720	340	376	36	28
18	4340	4348	/112	660	720	770	670	730	314	376 366	52	44
9+	4325	4326	/113	670	720	770	680	730	320	376	56	40
3	4316	4319	/114	630	720	770	640	730	298	376	78	51
-1	4315	4316										
0	4310		/115	610	720	770	620	730	288	376	88	56
+3	4306	4308	/116	640	720	770	650	730	308	376	73	49
4	4304	4303	/117	640	720	775	645	725	301	367	66	46
5	4302	4300	/118	630	720	775	635	725	296	367	71	48
10+	4294	4294	/119	670	720	775	675	725	317	367	50	37
13+	4288	4290	/120	680	710	775	685	715	324	354	30	24
16	4284	4286	/121	707	710	780	700	710	337	348	11	10
16+	4283	4283	/122	690	710	780	690	710	328	348	20	17
19+	4279	4280	/123	660	710	780	660	710	308	348	40	31
22	4274	4275	/124	655	710	780	655	710	306	348	42	32
26	4267	4268	/125	703	705	780	700	705	337	340	03	03
28+	4263	4261	/126	665	705	780	665	705	311	340	29	23
32	4257	4256 −8	/127	680	705	780	680	705	320	340	20	17
34+	4253	4255	/128	670	703	780	670	700	314	337	23	17
36	4250	4251	/129	680	700	780	680	700	320	337	17	14

a 1.10
b 1.40
c 1.27
d 4.74
e
f

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λ7901 – α Centauri m 2443 & 2444

41+	4241	4240	130	680	700	780	680	700	320	337	17	14	108
43	4238	4236	131	670	700	780	670	700	314	337	23	19	110
45	4234	4234	132	670	700	780	670	700	314	337	23	19	111+
47	4232	4230	133	680	700	780	680	700	320	337	17	14	114
50		4227	134	670	700	780	670	700	314	337	23	19	115
55	4220	4220	135	680	700	785	675	695	317	332	15	13	117+
57		4215	136	660	700	785	655	695	306	332	26	21	120+
60	4212	4211	137	680	700	785	675	695	317	332	15	13	123+
63	4207	4207	138	670	700	785	665	695	311	332	21	18	125
64	4206	4205	139	660	700	785	655	695	306	332	26	21	126+
66	4203	4202	140	625	700	785	620	695	288	332	44	38	130+
68	4200	4199	141	630	700	785	625	695	291	332	41	31	132+
69+	4197	4197	142	650	700	790	640	690	298	328	30	24	135
72+	4193	4192	143	650	700	790	640	690	298	328	30	24	136+
75	4189	4188	144	630	700	790	620	690	288	328	40	31	139
			145										140
			146										144
			147										148
			148										150
			149										151+
77+													
~~78(d)~~	4185	4184	150	650	690	790	640	680	298	320	22	18	154
78+	4183	4182	151	650	690	790	640	680	298	320	22	18	157+
81d	4179 4178	4179 4178	152	645	690	790	635	680	296	320	24	20	160
84	4175	4173	153	630	690	785	625	685	291	324	33	26	163+
88	4169	4168	154	650	690	785	645	685	301	324	23	19	166
89+	4167	4166	155	670	690	785	665	685	301	324	23	19	168
92	4162	4162	156	660	690	785	655	685	306	324	18	15	
94+	4160	4160	157	640	690	785	635	685	296	324	28	23	170+
96+	4157	4157	158	640	690	785	635	685	296	324	28	23	
98	4153	4152	159	660	690	785	655	685	306	324	18	15	173
99+	4152	4150	160	650	690	785	645	685	301	324	23	19	
101+	4149	4149	162	650	690	785	645	685	301	324	23	19	176+
103+	4146	4144	162	610	685	785	605	680	282	320	38	30	
106	4141	4140	163	680	685	785	675	680	317	320	03	03	180+

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			Line		Plate						
108	4138	4137	164	660	685	785	655	680	306	320	14	12
110	4134	4135	165	635	680	785	630	675	293	317	24	20
111+	4133	4133	166	630	680	785	615	675	286	317	31	25
114	4129	4129	167	660	680	785	655	675	306	317	11	10
115	4127	4128	168	650	680	785	645	675	301	317	16	14
117+	4124	4124	169	660	680	785	655	675	306	317	11	10
120+	4120	4119	170	645	680	785	640	675	298	317	19	16
123+	4115	4115	171	665	680	785	660	675	308	317	09	08
125	4112	4112	172	650	680	785	645	675	301	317	16	14
126+	4110	4111	173	650	680	785	645	675	301	317	16	14
130+	4104	4104	174	620	680	785	615	675	286	317	31	25
132+	4101 Hδ	4101	175	540	675	785	535	670	258	314	56	40
135	4095	4097	176	630	675	785	625	670	291	314	23	19
136+	4093	4094	177	630	675	785	625	670	291	314	23	19
139	4092	4092	178	650	670	785	645	665	301	311	10	10
140	4091	4090	179	665	670	785	660	665	308	311	03	03
144	4086	4087	180	640	670	785	635	665	296	311	15	13
148	4080	4082?	181	620	665	780	620	665	288	311	23	19
150	4078	4078	182	580	665	780	580	665	272	311	39	30
151+	4077	4077	183	620	665	780	620	665	288	311	23	19
154	4073	4072	184	560	661	780	560	660	266	308	42	32
157+	4069	4068	185	580	660	780	580	660	272	308	36	28
160	4066	4063	186	520	660	780	520	660	254	308	54	39
163+	4060	4059	187	570	660	780	570	660	270	308	38	30
166	4058	4058	188	600	660	780	600	660	280	308	28	23
168	4054	4055	189	610	660	780	610	660	284	308	24	20
170+	4052	4053	190	600	660	780	600	660	280	308	28	23
173	4046	4046	191	455	655	780	455	655	234	306	72	44
176+	4044	4042	192	605	653	780	605	650	282	303	21	18
180+	4039	4036	193	570	645	780	570	645	270	301	31	25

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n P 2444

182+	4036 ~~4034~~	4034	194	540	640	780	540	640	260	298	38	30
184+	4034 ~~4027~~	4033	195	540	640	780	540	640	260	298	38	30
189	4027 ~~4021~~	4025 ~~4031~~	196	580	630	780	580	630	272	293	21	18
191+	4024 ~~4019~~	4022	197	600	630	780	600	630	280	293	13	11
192+	4023 ~~4017~~	4021	198	580	625	780	580	625	272	291	19	16
194+	4021 ~~4015~~	4018	199	555	620	780	555	620	265	288	23	19
197	4017 ~~4012~~	4017	200	570	615	780	570	615	270	286	16	14
198+	4016 ~~4009~~	4016	201	570	610	780	570	610	270	284	14	12
201	4011 ~~4005~~	4013	202	560	610	780	560	610	266	284	18	15
203	4009 ~~4004~~	4009	203	560	605	780	560	605	266	282	16	14
204	4008 ~~4003~~	4009	204	460	600	780	460	600	236	280	44	33
207	4003 ~~4002~~	4002	205	540	590	780	540	590	260	276	16	14
210	4000 ~~3996~~	3999	206	490	580	780	490	580	245	274	29	23
212+	3997 ~~3993~~	3997	207	530	575	780	530	575	257	271	14	12
214	3995 ~~3991~~	3995	208	540	570	780	540	570	260	270	10	09
216	3992	3990	209	490	565	780	490	565	245	268	23	19
219	3988	3987	210	440	555	780	440	555	230	265	35	28
221	3985	~~3984~~ 3984	211	460	545	780	460	545	236	262	26	21
222+	3984	3983	212	470	540	780	470	540	239	260	21	18
224+	3982	3982	213	470	530	780	470	530	239	257	18	15
225+	3980	3979	214	440	530	780	440	530	230	257	27	22
227	3978	3978	215	350	525	780	350	525	202	255	53	39
229+	3975	3977	216	250	510	780	250	510	170	251	81	53
233+	3971 He	3971	217	00	570	780	00	570	0	~~232~~ 248	~~232~~ 248	88 90
237	3965	3964	218	225	480	780	225	480	160	242	82	58
239 Fe	3962		219	200	470	780	200	470	150	239	89	56
242	3957	3958	220	380	460	780	380	460	212	236	24	20
243	3955	3957	221	320	455	780	321	455	192	234	42	32
243+	3963	3958	222	325	450	780	325	450	194	236	42	32
246	3952	3951	223	260	445	780	260	445	172	231	59	42

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				Fine	u	ucu	Ltucu	u	ucu	[illegible]	[illegible]	dcudl
247	3951	3950	224	395	440	780	395	440	216	230	14	12
248	3949	3949	225	370	430	780	370	430	208	226	18	15
249+	3948	3948	226	300	430	780	300	430	186	226	40	31
250+	3947	3945	227	290	430	780	290	430	183	226	43	33
252	3944	↓	228	290	430	780	290	430	183	226	43	33
253	3943		229	200	420	780	200	420	150	224	74	49
253+	3943	3944										
al	3944		230	140	415	780	140	415	122	222	100	60
256	3940	3941	231	210	400	780	210	400	154	218	64	44
258	3937	3936	232	100	395	780	100	395	168	216	113	66
262	3932	K	233	00	380	780	00	380	0–	212	[212+]	86:
264+	3930	3930	234	50	370	780	50	370	72	208	136	71
266+	3928	3928	235	90	360	780	90	360	98	206	108	63
268+	3925	3926	236	160	350	780	160	350	132	202	70	48
271	3922	3923	237	150	340	780	150	340	128	200	72	48
272	3921	3921	238	150	335	780	150	335	128	198	70	48
274+	3919	3919	239	210	330	780	210	330	154	196	42	32
276+	3916	3917	240	240	320	780	240	320	166	192	26	21
278	3914	3915	241	220	310	780	220	310	158	190	32	26
279	3913	3914	242	225	305	780	225	305	160	188	28	23
280	3912	3912	243	250	300	780	250	300	170	186	16	14
281	3909	3909	244	200	290	780	200	290	150	183	33	26
283+	3907	3907	245	200	280	780	200	280	150	180	30	24
285	3906	3906	246	70	270	780	70	270	85	176	91	57
285+												
287+	3905	3903	247	100	250	780	100	250	103	170	67	46
289	3903	(3902)	248	150	245	780	150	245	128	168	40	31
290	3901	3901	249	120	240	780	120	240	118	166	48	36
292	3900	3900	250	170	230	780	170	230	118	162	44	33
294	3897	3896	251	80	220	780	80	220	92	158	66	46
295+	3896	3894	252	140	210	780	140	210	122	154	32	26
296+	3895	3892	253	120	210	780	120	210	114	154	40	31

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301	3894	3889	20	190	780	20	190	46	146	100	60
304	3890	3887	40	180	780	40	180	64	141	77	51
308	3886	3883	15	160	780	15	160	40	132	92	57
	3882	3879	20	140	780	20	140	46	122	76	50
314	3876	3872	20	110	780	20	110	46	108	62	44

	X7562		α Centauri		faint	companion				arbitrary unit 200 α mean
β	90	140	435	41	64	295	251	44	33	
γ	210	255	435	96	117	198	165	33	26	a 1.24
α	215	250	435	99	115	193	168	25	21	b 2.56
G	130	285	435	60	112	258	173	85	54	c 2.08
4327	160	220	430	74	102	234	188	46	34	d ..
δ	120	175	430	56	81	265	223	42	32	e ..

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Summary of plates of Canopus; dl

Revised curves

	×3681	f/893	f/3865					Mean	
β	15	19	13	16	β	17	19	18	
γ	18	15	17	16	γ	14	23	18	
δ	21	21	20	21	δ	19	26	22	
ε	45	49	36	43	ε	45	54	50	
ζ	37	40	33	36	k	42	55	48	
η	41	56	37	44	ζ	36	45	40	bq
θ	46	61	39	49	η	51	50	50	b4
ι	42	58	42	47	θ	56*	56*	56*	54
κ	41	58	48	49	ι	53	51	52	44
λ	39	54	48	47	κ	53	50	52	38
μ	34	46	44	41	λ	49	48	48	28
ν	23	41	38	34	μ	41	42	42	19
ξ	23	32	35	30	ν	37	29	33	18
ο	18	27	39	28	ξ	29	29	29	12
π	15	23	37	25	ο	24	23	24	
		26	23	24	π	20	20	20	
		21	31	26					
		19	18	18					

Evidently reduction curves must be revised.

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3 μ.		2 μ.	1 μ sun	dim	Sta
5			3681	7893	3865
50	η	69	18	23	15
66	θ	64	22	18	20
65	ι	54	25	26	24
90	κ	44	65	74	49
91	λ	88	66 0.88	68	46
76	μ	28	50 1.16	56	44
	ν	19	58	88	50
	ξ	18	68	102	54
	ο	12	60	94	60
			58	94	72
			54	84	72
			46	66	63
			28	58	52
			28	42	47
			22	34	53
			18	28	50
				33	28
				25	40
				23	21

Reduction curves must be revised

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λ 7965 – μ 2457 [n]+[n+m]= reduced to 770
α Tauri Reduce to 620

Pair	u	u+u	l+u+u	u	u+u	[u]+[u+u]	diff
1	20	80	590	20	85	25	105
2	40	90	590	40	95	50	115
3	40	120	590	40	125	50	155
4	50	130	590	50	135	65	170
5	130	150	590	135	160	170	195
6	120	160	590	125	170	155	210
7	130	170	590	135	180	170	220
8	80	180	590	85	190	105	235
9	110	180	590	115	190	145	235
10	120	190	590	125	200	155	250
11	130	210	595	135	220	170	270
12	85	220	595	85	220	110	285
13	160	240	595	165	250	205	310
14	180	255	600	185	265	230	330
15	180	260	600	185	270	230	335
16	160	280	600	165	290	205	360
17	150	280	600	155	290	195	360
18	180	290	600	185	300	230	370
19	220	300	600	230	310	280	385
20	190	300	600	195	310	245	385
21	220	310	600	230	320	280	400
22	180	310	600	185	320	230	400
23	240	320	600	250	330	310	410
24	270	330	600	280	340	345	425
25	280	340	600	290	350	360	435
26	280	340	600	290	350	360	435
27	310	350	600	310	360	385	450
28	280	350	600	290	360	360	450
29	320	360	600	330	370	410	460
30	300	370	600	310	380	385	475

4861

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Num	u	u+u	l+u+u	u	u+u	[illegible]	[illegible]	dem	dl
31	330	380	600	340	390	425	490		
32	320	390	600	330	400	410	500		
33	350	400	605	360	410	445	510		
34	350	400	605	360	410	445	510		
35	375	405	605	405	415	500	515		
36	320	410	605	340	420	420	520		
37	330	410	605	340	420	420	520		
38	315	410	605	325	420	415	520		
39	340	415	605	350	425	430	530		
40	380	420	605	390	430	485	535		
41	365	430	610	370	440	460	545		
42	330	430	610	335	440	415	545		
43	350	430	610	355	440	450	545		
44	395	440	610	400	450	500	555		
45	410	440	610	415	450	520	555		
46	430	440	610	440	450	545	555		
47	420	450	610	425	460	530	570		
48	410	450	610	415	460	520	570		
49	410	450	610	415	460	520	570		
50	420	455	610	440	465	545	575		
51	410	455	610	415	465	520	575		
52	400	460	610	405	470	505	580		
53	340	460	610	345	470	430	580		
54	445	470	610	455	470	560	595		
55	450	470	610	460	480	570	595		
56	410	470	610	415	480	520	595		
57	420	470	610	425	480	530	595		
58	400	475	610	405	485	505	600		
59	430	475	610	440	495	545	600		
60	400	475	610	405	485	505	600		

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α Tauri m Pg 2457

K 7695

Run	m	m+m	l+m+m	n	m+n	l+n	l+m+n	Dec dl
61	440	480	610	405	490	505	605	
62	420	480	610	425	490	530	605	
63	425	485	615	420	490	530	610	
64	430	490	615	435	495	540	615	
65	410	490	615	415	495	515	615	
66	430	490	615	435	495	540	615	
67	430	490	615	435	495	540	615	
68	350	490	615	350	495	440	615	
69	440	500	620	440	500	545	620	
90	410	500	620	410	500	510	620	
71	360	500	620	360	500	450	620	
72	395	500	620	395	500	490	620	
73	390	500	620	390	500	485	620	
74	400	500	620	400	500	495	620	
75	440	500	620	440	500	545	620	
76	430	500	620	430	500	535	620	
77	460	500	620	460	500	570	620	
78	450	500	620	450	500	560	620	
79	475	500	620	475	500	590	620	
80	460	500	620	460	500	570	620	
81	490	500	620	490	500	610	620	
82	465	500	620	465	500	580	620	
83	460	500	620	460	500	570	620	
84	470	500	620	470	500	585	620	
85	410	500	620	410	500	510	620	
86	410	500	620	410	500	510	620	
87	410	495	620	410	495	510	615	
88	420	490	620	420	490	520	610	
89	390	490	620	390	490	485	610	
90	400	490	620	400	490	500	610	

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Line u mtu ltmtm u mtu Lay Lutus den dl.

91	420	485	625	415	480
92	400	485	625	395	480
93	380	480	625	375	475
94	430	480	625	425	475
95	400	480	625	395	475
96	380	475	625	375	470
97	430	475	625	425	470
98	445	470	625	440	465
99	340	470	625	335	465
100	390	470	625	385	465
101	385	470	620	380	460
102	360	465	620	355	455
103	390	465	630	385	455
104	340	465	630	335	455
105	260	460	620	255	450
106	310	455	620	305	445
107	260	455	620	295	445
108	250	455	620	245	445
109	335	450	630	330	440
110	360	450	630	355	440
111	360	450	630	355	440
112	380	450	630	375	440
113	370	445	630	365	440
114	230	440	635	225	430
115	280	440	635	275	430
116	250	415	630	245	410
117	330	410	630	325	405
118	240	400	630	235	395
119	250	400	630	245	395
120	240	400	630	235	395

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χ Tauri mp 24/57

Line	u	mtu	ltmtu	u	mtu	[illegible]	[illegible]	dev	dl
121	170	395	630	165	390				
122	140	390	630	135	385				
123	180	390	630	175	385				
124	190	380	630	185	375				
125	270	380	630	265	375				
126	300	380	630	295	375				
127	170	370	630	165	365				
128	170	360	630	170	355				
129	190	360	630	185	355				
130	210	355	630	205	345				
131	190	350	630	185	345				
132	165	350	625	165	345				
133	100	340	625	100	335				
134	20	330	625	20	325				
135	170	325	625	170	320				
136	150	320	625	150	315				
137	140	310	625	140	305				
138	00	305	625	00	300				
139	100	300	625	100	295				
140	180	290	625	180	285				
141	200	290	625	200	285				
142	150	290	625	150	285				
143	170	285	625	170	280				
144	140	275	625	140	270				
145	170	270	625	170	265				
146	130	270	625	130	265				
147	70	270	625	70	265				
148	170	260	625	170	255				
149	150	260	625	15	255				
4340 150	70	250	625	70	245				

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Line	m+m	l+m+m	n	m+m	Estimated decade
152	70	245	625	70	240
152	200	245	625	200	240
153	150	240	625	150	235
154	10	235	625	10	230
155	120	230	625	120	225
156	140	225	620	140	225
157	85	220	620	85	220
158	05	210	620	05	210
159	15	200	620	15	200
160	55	190	620	55	190
161	10	185	620	10	185
162	30	180	620	30	180
163	60	175	620	60	175
164	65	175	620	65	175
165	60	170	620	60	170
166	10	160	620	10	160
167	05	160	620	05	160
168	60	150	620	60	150
169	20	140	620	20	140
170	10	130	620	10	130
171	20	120	620	20	120
172	55	120	620	55	120
173	50	115	620	50	115
174	30	110	620	30	110
175	20	110	620	20	110
176	10	105	620	10	105
4227 177	00	100	620	00	100
178	50	100	620	50	100
179	20	100	620	20	100
181	30	90	620	30	90

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Canopus X7801 Reduce to 770*

Line	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
β	670	810	860	600	725	280	367	87	55
γ	{815 / 780}	870 / 840	880 / 845}	730 / 710}	760 / 760}	348	440?	92?	57?
δ	760	850	860	680	760	320	440?	120?	67?
ε	370	840	865	330	750	196	420	224	87
[k]	320	825	870	285	730	182	376	194	83
ζ	395	760	870	350	670	202	314	112	64
η	145	575	875	130	505	118	250	122	67
θ	90	380	875	80	335	92	198	106	62
ι	65	240	880	55	210	75	154	79	52
κ	50	165	880	45	140	68	122	54	39
λ	30	115	880	25	100	50	103	53	39
μ	35	90	880	30	80	54	92	38	30
ν	25	60	880	20	50	46	72	26	21
ξ	20	50	880	20	45	46	68	22	18
ο	20	35	880	15	30	40	54	14	12

* Provisionally reduced by curve for Capella X7984

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Canopus X7813 Reduce to 770 *

Line	n	m+n	l+m+n	$\bar{n}$	m+n	[n]	[m+n]	dm	dl	X7801 dl	Mean	Res
β	790	870	890	695	750	332	420?	88	56	55	56	1
γ	815	885	900 }	695	755	332	430?	98?	58?	57:	58	1
	790	860	880 }	690	750	328	420?	92?				
δ	740	860	880	650	750	303	420?	117	66	67:	66	1
ε	370	830	880	325	725	194	367	173	88	87	84	3
[k]	310	805	880	270	705	176	340	164	78	83	80	3
ζ	380	730	880	330	640	196	298	102	61	64	62	2
η	120	540	875	105	470	106	239	133	71	67	69	2
θ	65	370	875	55	330	75	196	121	67	62	64	2
ι	50	240	875	45	210	68	154	86	55	52	54	2
κ	20	155	870	20	135	46	120	74	49	39	44	5
λ	20	105	870	20	90	46	98	52	38	39	38	1
μ	20	70	870	20	60	46	78	32	26	30	28	2
ν	15	40	870	15	35	40	60	20	17	21	19	2
ξ	-	-	-							18	18	..
ο	-	-	-							12	12	..

* Provisionally reduced by curve for Capella X7984

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K 7983 α Persei — φ2446 & 2447

Reduce to 60

		Time		Time		Time		Time		Time		dec	dl	from α
3978	1	30	90	630	30	95	00	67	67	46	2005
3984	2	60	180	630	65	105	52	72	20	17	1970
3988	3	70	110	630	75	115	58	76	18	15	1950
3990	4	80	110	630	85	115	62	76	14	12	1935
3997	5	80	120	630	85	125	62	80	18	15	1900
~~4002~~ 3999	6	50	130	630	50	135	36	84	48	36	1885
4002	7	100	140	630	105	145	72	88	16	14	1845
4005	8	50	140	630	50	145	36	88	52	38	1820
4013	9	120	160	630	125	170	80	97	17	14	1790
4016	10	110	160	630	115	170	76	97	21	18	1770
4017	11	120	170	630	125	180	80	101	21	18	1755
	12	150	170	630	155	180	91	101	10	09	1745
4018	13	130	180	630	135	190	84	105	21	18	1730
4022	14	130	190	630	135	~~200~~	84	109	25	21	1700
4025	15	110	200	630	105	210	72	113	41	31	1675
4028	16	150	210	630	155	220	91	116	25	21	1645
4031	17	80	210	630	85	220	62	116	54	39	1630
4033	18	100	210	630	105	220	72	116	44	33	1615
4034	19	160	215	630	170	225	~~95~~ 97	118	~~63~~ 21	~~44~~ 19	1595
4041	20	150	220	630	155	230	91	120	29	23	1555
4046	21	107	220	630	115	230	72	120	48	36	1520
4053	22	180	225	630	190	235	105	122	17	14	1495
..	23	170	230	635	175	240	99	123	24	20	1470
4058	24	120	230	635	125	240	80	123	43	33	1455
4059	25	170	230	635	175	240	99	123	24	20	1425
4063	26	130	240	640	135	250	84	127	43	33	1385
4067	27	150	240	640	155	250	91	127	36	28	1360
4072	28	150	240	640	155	250	91	127	36	28	1325
4077	29	90	250	640	95	260	67	130	63	44	1285
4087	30	170	250	640	175	260	99	130	31	25	1230

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4090	31	115	260	640	120	270	78	133	55	40	1190
4092	32	210	260	640	215	270	114	133	19	16	1175
	33	15	265	640	15	275	—	134			1110
4101	34	175	270	640	180	280	101	136	35	28	1070
4111											
4112	35	160	270	640	165	280	95	136	41	31	1055
4119	36	180	280	640	185	290	103	138	35	28	990
4124	37	185	280	645	190	285	105	137	32	26	965
4133	38	160	285	645	165	290	95	138	43	33	935
4135	39	180	290	645	185	295	103	140	37	29	895
4140	40	250	295	645	255	300	128	141	13	11	860
4144	41	180	300	650	185	305	103	142	39	30	820
4150	42	225	300	650	230	305	120	142	22	18	775
	43	205	305	650	210	310	113	143	30	24	745
	44	210	305	650	215	310	114	143	29	23	730
	45	220	310	650	225	315	118	144	26	21	695
	46	260	315	650	265	320	132	146	14	12	655
4173	47	190	320	650	195	325	91	147	56	40	620
4177	48	170	320	650	175	325	99	147	48	36	585
	49	215	325	650	220	330	116	148	32	26	550
4184	50	200	330	650	205	335	111	149	38	30	525
4189	51	240	330	650	245	335	125	149	24	20	500
4197	52	240	330	650	245	335	125	149	24	20	470
4199	53	190	335	650	195	340	106	150	44	33	450
4202	54	210	340	650	215	345	114	149	35	28	425
4207	55	210	340	650	215	345	114	149	35	28	410
4211	56	250	340	650	215	345	114	149	35	28	380
4216	57	230	350	655	235	355	122	152	30	24	340
4221	58	290	350	655	295	355	140	152	12	10	315
4227	59	190	350	655	195	355	106	152	46	34	275
4233	60	240	360	660	240	360	128	153	30	24	235

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74

α Persei
X 7983 m q 2447

	Dist	u	u+u	l+u+u	ū	u+ū	[u]	[u+ū]	dm	dl	from x
	61	270	360	660	270	360	133	153	20	17	215
	62	265	360	660	265	360	132	153	21	18	195
	63	310	365	660	310	365	143	154	11	10	175
	64	260	365	660	260	365	130	154	24	20	150
	65	280	370	660	280	370	136	155	19	16	130
	66	310	380	660	310	380	143	157	14	12	75
	67	300	380	660	300	380	141	157	16	14	65
4275	68	280	385	660	280	385	136	158	22	18	0
4280	69	320	385	660	320	385	146	158	12	10	20
	70	330	390	660	330	390	148	158	10	09	70
4290	71	250	390	660	250	390	127	158	31	25	105
	72	320	395	660	320	395	146	158	12	10	135
4299	73	250	395	660	250	395	127	158	31	25	165
4300	74	260	395	660	260	395	130	158	28	23	175
	75										
	76										
	77										
	78										
	79										
4308	80	310	400	660	310	400	143	159	16	14	210
4315	81	275	400	660	275	400	134	159	25	21	245
4321	82	360	425	685	370	410	155	160	05	04	290
4326	83	300	430	685	290	415	138	161	03	03	315
4331?	84	335	430	685	325	415	147	161	14	12	345
4340	85	110	435	685	105	415	72	161	89	56	395
4352	86	300	440	685	290	420	138	162	24	20	465
	87	380	445	685	365	425	154	162	08	07	505
	88	370	445	685	355	425	152	162	10	09	555
	89	340	450	685	325	430	147	163	16	14	590
4383	90	300	455	685	290	435	138	164	26	21	645

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α Persei

χ 7983 — m p 2+47

Rise	m	m+m	l+m+m	m	m+m	Eq	Eq+m	d	dd	from χ
91	360	460	680	350	445	151	164	13	11	700
92	350	460	680	340	445	150	164	14	12	725
93	415	465	680	400	450	159	164	05	04	755
94	390	470	680	380	455	157	165	08	07	775
95	340	470	680	330	455	148	165	17	14	815
96	415	470	680	400	455	159	165	06	05	850
97	470	475	680	455	460	165	165	—		875
98	465	475	680	450	460	164	165	01	01	890
99	400	475	680	390	460	158	165	07	06	915
100	355	480	680	345	465	150	166	16	14	960
101	420	485	680	405	470	160	166	06	05	995
102	400	490	680	390	475	158	166	08	07	1020
103	410	490	680	400	475	159	166	07	06	1050
104	400	495	680	390	480	158	—			1090
105	410	495	680	390	480	158	—			1155
106	430	500	680	415	485	161	—			1195
107	450	500	680	435	485	164	—			1220
108	470	505	680	455	490	165	—			1230
109	470	510	680	455	495	165	—			1255
110	480	510	680	465	495	166	—			1290
111	470	510	690	455	495	165	—			1325
112	470	510	680	455	495	165	—			1350
113	460	515	680	445	500	164	—			1365
114	440	515	675	420	505	163	—			1395
115	450	515	675	440	505	164	—			1415
116	485	520	675	475	510	166	—			1450
117	450	520	675	440	510	164	—			1490
118	450	520	675	440	510	164	—			1515
119	470	520	675	460	510	165	—			1560
120	485	520	670	480	510	—	—			1600

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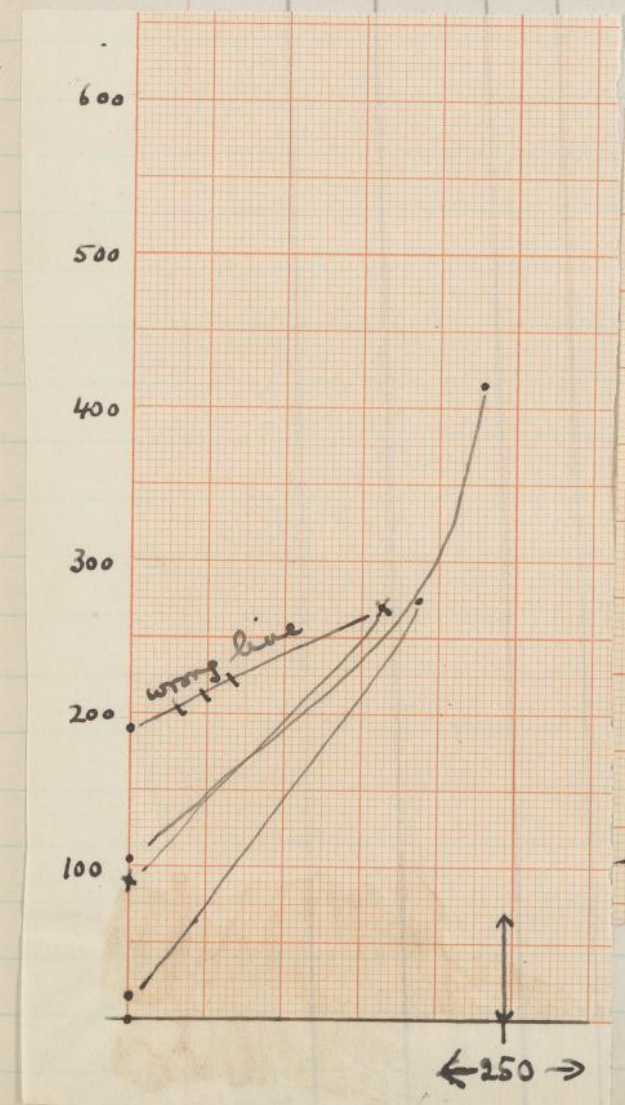
α Persei
X 7983 — m 24#7

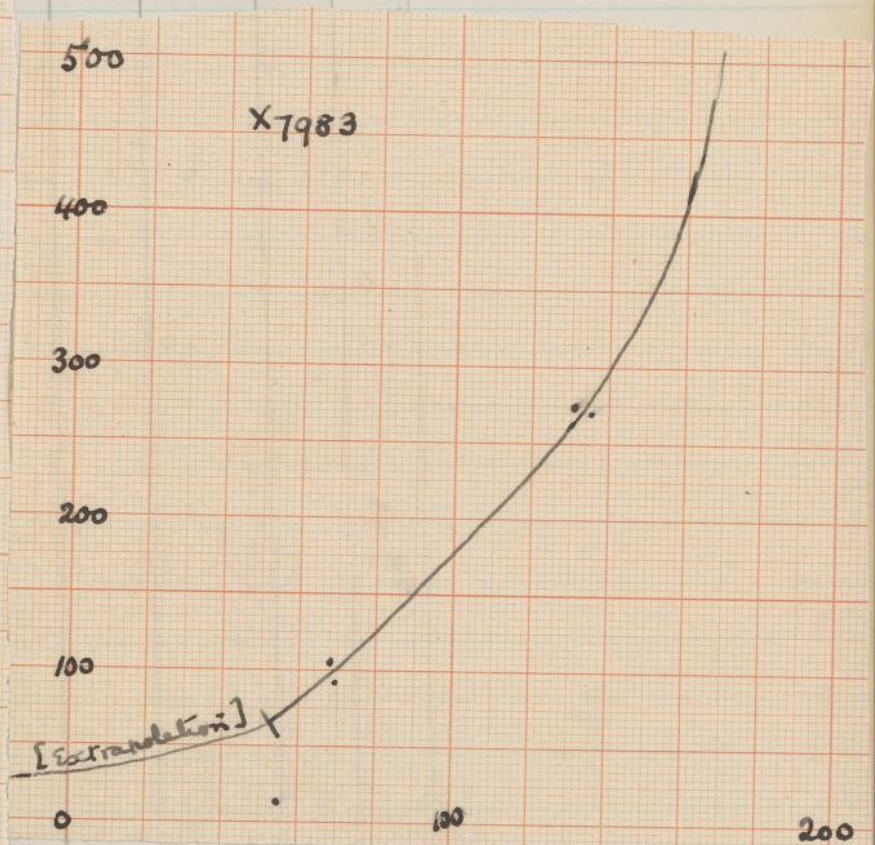
Line	u	u+u	l+u+u	u	u+u	[u]	[u+u]	dm	dl	from x
121	460	525	670	455	515	165	—			1650
122	490	525	670	480	515	—	—			1695
123	530	530	670	490	520	—	—			1735
124	530	530	670	510	520	—	—			1760
125	495	530	670	485	520	—	—			1820
126	500	530	670	490	520	—	—			
127	500	530	670	490	520	—	—			
128	500	530	670	490	520	—	—			
129	490	530	670	480	520	—	—			
130	470	530	670	460	520	165	—			
131	505	530	670	495	520	—	—			
132	515	530	670	505	520	—	—			
133	501	530	670	490	520	—	—			
134	490	530	670	480	520	—	—			
135	485	520	670	475	510	166	—			
136	480	515	670	470	505	166	—			
137	490	515	670	480	505	—	—			
138	490	510	670	480	500	—	—			
139	460	500	670	455	490	165	—			
140	470	495	670	460	485	165	—			
141	455	480	670	450	470	164	166	02	02	
142	405	470	670	400	460	159	165	06	05	
143	440	460	670	435	455	164	165	01	01	
144	435	445	665	430	440	163	164	01	01	
145	410	435	665	405	430	160	163	03	03	
146	410	420	665	405	415	160	161	01	01	
147	385	410	665	385	405	158	160	02	02	
148	390	400	665	390	400	158	159	01	01	
149	340	380	665	340	380	150	157	07	07	
150	330	340	666	330	340	148	150	02	02	

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Line	n	mm	l/mm	n	mm	Int	Int	dm	dl
	151 270	320	660	270	320	133	146	13	11
	152 275	300	660	275	300	134	141	07	06
4861	153 190	270	660	190	270	105	133	28	23
	154 210	260	660	210	260	113	130	17	14
	155 190	240	660	190	240	105	123	18	15
	156 180	230	660	180	230	101	120	19	16
	157 180	210	660	180	210	101	113	12	10
	158 185	210	660	185	200	103	109	06	05
	159 150	190	660	150	190	90	105	15	13
	160 170	170	660	100	170	70	97	27	22





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78 X4498 NGC 2586 Reduced to 770
ζ Eridani From 7984

Lue	n	m+n	l+m+n	n̄	m+n	[n]	[m+n]	dm	dl		
B	550	640	905	470	545	239	262	23	19	41	31
γ	730	790	915	615	665	287	311	24	20	43	33
δ	710	785	915	600	660	280	308	28	23	51	37
ε	680	770	915	570	650	269	303	34	27	63	44
ζ	595	705	915	500	595	248	278	30	24	54	39
η	485	625	915	420	525	223	256	33	26	60	42
θ	400	550	920	335	460	197	236	39	30	70	48
ι	345	485	920	290	405	183	219	36	28	65	45
κ	305	415	920	255	350	171	202	31	25	56	40
λ	275	350	920	230	275	162	178	16	14	29	23
μ	245	270	920	205	225	~~105~~ 152	160	08	7	10	9

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1924phae.proj.1124P

X-3681 + Carinae μ 02587 Reduce to 770

Line	n	m+n	b m+n	n̄	m+n	[n]	[m+n]	dm	dl	Reduced by red mark	
β	270	325	895	230	280	162	180	18	15	23	19
γ	370	460	890	330	400	196	218	22	18	29	23
δ	365	465	890	325	405	194	219	25	21	33	26
ε	215	430	895	185	370	143	208	65	45	85	54
k	195	405	895	170	350	136	202	66	46	87	55
ζ	205	355	895	175	305	138	188	50	37	65	45
η	120	270	890	105	235	106	164	58	41	76	50
θ	70	220	890	60	190	78	146	68	46	89	56
ι	60	185	890	50	160	72	132	60	42	78	51
K	45	160	890	40	140	64	122	58	41	76	50
λ	35	130	890	30	110	54	104	54	39	71	48
μ	35	110	890	30	95	54	170	46	34	60	42
ν	45	90	890	40	80	64	92	28	23	37	29
ξ	30	70	890	25	60	50	78	28	23	37	29
ο	30	55	890	25	50	50	72	22	18	29	23
π	25	45	890	20	40	46	64	18	15	24	20

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1924phae.proj.1124P

80 X-7729 α Eridani μ Φ 2588 to 770

Line	n	m+n	1+m+n	π	m+n	[n]	[m+n]	dm	dl	New Reductions	
ζ	915	925	930	760	765	..	..	–	–		
δ	900	915	915	755	770	..	..	–	–		
ε	870	890	900	745	760	..	..	–	–		
3	770	845	895	665	725	311	366	55	40	65	45
η	530	720	885	460	625	236	291	55	40	65	48
θ	350	590	880	310	515	189	252	63	44	74	49
ι	280	490	880	245	430	168	226	58	41	68	46
κ	245	415	875	215	365	156	207	51	37	60	42
λ	200	320	870	175	285	139	181	42	32	50	37
μ	160	235	870	140	210	123	154	31	25	37	29
ν	125	175	870	110	155	108	130	22	18	26	21

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1924phae.proj.1124P

X 5442. α Eridani μ Cφ 2589. to 770 Plate burned out

Line	n	m+n	b+m+n	ñ	m+n	[n]	[m+n]	dw	dl		
β	830	840	845	755	765	..	..	–	–		
δ	840	840	840	770	770	..	..	–	–		
ε	830	830	830	770	770	..	..	–	–		
ζ	820	825	830	760	765	..	..	–	–		
ζ	810	820	830	750	760	..	..	–	–		
η	790	815	825	740	760	..	..	–	–		
θ	770	805	825	720	750	..	..	–	–		
ι	755	795	825	705	740	..	..	–	–		
κ	740	780	825	690	730	328	376	48	36	56	40
λ	735	775	825	685	725	322	366	44	33	51	37
μ	710	755	825	665	705	311	341	30	24	35	28
ν	695	730	825	650	680	303	320	17	14	20	17
ξ	680	705	825	635	660	296	308	12	10	14	12
ο	655	670	825	610	625	284	291	07	06	8	7

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1924phae.proj.1124P

82 X-9996 α Eridani m c0 2591 t 770

Line	w	w+n	b+w+n	n	w+n	[n]	[w+n]	dw	dl
β	840	860	880	735	750	..	..	–	–
γ	850	865	865	755	770	..	..	–	–
δ	820	840	850	740	760	..	..	–	–
ε	790	825	845	720	750	..	..	–	–
ζ	665	740	840	610	680	284	320	36	28
η	415	610	835	385	560	213	266	53	39
θ	255	470	835	235	440	164	229	65	45
ι	175	355	830	160	330	134	196	62	44
κ	140	275	830	130	255	118	171	53	39
λ	120	205	830	110	190	108	146	38	30
μ	100	150	830	95	140	100	123	23	19
ν	65	90	830	60	85	78	94	16	14

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1924phae.proj.1124P

X 7729 δ Eridani uq 2589 to 770

Line	n	m+n	l+m+n	$\frac{n}{m+n}$	[n][m+n]		dw	dl
β	880	890	900	755	760	"	"	-	-
γ	890	895	895	765	770	"	"	-	-
δ	885	900	900	755	770	"	"	-	-

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1924phae.proj.1124P

84 x-7893 α Eridani uQ 25 94-2593 77°

Linie	m	m+n	m+n	n	m+n	[n]	[m+n]	dm	dv
β	730	785	855	670	720	314	358	44	33
γ	790	845	885	690	735	328	386	58	41
δ	710	795	860	635	710	296	346	50	37
4026	755	785	860	675	700	317	337	20	
ε	585	740	860	~~525~~	660	256 ~~268~~	308	52 ~~40~~	38
ζ	290	525	865	260	470	172	238	66	46
η	80	270	870	70	240	85	136	51	37
θ	40	145	875	35	130	59	118	59	42
ι	20	90	880	20	80	46	91	45	34
κ	20	70	880	20	60	46	78	32	26
λ									

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1924phae.proj.1124P

?? X-7893- μ 02595 α Pavonis t 770

1 prism.

Reduced by red mark

Line	n	m+n	k+m+y	n̄	m+n	[n]	[m+n]	dm	dl				
β	645	710	870	570	630	270	293	23	19			20	17
γ	755	785	870	670	695	314	332	18	15			16	14
δ	750	790	870	665	700	311	337	26	21			23	19
ε	605	785	870	535	695	258	332	74	49			65	45
k	580	770	870	510	680	252	320	68	46			59	42
ζ	565	740	870	500	655	250	306	56	40			49	36
η	375	690	870	330	610	196	284	88	56			77	51
θ	260	620	870	230	550	162	264	102	61			89	56
L	220	540	865	195	480	148	242	94	58			82	53
K	165	455	865	145	405	125	219	94	58			82	53
λ	145	390	865	130	350	118	202	84	54			74	49
μ	140	320	865	125	285	116	182	66	46			58	41
ν	125	270	865	110	240	108	166	58	41			50	37
ξ	120	220	865	105	195	106	148	42	32			37	29
o	100	180	865	90	160	98	132	34	27			30	24
π	90	150	865	80	135	92	120	28	23			24	20
ρ	70	130	865	60	115	78	111	33	26				
σ	65	110	865	60	100	78	103	25	21				
τ	60	100	865	55	90	75	98	23	19				

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86 X-3865 MC 2596 δ Carinae. ϕ 770

Line	n	m+n	t+u+n	n̄	m+n	[n]	[m+n]	dm	dl		
β	515	560	755	525	570	255	270	15	10		
γ	615	655	765	620	660	288	308	20	17		
δ	600	650	765	605	655	282	306	24	20		
ε	485	630	770	485	630	244	293	49	36		
κ	465	610	775	460	605	236	282	46	34		
ξ	435	575	775	430	570	226	270	44	33		
η	320	485	775	320	480	192	242	50	37		
θ	250	420	775	250	420	170	224	54	39	~~84~~	~~56~~
ι	190	360	775	190	360	146	206	60	42		
κ	130	310	775	130	310	118	190	72	48	57	41
λ	105	275	775	105	275	106	178	72	48	57	41
μ	100	240	775	100	240	103	166	63	44	50	37
ν	90	205	780	90	200	98	150	52	38	41	31
3	75	170	780	75	170	89	136	(47)	35	(37)	29
ο	50	145	780	50	145	72	125	53	39	41	31
π	45	120	780	45	120	68	118	50	37	39	30
ρ	55	100	780	55	100	75	103	28	23	36	28
σ	30	85	780	30	85	54	94	40	31		
τ	40	70	780	40	70	64	85	21	18		

Plate heavily fogged.

Rejected for several inconsistency.

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Line $n \; m+n-k+m+n \; \overline{m+n}, [n] [m+n] \, du \, dl$

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X-7538 α Φ 2604 Reduced to 770
α Valorum

Line	n	mtn	ltmtn	$\bar{n}$	mtn	[n]	dm	dl
1	30	60	795	30	60			
2	50	65	795	50	65			
3	50	70	795	50	70			
4	40	75	795	40	70			
5	70	85	795	70	80			
6	70	85	795	70	80			
7	45	90	790	45	90			
8	55	95	790	55	95			
9	80	100	790	80	100			
10	80	105	790	85	100			
11	90	110	790	90	105			
12	85	115	790	85	110			
13	95	125	790	95	120			
14	95	130	790	95	125			
15	80	140	790	80	135			
16	75	145	790	75	140			
17	80	150	790	80	145			
18	140	155	790	135	150			
19	125	155	790	130	150			
20	50	165	795	50	160			
21	110	165	795	105	160			
22	135	170	795	130	165			
23	100	175	795	95	170			
24	90	175	795	85	170			
25	65	180	795	65	175			
26	100	185	795	95	180			
27	100	190	795	95	185			
28	75	200	795	75	195			
29	110	200	795	105	195			
30	155	205	795	150	200			

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Line	n	m+n	l+m+n	$\bar{n}$	$\bar{m}+\bar{n}$	[n]	[m+n]	dnn	dll
31	160	205	795	155	200				
32	195	210	795	190	205				
33	175	215	795	170	210				
34	155	220	795	150	215				
35	160	225	795	155	220				
36	90	225	795	85	220				
37	130	230	795	125	225				
38	165	235	800	160	225				
39	170	235	800	165	225				
40	190	240	800	185	230				
41	200	240	800	190	230				
42	145	245	800	140	235				
43	175	245	800	170	235				
44	170	250	800	165	240				
45	180	255	800	175	245				
46	155	255	800	150	245				
47	155	255	800	150	245				
48	125	260	800	120	250				
49	130	260	800	125	250				
50	175	265	800	170	255				
51	105	270	800	100	260				
52	160	275	800	155	265				
53	155	275	800	150	265				
54	130	280	800	125	270				
55	130	280	800	125	270				
56	120	285	800	115	275				
57	110	285	800	105	275				
58	180	290	800	175	280				
59	195	290	800	190	280				
60	140	295	800	135	285				

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Line	n	m+n	[m+n]	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
61	185	295	800	180	285				
62	120	305	800	115	295				
63	125	305	800	120	295				
64	150	310	800	145	300				
65	175	315	800	170	305				
66	175	320	800	170	310				
67	135	325	805	130	310				
68	145	330	805	140	315				
69	155	335	805	150	320				
70	180	335	805	170	320				
71	220	335	805	210	320				
72	210	340	805	200	325				
73	225	340	805	215	325				
74	135	345	805	130	330				
75	290	350	805	280	335				
76	90	355	805	85	340				
77	255	360	805	245	345				
78	250	360	805	240	345				
79	220	365	805	210	350				
80	245	370	805	235	355				
81	255	370	805	245	355				
82	285	370	805	275	355				
83	270	380	805	260	365				
84	235	380	805	225	365				
85	255	385	805	245	370				
86	260	390	805	250	375				
87	220	390	805	210	375				
88	345	395	805	330	380				
89	175	400	805	170	380				
90	230	405	805	220	385				

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Reduce to 1870

Line	n	n+m	n+m+n	$\bar{n}$	m+n	[n]-[m+n]	dm	dl
91	290	410	810					
92	310	415	810					
93	290	415	810					
94	205	420	810					
95	280	425	810					
96	145	430	810					
97	155	430	810					
98	170	435	810					
99	120	435	810					
100	375	440	810					
101	430	445	810					
102	400	450	810					
103	205	450	810					
104	395	455	810					
105	420	460	810					
106	210	465	810					
107	350	470	810					
108	410	470	810					
109	315	475	810					
110	385	480	810					
111	385	485	810					
112	440	485	810					
113	405	490	810					
114	415	490	810					
115	325	495	810					
116	420	500	810					
117	300	500	870					
118	355	505	810					
119	360	505	810					
120	380	510	810					

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Line	n	m+n	b+m+n	$\bar{n}$	m+n	[n]	[m+n]	dm	dl
121	380	515	810						
122	305	520	815						
123	360	525	815						
124	375	525	815						
125	425	535	815						
126	450	535	815						
127	460	536	815						
128	420	540	810						
129	400	540	815						
130	415	550	815						
131	495	555	815						
132	490	555	815						
133	420	555	815						
134	420	560	815						
135	390	565	815						
136	470	565	815						
137	465	565	815						
138	530	570	815						
139	465	575	815						
140	500	580	815						
141	485	585	815						
142	525	590	815						
143	585	595	815						
144	540	595	815						
145	540	595	815						
146	565	600	820						
147	545	600	820						
148	480	600	820						
149	500	605	820						
150	555	605	820						

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Line	n	mt+n	lt m+n	ū	mF n	[n] (m+n)	dw	dl
151	540	605	820					
152	530	610	820					
153	530	610	820					
154	580	610	820					
155	590	610	820					
156	555	615	820					
157	590	615	820					
158	565	615	820					
159	590	615	820					
160	545	620	820					
161	550	620	820					
162	560	620	820					
163	570	620	820					
164	560	620	820					
165	560	625	820					
166	570	625	820					
167	605	630	820					
168	600	630	820					
169	605	630	820					
170	605	635	820					
171	610	635	825					
172	610	635	825					
173	605	635	825					
174	605	635	825					
175	580	635	825					
176	575	635	825					
177	540	635	825					
178	565	630	825					
179	575	625	825					
180	570	625	820					

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Line	n	m+n	l+m+n	$\bar{n}$	$\bar{m+n}$	[n]	[m+n]	dm	dl
181	580	620	825						
182	560	615	825						
183	585	615	825						
184	535	615	825						
185	560	610	825						
186	575	610	825						
187	540	605	825						
188	540	600	825						
189	545	600	825						
190	540	595	825						
191	575	585	825						
192	510	580	825						
193	505	580	825						
194	535	575	825						
195	530	565	825						
196	530	570	830						
197	545	570	830						
198	540	565	830						
199	530	560	830						
200	510	560	830						
201	525	555	830						
202	465	545	830						
203	505	540	830						
204	520	535	830						
205	515	525	830						
206	480	525	830						
207	465	520	830						
208	455	515	830						
209	445	500	830						
210	445	485	830						

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Line	n	m+n	l+m+n	$\bar{n}$	m+n	[n]	[m+n]	dm	dl
211	430	480	830						
212	435	470	830						
213	440	460	830						
214	445	455	830						
215	390	440	830						
216	390	430	830						
217	370	425	830						
218	340	400	835						
219	340	395	835						
220	330	390	835						
221	320	375	835						
222	265	365	835						
223	165	350	835						
224	210	320	835						
225	225	315	835						
226	225	290	835						
227	195	280	835						
228	180	270	835						
229	170	265	835						
230	190	230	840						
231	150	200	840						
232	105	180	840						
233	120	170	840						
234	110	155	840						
235	95	145	840						
236	110	135	840						
237	105	130	840						
238	70	115	845						
239	80	105	845						
240	80	100	845						
241	60	95	845						

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X6155, J Puppis

	n	m+n	l+m+n	$\overline{n}$	$[\overline{m+n}]$	[n]	[m+n]	dm	dl
β	660	680	740	690	760	328	348	20	17
γ	720	730	740	750	760	~~376~~	..		
δ	720	730	740	750	760	~~376~~	..		
ε	710	720	740	740	750	404	(424)	(20)	(17)
ζ	680	700	740	700	730	348	376	28	23
η	620	650	740	645	680	301	320	19	16
θ	565	590	740	590	615	276	287	11	10
ι	530	550	740	550	570	263	269	6	5
κ	505	520	740	525	540	256	260	4	4
λ	480	490	740	500	510	248	251	3	3

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200 and mean

ε Scorpii												
X7550	β	210	300 595	800	52	75	273	233	40	31		
	γ	450	600	815	103	146	187	119	68	46	a	0.71
	x	300	590	820	73	144	236	122	114	65	b	1.17
	G	200	580	820	49	142	278	125	153	76	c	1.65
	4227	135	510	820	33	124	316	154	162	78	d	..
	4215	140	500	820	59	122	260	157	103	61	e	1.28
	δ	250	400	825	61	97	256	197	59	42		

μ Vel												
	β	260	355	835	62	85	255	216	39	30		
	γ	210	465	810	52	115	273	168	105	62	a	1.02
	x	200	450	810	49	111	278	175	103	61	b	1.20
	G	120	435	810	30	107	324	181	143	73	c	1.18
	4227	90	355	800	22	89	353	209	144	73	d	..
	4215	135	345	800	34	86	313	214	99	60	e	1.22
	δ	90	230	800	22	58	353	262	91	57		

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HD 152293

No.	n	m+n	l+m+n	n	m+n	[n]	[m+n]	dm	dl
1	38.5	38.5	53	145	145	121	121	0	0
2	39	39	53	147	147	117	117	0	0
3	38.5	39.5	53	145	149	121	114	7	06
4	36.5	40	53	138	151	132	111	21	18
5	31.5	40	53	119	151	162	111	51	37
6	36.5	41	53	138	155	132	105	27	22
7	39.5	41	53	149	155	114	105	9	08
8	40.5	41.5	53	153	156.5	108	103	5	04
9	41.5	42	53	156.5	158.5	103	99	4	04
10	42	42	53	158.5	158.5	99	99	0	0
= 0	42	42	52.5	160	160	97	97	0	0
1	41.5	42	52.5	158	160	100	97	3	03
2	41	42	52.5	156	160	103	97	6	05
3	39.5	42	52.5	150.5	160	112	97	15	13
4	31.5	42	52.5	120	160	160	97	63	44
5	38	42	52.5	145	160	121	97	24	20
6	40.5	42	52.5	154.3	160	106	97	9	08
7	41	41.5	52.5	156	158	103	100	3	03
8	41.5	41.5	52.5	158	158	100	100	0	0
9	41.5	41.5	52.5	158	158	100	100	0	0
10	41.5	41.5	52.5	158	158	100	100	0	0
= 8.5	36	36	52.5	137	137	133	133	0	0
9	35.5	36	52.5	135	137	137	133	4	04
10	33	35.5	52.5	126	135	151	137	14	12
11	30.5	35.5	52.5	116	135	166	137	29	23
12	23.5	35.5	52.5	89.5	135	209	137	72	48
13	30.5	35	52.5	116	133.5	166	139	27	22
14	33	35	52.5	126	133.5	151	139	12	10
15	34	34.5	52.5	129.5	131.5	146	142	4	04

β

γ

δ

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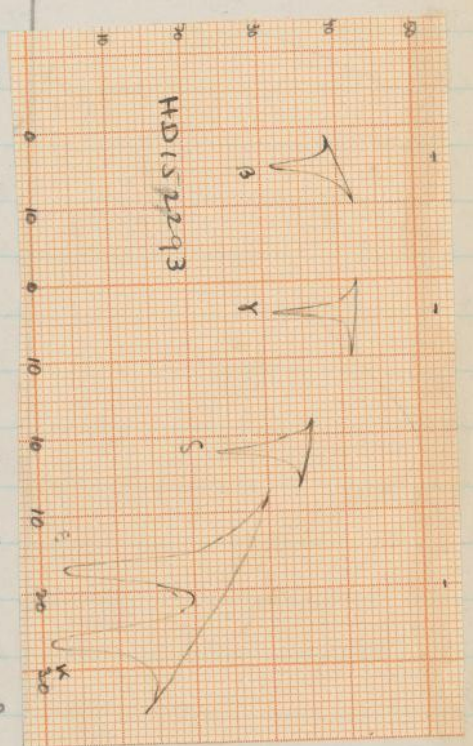
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HD 152293

No	n	m+n	t m+n	π	m+n	[m]	[m+n]	dm	dl
16	34	34	52.5	129.5	129.5	146	146	0	0
17	34	34	52.5	129.5	129.5	146	146	0	0
= 9	29	29	52.5	110.5	110.5	176	176	0	0
10	28	29	52.5	107	110.5	181	176	5	04
11	27	29	52.5	103	110.5	187	176	11	10
ε 12	26	28.5	52.5	99	108.5	193	179	14	12
13	24.5	28	52.5	93.5	107	202	181	21	18
14	22.5	27.5	52.5	86	105	214	184	30	24
15	20	27	52.5	76	103	231	187	44	33
16	10	26.5	52.5	38	101	303	190	113	65
17	3	26	52.5	14	99	399	193	206	85
18	7	25	52.5	26.7	95.5	335	199	136	71
19	14.5	25	52.5	55.3	95.5	266	199	67	46
20	18	24	52.5	68.5	91.5	244	206	38	30
21	20	23.5	52.5	76	89.5	231	209	22	18
22	19.5	23	52.5	74.5	87.5	234	212	22	18
23	17.5	22	52.5	66.5	84	247	217	30	24
24	13	21	52.5	49.5	80	277	224	53	39
25	8	20.5	52.5	32.5	78	317	228	89	56
26	2	20	52.5	4.6	76	[illegible]	231		
27	1.5	19.5	52.5	4.4	74.5		234		
28	10	18.5	52.5	38	70.5	303	240	63	44
29	12	18	52.5	45.7	68.5	285	244	41	31
K 30	13.5	17.5	52.5	51.5	66.5	274	247	27	22
31	14.5	17	52.5	55.3	65	266	249	17	14
32	15	16	52.5	57	61	263	256	7	06
33	14.5	15	52.5	55.3	57	266	263	3	03
34	14.5	14.5	52.5	55.3	55.3	266	266	0	0
35	14	14	52.5	53.5	53.5	270	270	0	0
36	13	13	52.5	49.5	49.5	277	277	0	0



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δ Cygni

	no	n	m+n	l=m+n	x	m+n	Σx	Σ(m+n)	dm	dl
	0	7	7	24	58.5	58.5	261	261	0	0
	1	6	6	24	50	50	276	276	0	0
	2	2	6	24	16.7	50	381	276	105	62
β	3	4	5	24	33.3	41.5	315	294	21	18
	4	4	4	24	33.3	33.3	315	315	0	0
	4.5	3.5	3.5	24	29	29	327	327	0	0
	=0	15	15	24	125	125	153	153	0	0
	1	15	15	24	125	125	153	153	0	0
	2	14.5	15	24	121	125	159	153	6	05
γ	3	11.5	15	24	96	125	198	153	45	34
	4	14.5	15	24	121	125	159	153	6	05
	5	15	15	24	125	125	153	153	0	0
	6	15	15	24	125	125	153	153	0	0
	=4	14.5	14.5	24	121	121	159	159	0	0
	5	14	14.5	24	117	121	165	159	6	05
	6	13.5	14.5	24	112.5	121	172	159	13	11
δ	7	9.5	14.5	24	79	121	226	159	67	46
	8	13.5	14.5	24	112.5	121	172	159	13	11
	9	14.5	14.5	24	121	121	159	159	0	0
	10	14.5	14.5	24	121	121	159	159	0	0
	10.5	14.5	14.5	24	121	121	159	159	0	0
	=5	9.5	9.5	24	79	79	226	226	0	0
	6	10	10	24	83	83	219	219	0	0
	7	9	10.5	24	75	87.5	233	212	21	18
ε	8	3.5	11	24	29	91.5	327	206	121	67
	9	8	11	24	66.5	91.5	247	206	41	31
	10	10	11	24	83	91.5	219	206	13	11
	11	11	11.5	24	91.5	96	206	198	8	07
	12	12	12	24	100	100	192	192	0	0
	=									

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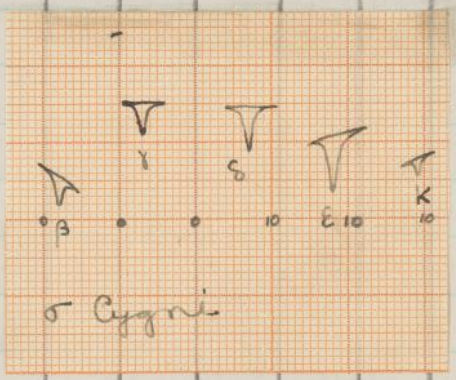
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δ Cygni

No	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
7	7	7	24	58.5	58.5	261	261	0	0
8	7	7	24	58.5	58.5	261	261	0	0
9	5.5	8	24	46	66.5	284	247	37	29
K 10	8	8	24	66.5	66.5	247	247	0	0
11	8.5	8.5	24	71	71	239	239	0	0
11.5	8.5	8.5	24	71	71	239	239	0	0



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b Velorum, X 4515

	No	n	m+n	l+m+n	n̄	m+n	[n]	[m+n]	dm	dl
	1	25	25	37.5	133	133	140	140	0	0
	2	25.5	26	37.5	136	138.5	135	131	4	04
	3	24.5	26.5	37.5	130.5	141	144	127	17	14
	4	21.5	27	37.5	114.5	144	169	122	47	35
	5	24.5	28	37.5	130.5	149	144	114	30	24
β	6	27	28	37.5	144	149	122	114	8	07
	7	28.5	29	37.5	152	155	110	105	5	04
	8	29	29.5	37.5	155	157	105	102	3	03
	9	30	30	37.5	160	160	97	97	0	0
	=0	34	34	37.5	181	181	55	55	0	0
	1	33.5	34	37.5	178.5	181	61	55	6	05
	2	27.5	34	37.5	146.5	181	118	55	63	44
γ	3	31.5	34	37.5	168	181	83	55	28	23
	4	34	34	37.5	181	181	55	55	0	0
	5	34	34	37.5	181	181	55	55	0	0
	=2.5	32	32	37	173	173	73	73	0	0
	3	32	32	37	173	173	73	73	0	0
	4	31.5	32	37	170	173	79	73	6	05
δ	5	29	32.5	37	157	176	102	67	35	28
	6	21.5	32.5	37	116	176	166	67	99	60
	7	31	32.5	37	167.5	176	84	67	17	14
	8	32	32	37	173	173	73	73	0	0
	9	32	32	37	173	173	73	73	0	0
	=4	28	28.5	37	151	154	111	106	5	04
	5	27	28	37	146	151	119	111	8	07
ε	6	26	28	37	140.5	151	128	111	17	14
	7	20	27.5	37	108	148.5	180	115	65	45
	8	6	27	37	32.3	146	318	119	199	84
	9	19.5	26.5	37	105	143	184	124	60	42

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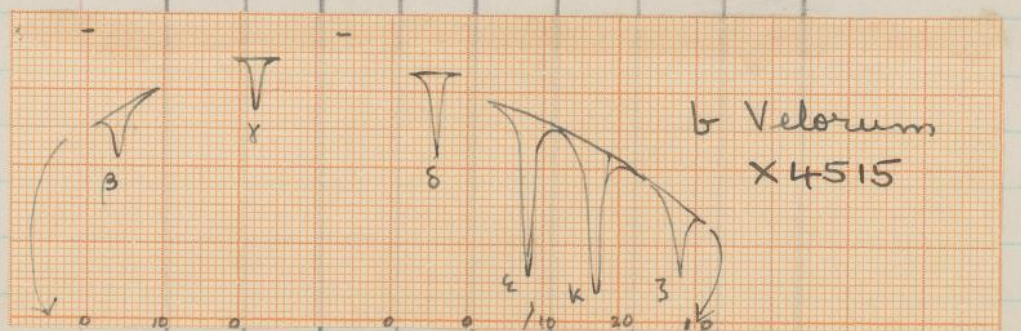
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b Velorum, X 4515

No	m	mm	M	m	mm	[m]	[mm]	dm	dl
10	24	26	37	130	140.5	145	128	17	14
11	25	26	37	135	140.5	137	128	9	08
12	25	25.5	37	135	138	137	132	5	04
K 13	24	25	37	130	135	145	137	8	07
14	22.5	24.5	37	121.5	132.5	158	141	17	14
15	20	24	37	108	130	180	145	35	28
16	12.5	23.5	37	67.5	127	245	149	96	59
17	4	23	37	21.6	124	355	154	201	84
18	17	22	37	92	119	205	162	43	33
19	19.5	22	37	105	119	184	162	22	18
20	20	21	37	108	113.5	180	171	9	08
21	20	20.5	37	108	111	180	175	5	04
22	19,5	19.5	37	105	105	184	184	0	0
23	19	19	37	103	103	187	187	0	0
= 4	18	18.5	37	97.5	100	196	192	4	04
5	17	18	37	92	97.5	205	196	9	08
6	15	17	37	81	92	223	205	18	15
3 7	12	16.5	37	65	89	249	209	40	31
8	6.5	15.5	37	36	84	308	217	91	57
9	12	15	37	65	81	249	223	26	21
10	13.5	14	37	73	75.5	236	232	4	04
11	13	13	37	70.3	70.3	240	240	0	0



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ζ_1 Scorpii. X14968

No	n	m+n	l+m+n	$\overline{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
4.5	23	23	47	98	98	195	195	0	0
5	23	23.5	47	98	100	195	192	3	03
6	23	24	47	98	102	195	188	7	06
7	20	25	47	85	106.5	216	182	34	27
8	14.5	26	47	61.7	111	256	175	81	53
9	21	27	47	89.5	115	209	168	41	31
10	26.5	28	47	113	119	171	162	9	08
11	28.5	29	47	121	123.5	159	155	4	04
12	30	30	47	128	128	148	148	0	0
12.5	30.5	30.5	47	130	130	145	145	0	0
=2.5	38.5	38.5	47	164	164	90	90	0	0
3	38.5	38.5	47	164	164	90	90	0	0
4	38	38.5	47	162	164	93	90	3	03
5	31.5	38.5	47	134	164	138	90	48	36
6	19.5	38.5	47	83	164	219	90	129	70
7	35	38.5	47	149	164	114	90	24	20
8	37.5	38.5	47	160	164	97	90	7	06
9	38.5	38.5	47	164	164	90	90	0	0
10	38.5	38.5	47	164	164	90	90	0	0
=4	35.5	35.5	47	151	151	111	111	0	0
5	35	36	47	149	153	114	108	6	05
6	34	36	47	145	153	121	108	13	11
7	29	35.5	47	123.5	151	155	111	44	33
8	19	35.5	47	81	151	223	111	112	64
9	28.5	35	47	121	149	159	114	45	34
10	34	35	47	145	149	121	114	7	06
11	35	35	47	149	149	114	114	0	0
=12	34.5	34.5	47	147	147	117	117	0	0

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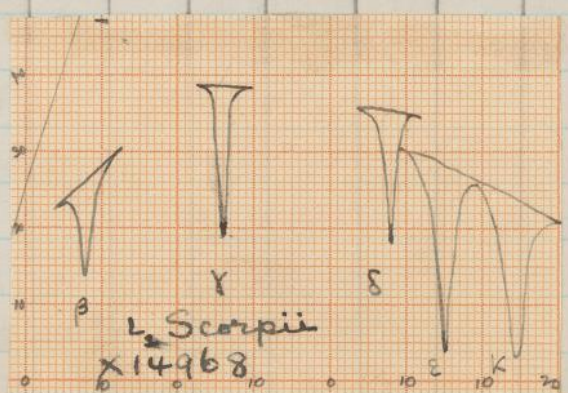
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L_1 Scorpii, X 14968

	No	n	mor	lomor	$\bar{n}$	m+n	[n]	[m+n]	dm	dl
	0	30	30	47	128	128	148	148	0	0
	1	29	30	47	123.5	128	155	148	7	06
	2	26.5	30	47	113	128	171	148	23	21
	3	23.5	29.5	47	100	125.5	192	152	40	31
ε	4	16	29	47	68	123.5	244	155	89	56
	5	5.5	28	47	23.4	119	347	162	185	82
	6	13.5	28	47	57.5	119	263	162	101	61
	7	22	27.5	47	93.5	117	202	165	37	29
	8	25	27	47	106.5	115	182	168	14	12
	9	25.5	26.5	47	108.5	113	179	171	8	07
	10	25	26	47	106.5	111	182	175	7	06
	11	22.5	25.5	47	96	108.5	198	179	19	16
	12	19	25	47	81	106.5	223	182	41	31
	13	13	24.5	47	55.5	104	266	185	81	53
	14	5	24	47	21.3	102	356	188	168	79
K	15	4.5	23.5	47	19.3	100	367	192	175	80
	16	15	23	47	64	98	251	195	56	40
	17	19	22	47	81	93.5	223	202	21	18
	18	20	22	47	85	93.5	216	202	14	12
	19	20.5	21.5	47	87.3	91.5	212	206	6	05
	20	21	21	47	89.5	89.5	209	209	0	0



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X 13413.4

no	n	m+n	[m+n]	x̄	m+n	[n]	[m+n]	dn	dl
0	9.5	9.5	39	48.7	48.7	279	279	0	0
1	10	10	39	51.3	51.3	274	274	0	0
2	10	11	39	51.3	56.5	274	264	10	09
3	8.5	11.5	39	43.5	59	289	260	29	23
4	5	12	39	25.6	61.5	339	256	83	53
5	1	12.5	39	5.1	64	473	251	222	87
6	5	13	39	25.6	66.5	339	247	92	57
7	9	13.5	39	46	69	284	243	41	31
8	11.5	14	39	59	72	260	238	22	18
9	13	15	39	66.5	77	247	229	18	15
10	14.5	15.5	39	74.5	79.5	234	225	9	08
11	16	16.5	39	82	84.5	221	217	4	04
12	17	17	39	87	87	213	213	0	0
12.5	17	17	39	87	87	213	213	0	0
6	26	26	38.5	135	135	137	137	0	0
1	25.5	26	38.5	132.5	135	141	137	4	04
2	25.5	26	38.5	132.5	135	141	137	4	04
3	25	25.5	38.5	130	132.5	145	141	4	04
4	24	25.5	38.5	125	132.5	153	141	12	10
5	23.5	25.5	38.5	122	132.5	157	141	16	14
6	22.5	25.5	38.5	117	132.5	165	141	24	20
7	19.5	25.5	38.5	101	132.5	190	141	49	36
8	15	25.5	38.5	78	132.5	228	141	87	55
9	6.5	25.5	38.5	33.7	132.5	314	141	173	80
10	10.5	25.5	38.5	54.5	132.5	268	141	127	69
11	16	25.5	38.5	83	132.5	219	141	78	51
12	20.5	25.5	38.5	106.5	132.5	182	141	41	31
13	22	25.5	38.5	114	132.5	170	141	29	23
14	23	25.5	38.5	119.5	132.5	161	141	20	17

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X 13413.4

no	n	min	[min]	x̄	[x̄]	[max+]	dm	dl
15	24	25.5	38.5	125	132.5	153	141	12	10
16	24	25	38.5	125	130	153	145	8	07
17	24.5	25	38.5	127	130	149	145	4	04
18	25	25	38.5	130	130	145	145	0	0
19	25	25	38.5	130	130	145	145	0	0
20	25	25	38.5	130	130	145	145	0	0
0	24	24	37.5	128	128	148	148	0	0
1	24	24	37.5	128	128	148	148	0	0
2	24	24	37.5	128	128	148	148	0	0
3	23.5	24	37.5	125	128	153	148	5	04
4	23	24	37.5	122.5	128	157	148	9	08
5	22.5	24	37.5	120	128	160	148	12	10
6	21	24	37.5	112	128	173	148	25	21
7	18.5	24	37.5	98.5	128	194	148	46	34
8	15	24	37.5	80	128	224	148	76	50
9	10	24	37.5	53.5	128	270	148	122	67
10	3	23.5	37.5	16	125	385	153	232	88
11	9.5	23.5	37.5	50.5	125	275	153	122	67
12	14	23	37.5	74.5	122.5	234	157	77	51
13	17	23	37.5	90.5	122.5	207	157	50	37
14	19	23	37.5	101	122.5	190	157	33	26
15	20	23	37.5	107	122.5	181	157	24	20
16	21	23	37.5	112	122.5	173	157	16	14
17	22	23	37.5	117	122.5	165	157	8	07
18	22.5	23	37.5	120	122.5	160	157	3	03
19	22.5	23	37.5	120	122.5	160	157	3	03
20	23	23	37.5	122.5	122.5	157	157	0	0
21	23	23	37.5	122.5	122.5	157	157	0	0
22	22.5	22.5	37.5	120	120	160	160	0	0
23	22.5	22.5	37.5	120	120	160	160	0	0

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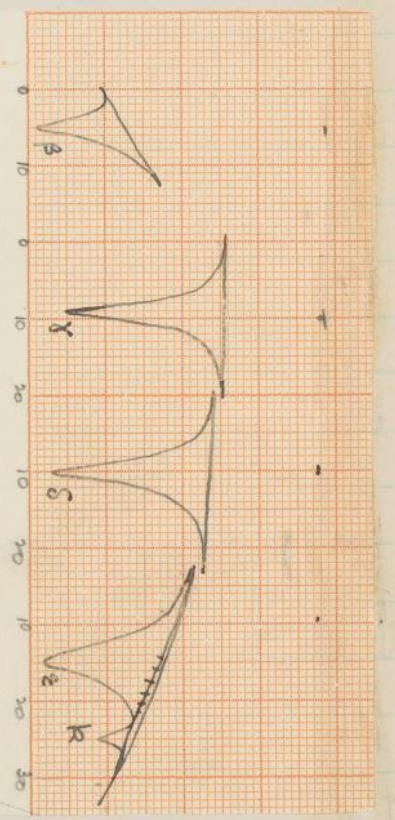
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X 13 4 13.4

no.	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
3	21	21	37.5	112	112	173	173	0	0
4	20.5	21	37.5	109	112	178	173	5	04
5	20.5	21	37.5	109	112	178	173	5	04
6	19.5	20.5	37.5	104	109	185	178	7	06
7	19	20	37.5	101	106.5	190	82	8	07
8	18.5	20	37.5	98.5	106.5	194	182	12	10
9	17	19.5	37.5	90.5	104	207	185	22	18
ε 10	16	19	37.5	85	101	216	190	26	21
11	13.5	19	37.5	72	101	238	190	48	36
12	10	18.5	37.5	53.5	98.5	278	193	77	51
13	6.5	18	37.5	34.6	96	312	198	114	65
14	3	18	37.5	16	96	385	198	187	82
15	2	17.5	37.5	6.5	93.5	460	202	258	91
16	5	17	37.5	26.6	90.5	335	207	128	69
17	8	17	37.5	42.7	90.5	291	207	84	54
18	10	16.5	37.5	53.5	88	270	211	59	42
19	11.5	16	37.5	61.5	85	256	216	40	31
20	12	15.5	37.5	64	82.5	251	220	31	25
21	13	15	37.5	69.5	80	242	224	18	15
22	13.5	14.5	37.5	72	77.5	238	229	9	08
β 23	13	14	37.5	69.5	74.5	242	234	8	07
24	11.5	14	37.5	61.5	74.5	256	234	22	18
25	9	13.5	37.5	48	72	280	238	42	32
26	11.5	13	37.5	61.5	69.5	256	242	14	12
27	12	12.5	37.5	64	66.5	251	247	4	04
28	11.5	12	37.5	61.5	64	256	251	5	04
29	11	11.5	37.5	58.5	61.5	261	256	5	04
30	11	11	37.5	58.5	58.5	261	261	0	0
31	10	10	37.5	53.5	53.5	270	270	0	0
32	9.5	9.5	37.5	50.5	50.5	275	275	0	0
33	9	9	37.5	48	48	280	280	0	0

X 13 4 13.4



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Arcturus

No	n	m+n	[m+n]	m	m+n	[m]	[m+n]	dm	dl
8	6	7	43	27.9	32.6	331	318	13	11
8.5	6.5	7	43	30.2	32.6	323	318	5	04
9	7	7	43	32.6	32.6	318	318	0	0
9.5	7.5	7.5	43	35	35	311	311	0	0
10	7	8	43	32.6	37.2	318	305	13	11
10.5	5	8.5	43	23.2	39.5	348	298	50	37
11	4	9	43	18.6	42	371	293	78	51
11.5	3.5	9	43	16.3	42	383	293	90	56
12	5.5	9.5	43	25.6	44	339	288	51	37
12.5	8.5	10	43	39.5	46.5	298	283	15	13
13	9.5	10.5	43	44	49	288	278	10	09
13.5	8.5	10.5	43	39.5	49	298	278	20	17
14	8	11	43	37.2	51	305	274	31	25
14.5	7	11.5	43	32.6	53.5	317	270	47	35
15	6	12	43	28	56	330	265	65	45
15.5	7	12.5	43	32.6	58	317	262	55	40
16	9	13	43	42	60.5	293	257	36	28
16.5	11	13.5	43	51	63	274	253	21	18
17	12.5	14	43	58	65	262	249	13	11
17.5	14	14.5	43	65	67.5	249	245	4	04
18	14.5	15	43	67.5	70	245	241	4	04
18.5	14	15.5	43	65	72	249	238	11	10
19	15	16	43	70	74.5	241	234	7	06
19.5	14	16	43	65	74.5	249	234	15	13
20	14.5	16.5	43	67.5	77	245	229	16	14
20.5	15.5	16.5	43	72	77	238	229	9	08
21	15	17	43	70	79	241	226	15	13
21.5	15.5	17.5	43	72	81.5	238	222	16	14
22	16.5	18	43	77	83.7	229	218	11	10

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Arcturus

No	n	m+n	b+n+1	$\overline{n}$	$\overline{m+n}$	Σn	$\Sigma(m+n)$	dn	dl
22.5	17	18.5	43	79	86	226	214	12	10
23	15.5	19	43	72	88.5	238	210	28	23
23.5	14	19	43	65	88.5	249	210	39	30
24	14	19.5	43	65	90.5	249	207	42	32
24.5	16.5	19.5	43	77	90.5	229	207	22	18
25	15	20	43	70	93	241	203	38	30
25.5	13	20.5	43	60.5	95.5	257	199	58	41
26	15	21	43	70	97.5	241	196	45	34
26.5	18.5	21	43	86	97.5	214	196	18	15
27	19.5	21.5	43	90.5	100	207	192	15	13
27.5	19	22	43	88.5	102	210	188	22	18
28	20	22	43	93	102	203	188	15	13
28.5	22.5	22.5	43	104.5	104.5	185	185	0	0
29	22.5	23	43	104.5	107	185	181	4	04
29.5	20.5	23	43	95.5	107	199	181	18	15
30	17	23.5	43	79	109	226	178	48	36
30.5	14.5	23.5	43	67.5	109	245	178	67	46
31	15	24	43	70	112	241	173	68	46
31.5	19	24.5	43	88.5	114	210	170	40	31
32	22	25	43	102	116	188	166	22	18
32.5	24.5	25	43	114	116	170	166	4	04
33	20.5	25	43	95.5	116	199	166	33	26
33.5	17	25.5	43	79	118.5	226	163	63	44
34	12	25.5	43	56	118.5	265	163	102	61
34.5	12.5	25.5	43	58	118.5	262	163	99	60
35	18.5	26	43	86	121	214	159	55	40
35.5	20	26	43	93	121	203	159	44	33
36	19	26	43	88.5	121	210	159	51	37
36.5	20.5	26.5	43	95.5	123	199	156	43	33

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Arcturus

No	n	m+n	b-m-n	π	m+π	[π]	[m+π]	dm	dl
37	16	27	43	74.5	125.5	234	152	82	53
37.5	9	27	43	42	125.5	293	152	141	73
38	9.5	27	43	44	125.5	288	152	136	71
38.5	14	27.5	43	65	128	249	148	101	61
39	21	27.5	43	97.5	128	196	148	48	36
39.5	16.5	28	43	77	130	229	145	84	54
40	14.5	28	43	67.5	130	245	145	100	60
40.5	12.5	28	43	58	130	262	145	117	66
41	12	28	43	56	130	265	145	120	67
41.5	20	28.5	43	93	132.5	203	141	62	44
42	25	28.5	43	116	132.5	166	141	25	21 ✓
42.5	22.5	28.5	43	104.5	132.5	185	141	44	33
43	17.5	29	43	81.5	135	222	137	85	54
43.5	18.5	29	43	86	135	214	137	77	51
44	20.5	29	43	95.5	135	199	137	62	44
44.5	21	29	43	97.5	135	196	137	59	42
45	21.5	29.5	43	100	137	192	133	59	42
45.5	25.5	29.5	43	118.5	137	163	133	30	24
46	27.5	30	43	128	140	148	129	19	16
46.5	29	30	43	135	140	137	129	8	07
47	29	30	43	135	140	137	129	8	07
47.5	28	30	43	130	140	145	129	16	14
48	29.5	30	43	137	140	133	129	4	04
48.5	30	30.5	43	140	142	129	125	4	04
49	30.5	30.5	43	142	142	125	125	0	0
49.5	29.5	30.5	43	137	142	133	125	8	07
50	24.5	31	43	114	144	170	122	48	36
50.5	23	31	43	107	144	181	122	59	42
51	25.5	31	43	118.5	144	163	122	41	31

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Arcturus

No	n	m+n	[illegible]	m	m+n	[illegible]	[illegible]	dm	dl
51.5	25.5	31	43	1185	144	163	122	41	31
52	24.5	31.5	43	114	146.5	170	118	52	38
52.5	22	31.5	43	102	146.5	188	118	70	48
53	25	32	43	116	149	166	114	52	38
53.5	29.5	32	43	137	149	133	114	19	16
54	30	32	43	140	149	129	114	15	13
54.5	27.5	32	43	128	149	148	114	34	27
55	28.5	32	43	132.5	149	141	114	27	22
55.5	29.5	32.5	43	137	151	133	111	22	18
56	26	32.5	43	121	151	159	111	48	36
56.5	24	32.5	43	112	151	173	111	62	44
57	23.5	33	43	109	153.5	178	107	71	48
57.5	19	33	43	88.5	153.5	210	107	103	61
58	21	33	43	97.5	153.5	196	107	89	56
58.5	19	33.5	43	88.5	156	210	103	107	63
59	19.5	33.5	43	90.5	156	207	103	104	62
59.5	22.5	33.5	43	104.5	156	185	103	82	53
60	23	34	43	107	158	181	100	81	53
60.5	21	34	43	97.5	158	196	100	96	59
61	24	34	43	112	158	173	100	73	49
61.5	24	34.5	43	112	160.5	173	96	77	51
62	25	34.5	43	116	160.5	166	96	70	48
62.5	30	34.5	43	140	160.5	129	96	33	26
63	30.5	35	43	142	163	125	92	33	26
63.5	30	35	43	140	163	129	92	37	29
64	28.5	35	43	132.5	163	141	92	49	36
64.5	29	35.5	43	135	165	137	88	49	36
65	29.5	35.5	43	137	165	133	88	45	34
65.5	27.5	35.5	43	128	165	148	88	60	42

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Arcturus

No	h	m+n	l+m+n	π	m+π	[π]	[m+π]	dπ	dl
66	25.5	36	43	118.5	167.5	163	84	79	52
66.5	27.5	36	43	128	167.5	148	84	64	44
67	31	36	43	144	167.5	122	84	38	30
67.5	30	36	43	140	167.5	129	84	45	34
68	29.5	36.5	43	137	170	133	79	54	39
68.5	29	36.5	43	135	170	137	79	58	41
69	29.5	37	43	137	172	133	75	58	41
69.5	32	37	43	149	172	114	75	39	30
70	31	37	43	144	172	122	75	47	35
70.5	31.5	37	43	146.5	172	118	75	43	33
71	33.5	37.5	43	156	174.5	103	70	33	26
71.5	34	37.5	43	158	174.5	100	70	30	24
72	33.5	37.5	43	156	174.5	103	70	33	26
72.5	37.5	38	43	174.5	177	70	64	6	05
73	38	38	43	177	177	64	64	0	0
73.5	37.5	38	43	174.5	177	70	64	6	05
74	37	38	43	172	177	75	64	11	10
74.5	37.5	38	43	174.5	177	70	64	6	05
75	37.5	38.5	43	174.5	179	70	60	6	05
75.5	37	38.5	43	172	179	75	60	15	13
76	38	39	43	177	181.5	64	54	10	09
76.5	38.5	39	43	179	181.5	60	54	6	05
77	39	39	43	181.5	181.5	54	54	0	0
77.5	39	39	43	181.5	181.5	54	54	0	0
78	38.5	39	43	179	181.5	60	54	6	05
78.5	37.5	39	43	174.5	181.5	70	54	16	14
79	35.5	39	43	165	181.5	88	54	34	27
79.5	35.5	39.5	43	165	184	88	46	42	32
80	33	39.5	43	153.5	184	107	46	61	43

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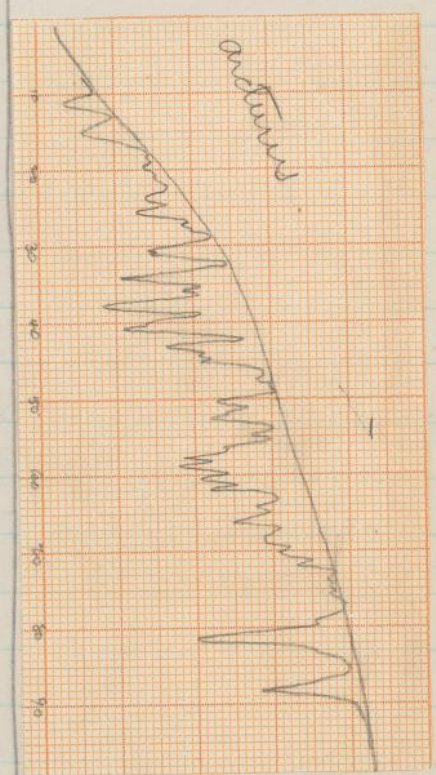
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Arcturus

no	n	m+n	l+m+n	π	m+π	[π]	[m+π]	dm	dl
80.5	28	39.5	43	130	184	145	46	99	60
81	23.5	40	43	109	186	178	40	138	72
81.5	20	40	43	93	186	203	40	163	78
82	26	40	43	121	186	159	40	119	67
82.5	33	40	43	153.5	186	107	40	67	46
83	35	40	43	163	186	92	40	52	38
83.5	36	40.5	43	167.5	188	84	31	53	39
84	38	40.5	43	177	188	64	31	33	26
84.5	39	40.5	43	181.5	188	54	31	23	19
85	39.5	41	43	184	191	46	15	31	25
85.5	39.5	41	43	184	191	46	15	31	25
86	39.5	41	43	184	191	46	15	31	25
86.5	38	41	43	177	191	64	15	49	36
87	35.5	41	43	165	191	88	15	73	49
87.5	33.5	41	43	156	191	103	15	88	56
88	30	41.5	43	140	193	129	2	127	69
88.5	30.5	41.5	43	142	193	125	2	123	68
89	35	41.5	43	163	193	92	2	90	56
89.5	38	41.5	43	177	193	64	2	62	44
90	40	42	43	186	195				
90.5	40.5	42	43	188	195				
91	41	42	43	191	195				
91.5	41	42	43	191	195				
92	41.5	42	43	193	195				
92.5	41.5	42	43	193	195				
93	42	42	43	195	195			0	0
93.5	42	42	43	195	195			0	0
94	42	42	43	195	195			0	0
94.5	42	42	43	195	195			0	0



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Aldebaran

No	n	m+n	l+m+n	$\overline{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
1.5	4.5	4.5	69.5	12.9	12.9	407	407	0	0
2	5	5	69.5	14.4	14.4	397	397	0	0
2.5	5	5.5	69.5	14.4	15.8	397	386	11	10
3	4.5	6	69.5	12.9	17.3	407	377	30	24
3.5	3.5	6.5	69.5	10.1	18.7	427	371	56	40
4	2.5	7	69.5	7.2	20.2	454	362	92	57
4.5	2.5	7.5	69.5	7.2	21.6	454	355	99	60
5	5	8	69.5	14.4	23	397	349	48	36
5.5	6.6	8.5	69.5	18.7	24.5	370	343	27	22
6	7.5	9	69.5	21.6	25.9	355	338	17	14
6.5	6	9.5	69.5	17.3	27.3	397	333	44	33
7	4.5	10	69.5	12.9	28.8	407	328	79	52
7.5	4	11	69.5	11.5	31.5	417	318	99	60
8	4	11.5	69.5	11.5	33	417	316	101	61
8.5	5	12	69.5	14.4	34.5	397	312	85	54
9	7	13	69.5	20.2	37.4	361	304	57	41
9.5	9.5	14	69.5	27.3	40.3	333	296	37	29
10	12.5	14.5	69.5	36	41.7	308	294	14	12
10.5	14.5	15.5	69.5	41.7	44.5	294	287	7	06
11	16	16	69.5	46	46	284	284	0	0
11.5	16.5	17	69.5	47.5	49	281	278	3	03
12	15.5	17.5	69.5	44.5	50.5	287	275	12	10
12.5	15.5	18.5	69.5	44.5	53.3	287	270	17	14
13	17	19	69.5	49	54.7	278	268	10	09
13.5	15.5	20	69.5	44.5	57.5	287	263	24	20
14	15	20.5	69.5	43.3	59	289	260	29	23
14.5	17	21	69.5	49	60.5	278	257	21	18
15	18.5	22	69.5	53.3	63.5	270	252	18	15
15.5	18.5	22.5	69.5	53.3	64.7	270	250	20	17

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Aldebaran

no	n	m+n	[m+n]	=	m+n	[n]	[m+n]	dm	dl
16	16.5	23	69.5	47.5	66	281	248	33	26
16.5	15	23.5	69.5	43.3	67.5	289	245	44	31
17	17	24	69.5	49	69	278	243	35	28
17.5	18.5	25	69.5	53.3	72	270	238	32	26
18	15	25.5	69.5	43.3	73.5	289	235	54	39
18.5	13.5	26	69.5	39	75	300	233	67	46
19	18	26.5	69.5	52	76.3	273	230	43	33
19.5	23.5	27	69.5	67.5	77.5	245	229	16	14
20	23.5	27.5	69.5	67.5	79	245	226	19	16
20.5	22	28	69.5	63.5	80.5	252	224	28	23
21	24	28.5	69.5	69	82	243	221	22	18
21.5	27.5	29	69.5	79	83.5	226	218	8	07
22	27.5	29.5	69.5	79	85	226	216	10	09
22.5	20	30	69.5	57.5	86.3	263	214	49	36
23	15	30	69.5	43.3	86.3	289	214	75	50
23.5	15.5	30.5	69.5	44.5	87.5	287	212	75	50
24	18.5	31	69.5	53.3	89	270	209	61	43
24.5	22	31.5	69.5	63.5	90.5	252	207	45	34
25	28	32	69.5	80.5	92	224	205	19	16
25.5	31	32.5	69.5	89	93.5	209	202	7	06
26	20	33	69.5	57.5	95	263	200	63	44
26.5	11.5	33	69.5	33	95	316	200	116	66
27	13	33.5	69.5	37.3	96.5	304	198	106	62
27.5	17	33.5	69.5	49	96.5	278	198	80	52
28	23	34	69.5	66	98	248	195	53	39
28.5	21.5	34.5	69.5	62	99.5	255	193	62	44
29	22	35	69.5	63.5	101	252	190	62	44
29.5	20	35	69.5	57.5	101	263	190	73	49
30	11.5	35.5	69.5	33	102	316	188	128	69

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Aldebaran

m	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	Σn	$\Sigma(m+n)$	dm	dl
30.5	10	35.5	69.5	28.8	102	328	188	140	72
31	15.5	36	69.5	44.5	103.5	287	186	101	61
31.5	13.5	36.5	69.5	67.5	105	245	184	61	43
32	21	37	69.5	60.5	106.5	257	182	75	50
32.5	16	37	69.5	46	106.5	284	182	102	61
33	15	37.5	69.5	43.3	108	289	180	109	63
33.5	13.5	38	69.5	39	109.5	300	177	123	68
34	14.5	38	69.5	41.7	109.5	294	177	117	66
34.5	20	38.5	69.5	57.5	111	263	175	88	56
35	31.5	39	69.5	90.5	112	207	173	34	27
35.5	30.5	39.5	69.5	87.5	114	212	170	42	32
36	22	40	69.5	63.5	115	252	168	84	54
36.5	25	40	69.5	72	115	238	168	70	48
37	28.5	40.5	69.5	82	116.5	221	166	55	40
37.5	26.5	41	69.5	76.3	118	230	163	67	46
38	28	41	69.5	80.5	118	224	163	61	43
38.5	28	41.5	69.5	80.5	119.5	224	161	63	44
39	37	42	69.5	106.5	121	182	159	23	19
39.5	40.5	42.5	69.5	116.5	122	166	157	9	08
40	39.5	425	69.5	114	122	170	157	13	11
40.5	39.5	43	69.5	114	124	170	154	16	14
41	40.5	43	69.5	116.5	124	166	154	12	10
41.5	42.5	43.5	69.5	122	125	157	153	4	04
42	43.5	44	69.5	125	127	153	149	4	04
42.5	40	44.5	69.5	115	128	168	148	20	17
43	82	45	69.5	92	129.5	205	146	59	42
43.5	82.5	45.	69.5	93.5	129.5	202	146	56	40
44	55	45.5	69.5	101	131	190	143	47	35
44.5	37	45.5	69.5	106.5	131	182	143	39	30

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Aldebaran

No	n	m+n	l+m+n	m	m+n	[n]	[m+n]	dm	dl
45	33.5	46	69.5	96.5	132	198	141	57	41
45.5	35	46	69.5	101	132	190	141	49	36
46	40.5	46.5	69.5	116.5	134	166	138	28	23
46.5	44	47	69.5	127	135	149	137	12	10
47	42	47	69.5	121	135	159	137	22	18
47.5	40	47.5	69.5	115	136.5	168	134	34	27
48	42	48	69.5	121	138	159	132	27	22
48.5	44	48.5	69.5	127	139.5	149	130	19	16
49	37	48.5	69.5	106.5	139.5	182	130	52	38
49.5	34	49	69.5	98	141	195	127	68	46
50	32	49	69.5	92	141	205	127	78	51
50.5	29	49.5	69.5	83.5	142.2	218	125	93	58
51	30	50	69.5	86.3	144	214	122	92	57
51.5	28	50	69.5	80.5	144	224	122	102	61
52	32.5	50	69.5	93.5	144	202	122	80	52
52.5	38.5	50.5	69.5	111	145	175	121	54	39
53	38	51	69.5	109.5	146.5	177	118	59	42
53.5	36.5	51	69.5	105	146.5	184	118	66	46
54	40	51	69.5	115	146.5	168	118	50	37
54.5	41	51.5	69.5	118	148	163	116	47	35
55	38	52	69.5	109.5	149.5	177	114	63	44
55.5	39	52	69.5	112	149.5	173	114	59	42
56	48	52	69.5	138	149.5	132	114	18	15
56.5	47.5	52.5	69.5	136.5	151	134	111	23	19
57	45.5	53	69.5	131	152.2	143	110	33	26
57.5	45	53	69.5	129.5	152.2	146	110	36	28
58	46.5	53.5	69.5	134	154	138	106	32	26
58.5	43	54	69.5	124	155	154	105	49	36
59	42.5	54	69.5	122	155	157	105	52	38

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α Aldebaran

hs	n	m+n	l+m+n	ñ	m+ñ	[n]	[m+n]	dm	dl
59.5	45	54.5	69.5	129.5	157	146	102	44	33
60	49	55	69.5	141	158	127	100	27	22
60.5	48.5	55	69.5	139.5	158	130	100	30	24
61	50	55	69.5	144	158	122	100	22	18
61.5	50.5	55.5	69.5	145	160	121	97	24	20
62	49	56	69.5	141	161	127	95	32	26
62.5	50	56	69.5	144	161	122	95	27	22
63	49	56	69.5	141	161	127	95	32	26
63.5	51.5	56.5	69.5	148	162.5	116	93	23	19
64	52.5	57	69.5	151	164	111	90	21	18
64.5	52	57	69.5	149.5	164	114	90	24	20
65	52.5	57	69.5	151	164	111	90	21	18
65.5	54.5	57.5	69.5	154	165.5	102	87	15	13
66	56.5	58	69.5	162.5	167	93	85	8	07
66.5	56.5	58	69.5	162.5	167	93	85	8	07
67	55.5	58	69.5	160	167	97	85	12	10
67.5	56	58.5	69.5	161	168.5	95	82	13	11
68	56.5	59	69.5	162.5	171	93	79	14	12
68.5	57	59	69.5	164	170	90	79	11	10
69	57.5	59	69.5	165.5	170	89	79	10	09
69.5	57	59.5	69.5	164	171	90	77	13	11
70	59	60	69.5	170	172.5	79	74	5	04
70.5	59	60	69.5	170	172.5	79	74	5	04
71	58.5	60	69.5	168.5	172.5	82	74	8	07
71.5	57	60.5	69.5	164	174	90	71	19	16
72	55	61	69.5	158	175.5	100	68	32	26
72.5	54	61	69.5	155	175.5	105	68	37	29
73	54	61	69.5	155	175.5	105	68	37	29
73.5	48.5	61.5	69.5	139.5	177	130	64	66	46
74	40.5	61.5	69.5	116.5	177	166	64	102	61
74.5	42.5	62	69.5	122	178.5	157	61	96	59

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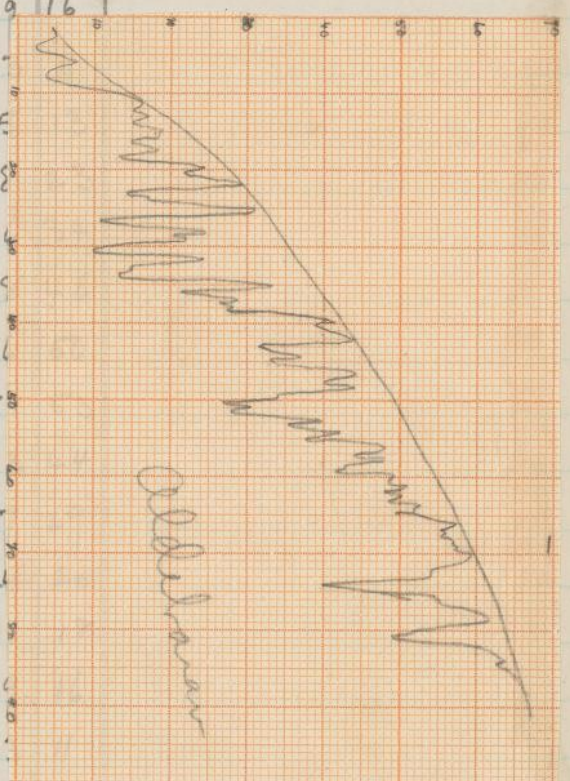
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Aldebaran

No	m	mm	Lm+m	n	nm+n	[m]	[m+n]	dm	dl
75	46.5	62	69.5	134	178.5	138	61	77	51
75.5	54.5	62	69.5	157	178.5	102	61	41	31
76	55	62.5	69.5	158	180	170	57	43	33
76.5	55.5	62.5	69.5	160	180	97	57	40	31
77	57.5	63	69.5	165.5	187	87	55	32	26
77.5	60	63	69.5	172.5	187	74	55	19	16
78	61	63	69.5	175.5	187	68	55	17	
78.5	61.5	63.5	69.5	177	183	64	49	15	
79	59.5	63.5	69.5	171	183	77	49	28	
79.5	56	63.5	69.5	161	183	95	49	44	
80	52	64	69.5	149.5	184	114	46	69	
80.5	50	64	69.5	144	184	122	46	76	
81	49	64	69.5	141	184	127	46	81	
81.5	53	64	69.5	152.2	184	109	46	63	
82	59.5	64.5	69.5	171	186	77	40	37	
82.5	61.5	64.5	69.5	177	186	64	40	24	
83	62.5	65	69.5	180	187	57	36	21	
83.5	63	65	69.5	181	187	55	36	19	
84	63.5	65	69.5	183	187	49	36	13	
84.5	62.5	65	69.5	180	187	57	36	21	18
85	64	65	69.5	184	187	46	36	10	09
85.5	64.5	65.5	69.5	186	188.5	40	29	11	10
86	65	65.5	69.5	187	188.5	36	29	7	06
86.5	65.5	66	69.5	188.5	190	29	21	8	07
87	66	66	69.5	190	190	21	21	0	0
87.5	66	66	69.5	190	190	21	21	0	0
88	66.5	66.5	69.5	191	191	15	15	0	0
88.5	66.5	66.5	69.5	191	191	15	15	0	0
89	66.5	66.5	69.5	191	191	15	15	0	0
89.5	67	67	69.5	193	193	2	2	0	0
90	67	67	69.5	193	193	2	2	0	0



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Aldebaran

No	m	mpm	Lomm	π	mm π	[m]	[mm]	dm	dl
75	46.5	62	69.5	134	178.5	138	61	77	51
75.5	54.5	62	69.5	157	178.5	102	61	41	31
76	55	62.5	69.5	158	180	100	57	43	33
76.5	55.5	62.5	69.5	160	180	97	57	40	31
77	57.5	63	69.5	165.5	187	87	55	32	26
77.5	60	63	69.5	172.5	187	74	55	19	16
78	61	63	69.5	176.5	187	68	55	13	11
78.5	61.5	63.5	69.5	177	183	64	49	15	13
79	59.5	63.5	69.5	171	183	77	49	28	23
79.5	56	63.5	69.5	161	183	95	49	46	34
80	52	64	69.5	149.5	184	114	46	68	46
80.5	50	64	69.5	144	184	122	46	76	50
81	49	64	69.5	141	184	127	46	81	53
81.5	53	64	69.5	152.2	184	109	46	63	44
82	59.5	64.5	69.5	171	186	77	40	37	29
82.5	61.5	64.5	69.5	177	186	64	40	24	20
83	62.5	65	69.5	180	187	57	36	21	18
83.5	63	65	69.5	181	187	55	36	19	16
84	63.5	65	69.5	183	187	49	36	13	11
84.5	62.5	65	69.5	180	187	57	36	21	18
85	64	65	69.5	184	187	46	36	10	09
85.5	64.5	65.5	69.5	186	188.5	40	29	11	10
86	65	65.5	69.5	187	188.5	36	29	7	06
86.5	65.5	66	69.5	188.5	190	29	21	8	07
87	66	66	69.5	190	190	21	21	0	0
87.5	66	66	69.5	190	190	21	21	0	0
88	66.5	66.5	69.5	191	191	15	15	0	0
88.5	66.5	66.5	69.5	191	191	15	15	0	0
89	66.5	66.5	69.5	191	191	15	15	0	0
89.5	67	67	69.5	193	193	2	2	0	0
90	67	67	69.5	193	193	2	2	0	0

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X 13371, No. 4

No.	n	m+n	[m+n]	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
4	7.5	7.5	42	35.7	35.7	309	309	0	0
5	8	8	42	38.1	38.1	303	303	0	0
6	8	8	42	38.1	38.1	303	303	0	0
7	6	9	42	28.6	43	328	290	38	30
8	7.5	9	42	35.7	43	309	290	19	16
K 9	9	9	42	43	43	290	290	0	0
10	9	9	42	43	43	290	290	0	0
11	9	10	42	43	47.5	290	281	9	08
12	8.5	10	42	40.5	47.5	296	281	15	13
13	7.5	10.5	42	35.7	50	309	276	33	26
14	6.5	10.5	42	31	50	321	276	45	34
15	4.5	11	42	21.4	52.5	356	272	84	54
16	2.5	11.5	42	11.9	55	415	267	148	74
17	0	11.5	42		55				
18	2.5	12	42	11.9	57	415	263	152	75
19	5	12	42	23.8	57	346	263	83	53
20	6.5	12.5	42	31	59.5	321	259	62	44
21	8.5	13	42	40.5	62	296	255	41	31
22	10.5	13	42	50	62	276	255	21	18
E 23	12	13.5	42	57	64.5	263	250	13	11
24	13	14	42	62	66.5	255	247	8	07
25	13.5	14	42	64.5	66.5	250	247	3	03
26	14	14.5	42	66.5	69	247	243	4	04
27	14.5	15	42	69	71.5	243	239	4	04
28	15	15	42	71.5	71.5	239	239	0	0
29	15	15	42	71.5	71.5	239	239	0	0
30	15.5	15.5	42	74	74	234	234	0	0
1	17.5	17.5	42	83.5	83.5	218	218	0	0
2	17.5	17.5	42	83.5	83.5	218	218	0	0

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X 13371, No. 4

No.	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
3	17	17.5	42	81	83.5	223	218	5	04
4	17	17.5	42	81	83.5	223	218	5	04
5	16.5	17.5	42	78.5	83.5	227	218	9	08
6	16	17.5	42	76	83.5	231	218	13	11
7	16	18	42	76	85.5	231	215	16	14
8	15	18	42	71.5	85.5	239	215	24	20
9	14	18	42	66.5	85.5	247	215	32	26
10	11.5	18	42	55	85.5	267	215	52	38
11	9	18.5	42	43	88	290	211	79	53
12	5	18.5	42	238	88	346	211	135	71
13	1.5	18.5	42	5.5	88	474	211	263	91
14	6	18.5	42	28.6	88	328	211	117	66
15	9.5	18.5	42	45.3	88	285	211	74	49
16	13	18.5	42	62	88	255	211	44	33
17	14.5	19	42	69	90.5	243	207	36	28
18	16	19	42	76	90.5	231	207	24	20
19	16.5	19	42	78.5	90.5	227	207	20	17
20	17	19	42	81	90.5	223	207	16	14
21	18	19	42	85.7	90.5	215	207	8	07
22	18.5	19	42	88	90.5	211	207	4	04
23	18.5	19	42	88	90.5	211	207	4	04
24	19	19	42	90.5	90.5	207	207	0	0
25	19	19	42	90.5	90.5	207	207	0	0
26	19	19	42	90.5	90.5	207	207	0	0
3	21	21	42	100	100	192	192	0	0
4	21	21	42	100	100	192	192	0	0
5	21	21	42	100	100	192	192	0	0
6	20.5	21	42	97.5	100	196	192	4	04
7	20.5	21	42	97.5	100	196	192	4	04

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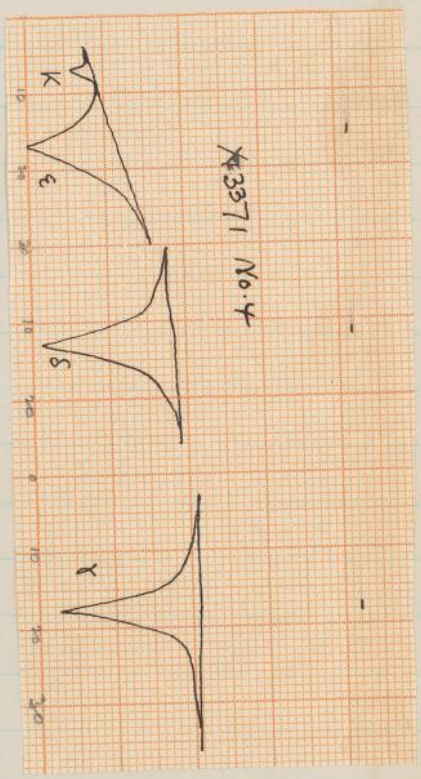
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X 13371, No. 4

No	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
8	20.5	21	42	97.5	100	196	192	4	04
9	20	21	42	95	100	200	192	8	07
10	20	21	42	95	100	200	192	8	07
11	19.5	21	42	93	100	203	192	11	10
12	19	21	42	90.5	100	207	192	15	13
13	18.5	21	42	88	100	211	192	19	16
14	17.5	21	42	83.5	100	218	192	26	21
15	15.5	21	42	74	100	234	192	42	32
16	12	21	42	57	100	263	192	71	48
17	6.5	21	42	31	100	321	192	129	70
18	5	21	42	23.8	100	346	192	154	76
19	10	21	42	47.5	100	281	192	89	56
20	18.5	21	42	64.5	100	250	192	58	41
21	17	21	42	81	100	228	192	31	25
22	18	21	42	85.7	100	215	192	23	19
23	19	21	42	90.5	100	207	192	15	13
24	19.5	21	42	93	100	203	192	11	10
25	19.5	20.5	42	93	97.5	203	196	7	06
26	20	20.5	42	95	97.5	200	196	4	04
27	20	20.5	42	95	97.5	200	196	4	04
28	20	20.5	42	95	97.5	200	196	4	04
29	20	20.5	42	95	97.5	200	196	4	04
30	20	20.5	42	95	97.5	200	196	4	04
31	20.5	20.5	42	97.5	97.5	196	196	0	0
32	20.5	20.5	42	97.5	97.5	196	196	0	0
33	20.5	20.5	42	97.5	97.5	196	196	0	0
34	20.5	20.5	42	97.5	97.5	196	196	0	0
35	20.5	20.5	42	97.5	97.5	196	196	0	0



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1924phae.proj.112P

Alcor

No.	n	m+n	[m+n]	$\overline{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dk
1.5	22	22	55	80	80	224	224	0	0
3	22.5	22.5	55	82	82	221	221	0	0
4	24	24	55	87.5	87.5	212	212	0	0
5	25	25	55	91	91	206	206	0	0
6	25.5	26	55	92.5	94.5	204	201	3	03
7	26	26.5	55	94.5	96.5	201	198	3	03
8	25.5	27.5	55	92.5	100	204	192	12	10
9	20	28.5	55	72.7	103.5	237	186	51	37
10	17	29.5	55	62	107	255	181	74	49
11	25	30.5	55	91	111	206	175	31	25
β 12	30	31	55	109	113	178	171	7	06
13	31.5	32	55	114.8	116	169	166	3	03
14	33	33	55	120	120	160	160	0	0
15	34	34	55	124	124	154	154	0	0
16	35	35	55	127	127	149	149	0	0
17	35.5	35.5	55	129	129	146	146	0	0
18	36	36	55	131	131	143	143	0	0
19	37	37	55	134.5	134.5	138	138	0	0
1	42	42	55	153	153	108	108	0	0
2	42	42	55	153	153	108	108	0	0
3	42	42	55	153	153	108	108	0	0
γ 4	41.5	42	55	151	153	111	108	3	03
5	41	42	55	149	153	114	108	6	05
6	40.5	42	55	147	153	117	108	9	08
7	39.5	42	55	144	153	122	108	14	12
8	35.5	42	55	129	153	146	108	38	30
9	28	42	55	102	153	188	108	80	52
10	34.5	42	55	125.5	153	152	108	44	33
11	38	42	55	138	153	132	108	24	20

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Alcor

No	n	m+n	l+m+n	$\overline{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
12	40	42	~~55~~	145	153	120	108	12	10
13	40.5	42	55	147	153	117	108	9	08
14	41	42	55	149	153	114	108	6	06
15	41	42	55	149	153	114	108	6	05
16	41.5	42	55	151	153	111	108	3	03
17	41.5	42	55	151	153	111	108	3	03
18	42	42	55	153	153	108	108	0	0
19	42	42	55	153	153	108	108	0	0
=8	40.5	40.5	55	147	147	117	117	0	0
9	40	40.5	55	145.5	147	120	117	3	03
10	40	40.5	55	145.5	147	120	117	3	03
11	39.5	40.5	55	144	147	122	117	5	04
12	39	40	55	142	145.5	125	120	5	04
13	38.5	40	55	140	145.5	129	120	9	08
14	38	40	55	138	145.5	132	120	12	18
15	36	40	55	131	145.5	143	120	23	19
16	31	40	55	119	145.5	171	120	51	37
17	22.5	40	55	82	145.5	221	120	101	61
18	30	40	55	109	145.5	178	120	58	41
19	36	40	55	131	145.5	143	120	23	19
20	37	40	55	134.5	145.5	138	120	18	15
21	38	40	55	138	145.5	132	120	12	10
22	38.5	40	55	140	145.5	129	120	9	08
23	38.5	40	55	140	145.5	129	120	9	08
24	39	39.5	55	142	144	125	122	3	03
25	39	39.5	55	142	144	125	122	3	03
26	39.5	39.5	55	144	144	122	122	0	0
=27	39.5	39.5	55	144	144	122	122	0	0
0	38	38	55	138	138	132	132	0	0

δ

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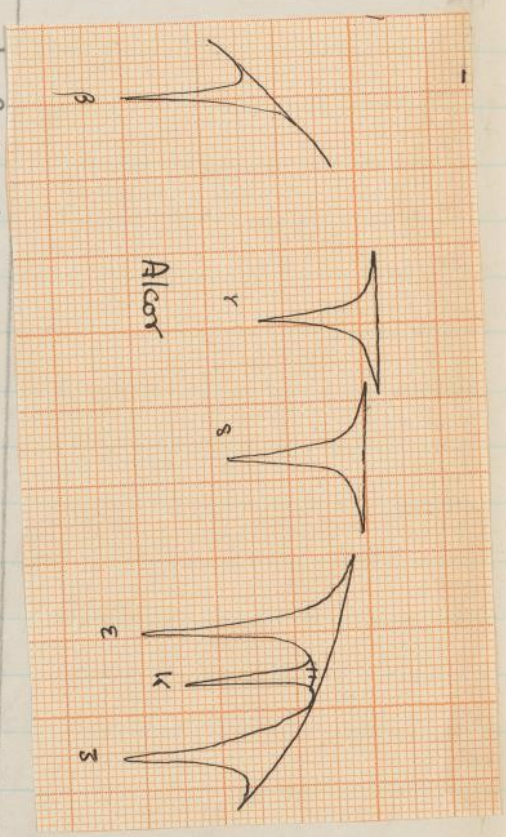
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Alcor

No.	n	m+n	[m+n]	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
1	37.5	38	55	136.5	138	134	132	2	02
2	37	38	55	135	138	137	132	5	04
ε 3	36.5	37.5	55	133	136.5	140	134	6	05
4	36	37	55	131	135	143	137	6	05
5	35	37	55	127.5	135	149	137	12	10
6	34	36.5	55	124	133	154	140	14	12
7	31.5	36.5	55	114.8	133	169	140	29	23
8	27	36	55	98.3	131	194	143	51	37
9	17	36	55	62	131	255	143	112	64
10	17	35.5	55	62	129	255	146	109	63
11	28.5	35	55	104	127	185	149	36	28
12	30.5	35	55	111	127	175	149	26	21
13	31.5	34.5	55	114.8	125.5	169	152	17	14
14	31.5	34	55	114.8	124	169	154	15	13
15	27.5	34	55	100	124	192	154	38	30
K 16	19.5	33.5	55	71	122	239	157	82	53
17	31	33	55	103	120	187	160	27	22
18	32	32.5	55	116	118.5	166	163	3	03
19	32	32	55	116	116	166	166	0	0
20	31.5	31.5	55	114.8	114.8	122	122	0	0
21	29.5	31	55	107	113	181	171	10	09
22	27	30.5	55	98.3	111	193	175	18	15
23	23.5	30	55	85.5	109	215	178	37	29
24	20	29	55	72.7	105.5	237	183	54	39
25	15	28.5	55	54.5	104	268	185	83	53
26	8	28	55	29.2	102	326	188	138	72
3 27	19	27	55	69	98.3	243	193	50	37
28	22	26	55	80	94.5	224	201	23	19
29	23	25.5	55	83.5	92.5	218	204	14	12
30	23	24.5	55	83.5	89	218	209	9	08
31	23	23.5	55	83.5	85.5	218	215	3	03
32	22.5	22.5	55	82	82	221	221	0	0



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θ Cas. A5

no.	n	m+n	l+m+n	$\bar{n}$	$\bar{m+n}$	[n]	[m+n]	dm	dl
0	28.5	28.5	43.5	131	131	143	143	0	0
1	27.5	27.5	43.5	126.5	126.5	150	150	0	0
2	25.5	27	43.5	117.5	124	164	154	10	09
3	23.5	26	43.5	108	120	180	160	20	17
4	19.5	25.5	43.5	89.5	117.5	209	164	45	34
5	10.5	24.5	43.5	48.5	113	279	171	108	63
6	18	23.5	43.5	83	108	219	180	39	30
7	19.5	22.5	43.5	89.5	103.5	209	186	23	19
8	20	21.5	43.5	92	99	205	193	12	10
9	19.5	20	43.5	89.5	92	209	205	4	04
10	18.5	18.5	43.5	85	85	216	216	0	0
10.5	18	18	43.5	83	83	219	219	0	0
0	33	33	43.5	152	152	110	110	0	0
1	32.5	33	43.5	149.5	152	114	110	4	04
2	32.5	33	43.5	149.5	152	114	110	4	04
3	32	33	43.5	147	152	117	110	7	06
4	31.5	33	43.5	145	152	121	110	11	10
5	31	33	43.5	143	152	124	110	14	12
6	29.5	33	43.5	136	152	135	110	25	21
7	23.5	33	43.5	108	152	180	110	70	48
7.5	20	33	43.5	92	152	205	110	95	58
8	22	33	43.5	101	152	190	110	80	52
9	28.5	33	43.5	131	152	143	110	33	26
10	31	33	43.5	143	152	124	110	14	12
11	31.5	33	43.5	145	152	121	110	11	10
12	32	33	43.5	147	152	117	110	7	06
13	32.5	33	43.5	149.5	152	114	110	4	04
14	32.5	33	43.5	149.5	152	114	110	4	04
15	33	33	43.5	152	152	110	110	0	0
16	33	33	43.5	152	152	110	110	0	0

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θ Car., A5

No	n		l			[m]	[m+n]	dm	dl
5	31	31	43.5	143	143	124	124	0	0
6	31	31	43.5	143	143	124	124	0	0
7	31	31	43.5	143	143	124	124	0	0
8	30.5	31	43.5	140	143	129	124	5	04
9	30	31	43.5	138	143	132	124	8	07
10	29.5	31	43.5	136	143	135	124	11	10
11	28.5	31	43.5	131	143	143	124	19	16
12	25	31	43.5	115	143	168	124	44	33
13	19	31	43.5	87.5	143	212	124	88	56
8 13.5	15.5	31	43.5	71.5	143	239	124	115	65
14	20.5	31.5	43.5	94.5	145	201	121	80	52
15	27.5	31.5	43.5	126.5	145	150	121	29	23
16	29	31.5	43.5	133.5	145	139	121	18	15
17	30	31.5	43.5	138	145	132	121	11	10
18	30.5	31.5	43.5	140	145	129	121	8	07
19	31	31.5	43.5	143	145	124	121	3	03
20	31.5	31.5	43.5	145	145	121	121	0	0
21	31.5	31.5	43.5	145	145	121	121	0	0
215	31.5	31.5	43.5	145	145	121	121	0	0
= 6	14	14	43.5	64.5	64.5	250	250	0	0
7	15	15	43.5	69	69	243	243	0	0
8	15	16	43.5	69	73.5	243	235	8	07
3 9	14	17	43.5	64.5	78	250	228	22	18
10	10	17.5	43.5	46	80.5	284	224	60	42
11	5	18.5	43.5	23	85	349	216	133	71
12	4.5	19	43.5	20.7	87.5	360	212	148	94
13	11	20	43.5	50.5	92	275	205	70	48
14	15.5	20.5	43.5	71.5	94.5	239	201	38	30
15	19	21.5	43.5	87.5	99	212	193	19	16

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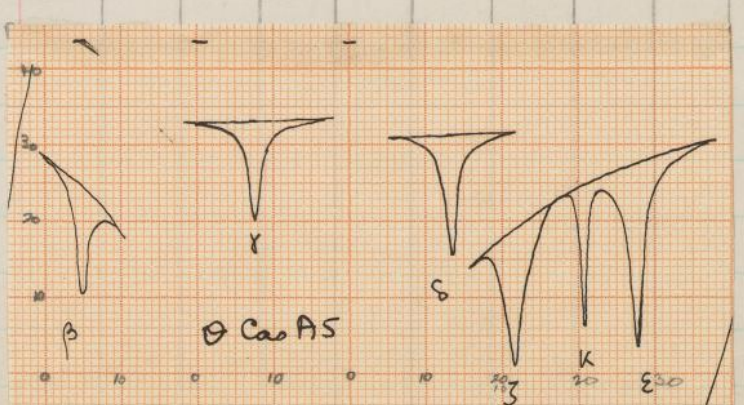
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θ Cas., A5

	No.	n	m+n	[illegible]	$\bar{n}$	m+n	[n]	[illegible]	dn	dl
	16	21.5	22	43.5	99	101	193	190	3	03
	17	22.5	22.5	43.5	103.5	103.5	186	186	0	0
K	18	23	23	43.5	106	106	182	182	0	0
	19	23	24	43.5	106	110	182	176	6	05
	20	19	14.5	43.5	87.5	112.5	212	172	40	31
	21	14	25	43.5	64.5	115	250	168	82	53
	22	23.5	25.5	43.5	108	117.5	180	164	16	14
	23	24	25.5	43.5	110	117.5	176	164	12	10
	24	23.5	26	43.5	108	120	180	160	20	17
	25	22	26.5	43.5	101	122	190	157	33	26
	26	19.5	27	43.5	89.5	124	209	154	55	40
ε	27	12	27	43.5	55	124	267	154	113	65
	28	7.5	27.5	43.5	34.6	126.5	312	150	162	78
	29	20	28	43.5	92	129	205	146	59	42
	30	24.5	28.5	43.5	112.5	131	172	143	29	23
	31	26	29	43.5	120	133.5	160	139	21	18
	32	27	29	43.5	124	133.5	154	139	15	13
	33	28	29.5	43.5	129	136	146	135	11	10
	34	28.5	29.5	43.5	131	136	143	135	8	07
	35	29.5	30	43.5	136	138	135	132	3	03
	36	30	30	43.5	138	138	132	132	0	0
	37	30	30	43.5	138	138	132	132	0	0



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π Sgr X6451

No	n	m+n	l.m+z	$\overline{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
8	4.5	4.5	39	23	23	349	349	0	0
9	5	5	39	25.6	25.6	339	339	0	0
θ 10	5	6	39	25.6	30.8	339	322	17	14
11	4	6.5	39	20.5	33.3	360	315	45	34
12	2	7.5	39	10.3	38.5	426	301	125	68
13	0	8	39		41		295		
14	1	9	39	5.13	46	486	284	202	84
15	6	9.5	39	30.8	48.5	323	279	44	33
16	8.5	10	39	43.5	51	289	274	15	13
17	10	11	39	51	56.5	274	264	10	09
18	11.5	11.5	39	59	59	260	260	0	0
19	12	12	39	61.5	61.5	256	256	0	0
20	12	13	39	61.5	66.5	256	247	9	08
21	11	14	39	56.5	71.7	264	239	25	21
22	8.5	15	39	43.5	77	289	229	60	42
η 23	5	15.5	39	25.6	79.5	339	225	114	65
24	3.5	16.5	39	18	84.5	374	217	157	76
25	8	17	39	41	87	295	213	82	53
26	13	18	39	66.5	92	247	205	42	32
27	16	19	39	82	97.5	221	196	25	21
28	18	20	39	92	102.5	205	188	17	14
29	20	20.5	39	102.5	105	188	184	4	04
30	21.5	21.5	39	110	110	176	176	0	0
31	22.5	22.5	39	115	115	168	168	0	0
32	23	23	39	118	118	163	163	0	0
33	24	24	39	123	123	156	156	0	0
34	24	24.5	39	123	125	156	153	3	03
35	23.5	25	39	120	128	160	148	12	10
36	21.5	25.5	39	110	130.5	176	144	32	26

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π Sgr. X 6451

No	h	m+n	l+m+n	π	m+n	[n]	[m+n]	dm	dl
37	18.5	26	39	95	133	200	140	60	42
38	15	27	39	77	138	229	132	97	59
39	17	27	39	87	138	213	132	81	53
40	22	28	39	113	143.5	171	123	48	36
41	24.5	28.5	39	125	146	153	119	34	27
42	26.5	29	39	136	149	135	114	21	18
43	28	29.5	39	1435	151	123	111	12	10
44	29.5	29.5	39	151	151	111	111	0	0
45	30.5	30.5	39	156	156	103	103	0	0
46	30	30.5	39	154	156	106	103	3	03
47	30	31	39	154	159	106	98	8	07
48	28.5	31	39	146	159	119	98	21	18
49	15	32	39	77	164	229	90	139	72
50	13	32	39	66.5	164	247	90	157	76
51	22.5	32	39	115	164	168	90	78	51
52	30	32.5	39	154	166.5	106	86	20	17
53	31	33	39	159	169	98	81	17	14
54	32	33	39	164	169	90	81	9	08
55	32	33.5	39	164	172	90	75	15	13
56	31.5	33.5	39	1615	172	94	75	19	16
57	29	34	39	149	174	114	71	43	33
58	19.5	34	39	100	174	192	71	121	67
59	13	34	39	66.5	174	247	71	176	80
60	25.5	34.5	39	130.5	177	144	64	80	52
61	31.5	35	39	161.5	179	94	60	34	27
62	33	35	39	169	179	81	60	21	18
63	34	35	39	174	179	71	60	11	10
64	34.5	35	39	177	179	64	60	4	04
65	35	35	39	179	179	60	60	0	0

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π Sgr, X 6451

No	h	m+n	l+m+n	$\overline{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
66	35	35	39	179	179	60	60	0	0
67	35.5	35.5	39	182	182	52	52	0	0
=									
1	37	37	39	190	190	21	21	0	0
2	37	37	39	190	190	21	21	0	0
3	36.5	37.5	39	187	192	36	8	28	23
4	36	37.5	39	184	192	46	8	38	30
5	33	37.5	39	169	192	81	8	73	49
6	32.5	37.5	39	167	192	85	8	77	51
7	35.5	37.5	39	182	192	52	8	44	33
8	36.5	37.5	39	187	192	36	8	28	23
9	37	37.5	39	190	192	21	8	13	11
10	37.5	37.5	39	192	192	8	8	0	0
11	37.5	37.5	39	192	192	8	8	0	0
=									
1	38	38	39	195	195	—	—		
2	38	38	39	195	195	—	—		
3	38	38.5	39	195	197	—	—		
4	37.5	38.5	39	192	197	8	—		
5	36	38.5	39	184	197	46	—		
6	36	38.5	39	184	197	46	—		
7	37.5	38.5	39	192	197	8	—		
8	38	38.5	39	195	197	—	—		
9	38.5	38.5	39	197	197	—	—		
10	38.5	38.5	39	197	197	—	—		
=									
6	36	36	39	184	184	46	46	0	0
7	35.5	35.5	39	182	182	52	52	0	0
8	34.5	35	39	177	179	64	60	4	04
9	33.5	35	39	172	179	75	60	15	13
10	31.5	34.5	39	161.5	177	94	64	30	24
11	29	34	39	149	174	114	71	43	33

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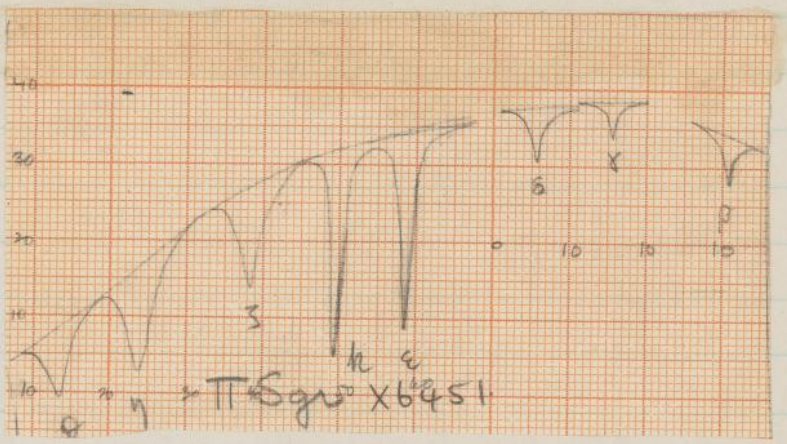
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1924phae.proj.1124P

π Sgr, X6451

No	h	h+n	[illegible]	n	n+n	[illegible]	[illegible]	dm	dl
12	31.5	33.5	39	161.5	172	94	75	19	16
13	32	33	39	164	169	90	81	9	08
14	32.5	32.5	39	167	167	85	85	0	0
15	32	32	39	164	164	90	90	0	0



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X7247, α 2645, A.G.C. 467

No	h	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
8	3	3	50	12	12	413	413	0	0
9	2.5	3	50	10	12	428	413	15	13
10	1.5	3.5	50	6	14	469	399	70	48
11	1	3.5	50	4	14	57?	399	??	64?
12	1.5	3.5	50	6	14	469	399	70	48
13	2.5	4	50	10	16	428	385	43	33
14	3	4	50	12	16	413	385	28	23
15	4	4.5	50	16	18	385	374	11	10
16	4.5	4.5	50	18	18	374	374	0	0
17	4.5	4.5	50	18	18	374	374	0	0
18	4	5	50	16	20	385	363	22	18
19	3.5	5.5	50	14	22	399	353	46	34
20	2.5	5.5	50	10	22	428	353	75	50
21	1.5	6	50	6	24	469	345	124	68
22	1.5	6	50	6	24	469	345	124	68
23	3	6.5	50	12	26	413	337	76	50
24	4.5	7	50	18	28	374	330	44	33
25	5.5	7	50	22	28	353	330	23	19
26	6.5	7.5	50	26	30	337	324	13	11
27	7.5	8	50	30	32	324	319	5	04
28	8.5	8.5	50	34	34	313	313	0	0
29	9	9	50.5	35.6	35.6	309	309	0	0
30	9	9	50.5	35.6	35.6	309	309	0	0
31	9	10	50.5	35.6	39.6	309	298	11	10
32	8.5	10	50.5	33.6	39.6	314	298	16	14
33	7.5	10.5	50.5	29.7	41.5	325	294	31	25
34	6	11	50.5	23.8	43.5	346	289	57	41
35	4.5	11.5	50.5	17.8	45.5	376	285	91	57
36	3	12	50.5	11.9	47.5	415	281	134	71

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X7247, ng 2645, A.G.C. 467

No	h	m+n	l+m+n	n	m+n	[n]	[m+n]	dm	dl
37	5	12.5	50.5	19.8	49.5	365	247	88	56
38	6.5	13	50.5	25.8	51.5	339	274	65	45
39	9	14	50.5	35.6	55.5	310	266	44	33
40	10.5	14.5	50.5	41.5	57.5	294	263	31	25
41	12	15	50.5	47.5	59.5	281	259	22	18
42	13.5	15.5	50.5	53.5	61.5	270	256	14	12
43	15	16	50.5	59.5	63.5	259	252	7	06
44	16	16.5	50.5	63.5	65.5	252	249	3	03
45	16.5	17	50.5	65.5	67.5	249	245	4	04
46	17	17.5	50.5	67.5	69.5	245	242	3	03
47	15	18	50.5	59.5	71.5	259	239	20	17
48	14.5	18.5	50.5	57.5	73.5	263	235	28	23
49	19	19	50.5	75.5	75.5	232	232	0	0
50	19.5	19.5	51	76.5	76.5	230	230	0	0
51	19	20	51	74.5	78.5	234	227	7	06
52	18	20.5	51	70.5	80.5	240	224	16	14
53	16	21	51	62.7	82.5	254	220	34	27
54	13	21.5	51	51	84.3	274	217	57	41
55	9.5	22	51	37.2	86.3	305	214	91	57
56	4.5	22.5	51	17.6	88.3	374 ~~404~~	211	163	78
E 57	6.5	23	51	25.5	90	339	208	131	70
58	12	23.5	51	47	92	282	205	77	51
59	16	24	51	62.7	94	254	201	53	39
60	19.5	24.5	51	76.5	96	230	198	32	26
61	22	25	51	86.3	98	214	195	19	16
62	23	25	51	90	98	208	195	13	11
63	24	25.5	51	94	100	201	192	9	08
64	25	26	51	98	102	195	188	7	06
65	25.5	26	51	100	102	192	188	4	04

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1924phae.proj.1124P

X 7247, MP 2645, A.G.C. 467

No	n	m+n	C+m+n	π	m+n	[π]	[m+n]	dm	dl
66	26	26.5	51	102	104	188	185	3	03
67	26.5	27	51	104	106	185	182	3	03
68	27	27	51	106	106	182	182	0	0
69	27	27	51	106	106	182	182	0	0
70	27.5	27.5	51	108	108	180	180	0	0
1	29	29	51.5	112.8	112.8	172	172	0	0
2	29	29	51.5	112.8	112.8	172	172	0	0
3	29	29	51.5	112.8	112.8	172	172	0	0
4	28.5	29	51.5	110.8	112.8	176	172	4	04
5	28.5	29	51.5	110.8	112.8	176	172	4	04
6	28	29	51.5	109	112.8	178	172	6	05
7	26.5	29	51.5	103	112.8	187	172	15	13
8	25	29	51.5	97	112.8	197	172	25	21
9	22.5	29	51.5	87.5	112.8	212	172	40	31
10	19	29	51.5	74	112.8	234	172	62	44
11	13.5	29	51.5	52.5	112.8	272	172	100	60
12	9	29	51.5	35	112.8	311	172	139	72
							+66		73
13	15	29.5	57.5	58.3	114.5	262	169	93	58
14	20	29.5	51.5	77.5	114.5	229	169	60	42
15	23.5	29.5	51.5	91.3	114.5	206	169	37	29
16	25.5	29.5	51.5	99	114.5	193	169	24	20
17	27	29.5	51.5	105	114.5	184	169	15	13
18	28	29.5	51.5	109	114.5	178	169	9	08
19	28.5	30	51.5	110.8	116.5	176	166	10	09
20	29	30	51.5	112.8	116.5	172	166	6	05
21	29.5	30	51.5	114.5	116.5	169	166	3	03
22	30	30	51.5	116.5	116.5	166	166	0	0
23	30	30	51.5	116.5	116.5	166	166	0	0
24	30	30	51.5	116.5	116.5	166	166	0	0
25	30	30	51.5	116.5	116.5	166	166	0	0

δ

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X7247, α_{1900} 2645, A.G.C. 467

No	n	m+n	L+m+n	$\bar{n}$	$\bar{m+n}$	[n]	[m+n]	dm	dll
6	31	31	52	119.5	119.5	161	161	0	0
7	30.5	31	52	117.5	119.5	164	161	3	03
8	30.5	31	52	117.5	119.5	164	161	3	03
9	30	31	52	115.5	119.5	167	161	6	05
10	30	31	52	115.5	119.5	167	161	6	05
11	29.5	31	52	113.5	119.5	171	161	10	09
12	29	31	52	111.5	119.5	174	161	13	11
13	27.5	31	52	106	119.5	182	161	21	18
14	25.5	31	52	98	119.5	195	161	34	27
15	23	31	52	88.5	119.5	210	161	49	36
16	18	31	52	69.3	119.5	243	161	82	53
17	11.5	31	52	44.3	119.5	288	161	127	69
18	15	31	52	57.7	119.5	263	161	102	61
19	21.5	31	52	82.5	119.5	220	161	59	42
20	25.5	31	52	98	119.5	195	161	34	27
21	28	31	52	108	119.5	180	161	19	16
22	29.5	31	52	113.5	119.5	171	161	10	09
23	30	31	52	115.5	119.5	167	161	6	05
24	30	31	52	115.5	119.5	167	161	6	05
25	30.5	31	52	117.5	119.5	164	161	3	03
26	30.5	31	52	117.5	119.5	164	161	3	03
27	30.5	31	52	117.5	119.5	164	161	3	03
28	31	31	52	119.5	119.5	161	161	0	0
29	31	31	52	119.5	119.5	161	161	0	0
30	15.5	15.5	53	58.5	58.5	261	261	0	0
1	14.5	14.5	53	54.7	54.7	268	268	0	0
2	13	13.5	53	49	51	278	274	4	04
3	11.5	13	53	43.5	49	289	278	11	10
4	10	12	53	37.8	45.3	304	286	18	15

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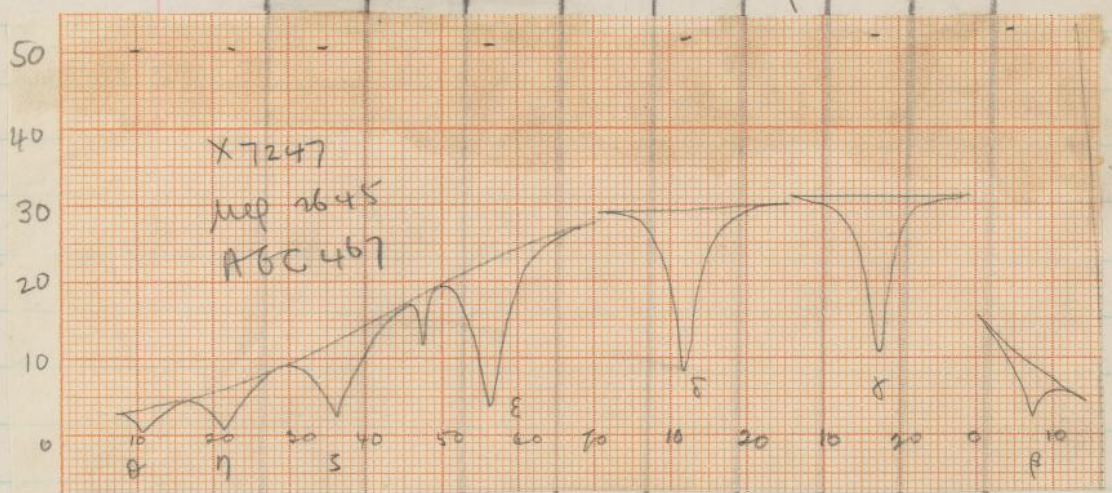
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X 7247, mp 2645, A.G.C. 467

No	n	m+n	l+m+n	$\bar{w}$	$\overline{m+n}$	[n]	[m+n]	dw	dl
5	8.5	11	53	32.2	41.5	319	294	25	21
6	6	10	53	22.6	37.8	351	304	47	35
7	3.5	9	53	13.2	34	405	313	92	57
8	4	8.5	53	15.1	32.2	391	319	72	48
9	5.5	8	53	20.8	30.2	359	324	35	28
10	5.5	7	53	20.8	26.4	359	336	23	19
11	5.5	6.5	53	20.8	24.5	359	343	16	14
12	5.5	5.5	53	20.8	20.8	359	359	0	0
13	5	5	53	18.9	18.9	370	370	0	0
14	4.5	4.5	53	17	17	379	379	0	0



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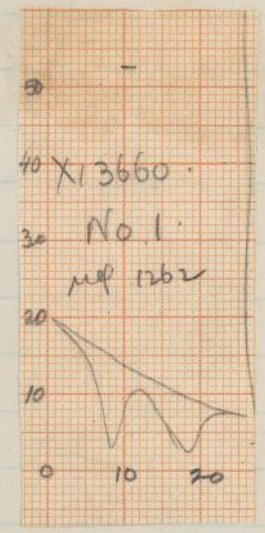
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X 13 660. No. 1. μμ 1262

No	n	m+n	l+m+n	$\bar{n}$	m+n	[n]	[m+n]	dn	dl
1	19.5	19.5	52.5	74.3	74.3	234	234	0	0
2	18.5	19	52.5	70.5	72.5	240	237	3	03
3	17.5	18	52.5	66.5	68.5	247	244	3	03
4	16.5	17.5	52.5	63	66.5	253	247	6	05
5	15	17	52.5	57	648	263	250	13	11
6	12.5	16.5	52.5	47.5	63	281	253	28	23
7	9	16	52.5	34.2	61	313	256	57	41
8	4	15	52.5	15.2	57	390	263	124	69
9	4.5	14	52.5	17.2	53.3	378	271	107	68
10	7.5	13.5	52.5	28.6	51.5	328	274	54	39
11	10	13	52.5	38.1	49.5	303	277	26	21
12	10.5	12.5	52.5	40	47.5	297	281	16	14
13	10	12	52.5	38.1	45.7	303	285	18	15
14	8.5	11.5	52.5	32.4	43.7	318	289	29	23
15	6.5	11	52.5	24.7	42	343	293	50	37
16	5	10.5	52.5	19	40	369	297	72	48
17	4	10	52.5	15.5	38.1	389	303	86	55
18	2.5	9.5	52.5	9.5	36.2	434	308	126	69
19	3	9	52.5	11.4	34.3	418	313	105	62
20	5	9	52.5	19	34.3	369	313	56	40
21	6.5	8.5	52.5	24.8	32.4	342	318	24	20
22	7.5	8	52.5	28.6	30.5	329	323	6	05
23	7.5	7.5	52.5	28.6	28.6	329	329	0	0
24	7.5	7.5	52.5	28.6	28.6	329	329	0	0
25	7	7	52.5	26.6	26.6	335	335	0	0
26	7	7	52.5	26.6	26.6	335	335	0	0



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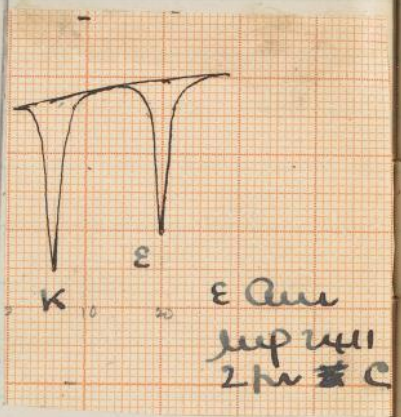
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ε Aur, sep 24 11, 2 fr. C

No	n	m+n	l+m+n	$\overline{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
1	26	26	37.5	139	139	130	130	0	0
2	26	26.5	37.5	139	141	130	127	3	03
3	25	26.5	37.5	133	141	140	127	13	11
4	22.5	26.5	37.5	120	141	160	127	33	26
5	9	27	37.5	48	144	280	122	158	77
6	8	27	37.5	42.5	144	292	122	170	79
7	18.5	27	37.5	98.5	144	194	122	72	48
8	24	24.5	37.5	128	147	148	117	31	25
9	27	28	37.5	144	149	122	114	8	07
10	27.5	28	37.5	147	149	117	114	3	03
11	28	28	37.5	149	149	114	114	0	0
12	28.5	28.5	37.5	152	152	110	110	0	0
13	28.5	28.5	37.5	152	152	110	110	0	0
14	29	29	37.5	155	155	105	105	0	0
15	28.5	29	37.5	152	155	110	105	5	04
16	28.5	29	37.5	152	155	110	105	5	04
17	28	29.5	37.5	149	157	114	102	12	10
18	26.5	29.5	37.5	141	157	127	102	25	21
19	20.5	29.5	37.5	109	157	178	102	76	50
20	11	29.5	37.5	58.5	157	261	102	159	77
21	22	30	37.5	117	160	165	97	68	46
22	27.5	30	37.5	147	160	117	97	20	17
23	28.5	30	37.5	152	160	110	97	13	11
24	29	30	37.5	155	160	105	97	8	07
25	30	30.5	37.5	160	163	97	92	5	04
26	30.5	30.5	37.5	163	163	92	92	0	0
27	30.5	30.5	37.5	163	163	92	92	0	0
28	30.5	30.5	37.5	163	163	92	92	0	0
28.5	30.5	30.5	37.5	163	163	92	92	0	0

K

ε



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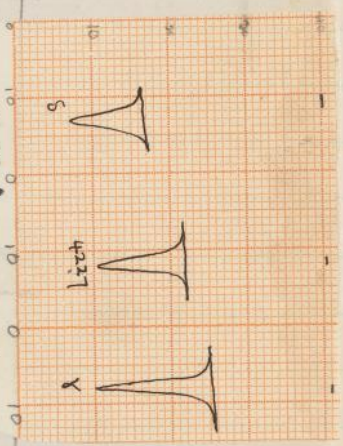
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1924phae.proj.1124P

δ Vol, μ Lup 2731, βE = 316

No	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
9	16.5	16.5	40	82.5	82.5	220	220	0	0
10	16	16.5	40	80	82.5	224	220	4	
11	15.5	16.5	40	77.5	82.5	229	220		
12	12	16.5	40	60	82.5	258	220		
13	7.5	17	40	37.5	85	304	216		
14	11.5	17	40	57.5	85	263	216	4	
15	15.5	17	40	77.5	85	229	216	1	
16	17	17	40	85	85	216	216		
17	17	17	40	85	85	216	216	0	0
=7	21.5	21.5	40.5	106	106	182	182	0	0
8	21.5	21.5	40.5	106	106	182	182	0	0
9	21.5	22	40.5	106	109	182	178	4	04
10	20	22	40.5	99	109	193	178	15	13
11	15.5	22	40.5	76.5	109	230	178	52	38
12	10.5	22	40.5	52	109	273	178	95	58
13	19	22	40.5	94	109	201	178	23	19
14	21.5	22	40.5	106	109	182	178	4	04
15	22	22	40.5	109	109	178	178	0	0
16	22	22	40.5	109	109	178	178	0	0
16.5	22	22	40.5	109	109	178	178	0	0
=3	25	25	41	122	122	157	157	0	0
4	25	25	41	122	122	157	157	0	0
5	24.5	25	41	119.5	122	161	157	4	04
6	24	25	41	117	122	165	157	8	07
7	19.5	25	41	95	122	200	157	43	33
8	10.5	25.5	41	57.3	124.5	274	154	120	67
9	20.5	25.5	41	100	124.5	192	154	38	30
10	24.5	25.5	41	119.5	124.5	161	154	7	06
11	25	25.5	41	122	124.5	157	154	3	03
12	25.5	25.5	41	124.5	124.5	154	154	0	0
13	25.5	25.5	41	124.5	124.5	154	154	0	0
14	25.5	25.5	41	124.5	124.5	154	154	0	0

δ Vol μ Lup 2731
βE = 316



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1924phae.proj..1124P

δ Vol., Mf 2731, βE = 316

No	n	m+n	l+m+n	$\frac{l}{n}$	$\frac{l}{m+n}$	[n]	[m+n]	dn	dl
9	16.5	16.5	40	82.5	82.5	220	220	0	0
10	16	16.5	40	80	82.5	224	220	4	04
11	15.5	16.5	40	77.5	82.5	229	220	9	08
12	12	16.5	40	60	82.5	258	220	38	30
13	7.5	17	40	37.5	85	304	216	88	56
14	11.5	17	40	57.5	85	263	216	47	35
15	15.5	17	40	77.5	85	229	216	13	11
16	17	17	40	85	85	216	216	0	0
17	17	17	40	85	85	216	216	0	0
=7	21.5	21.5	40.5	106	106	182	182	0	0
8	21.5	21.5	40.5	106	106	182	182	0	0
9	21.5	22	40.5	106	109	182	178	4	04
10	20	22	40.5	99	109	193	178	15	13
11	15.5	22	40.5	76.5	109	230	178	52	38
12	10.5	22	40.5	52	109	273	178	95	58
13	19	22	40.5	94	109	201	178	23	19
14	21.5	22	40.5	106	109	182	178	4	04
15	22	22	40.5	109	109	178	178	0	0
16	22	22	40.5	109	109	178	178	0	0
16.5	22	22	40.5	109	109	178	178	0	0
=3	25	25	41	122	122	157	157	0	0
4	25	25	41	122	122	157	157	0	0
5	24.5	25	41	119.5	122	161	157	4	04
6	24	25	41	117	122	165	157	8	07
7	19.5	25	41	95	122	200	157	43	33
8	10.5	25.5	41	57.3	124.5	274	154	120	67
9	20.5	25.5	41	100	124.5	192	154	38	30
10	24.5	25.5	41	119.5	124.5	161	154	7	06
11	25	25.5	41	122	124.5	157	154	3	03
12	25.5	25.5	41	124.5	124.5	154	154	0	0
13	25.5	25.5	41	124.5	124.5	154	154	0	0
14	25.5	25.5	41	124.5	124.5	154	154	0	0

δ

γ

4227

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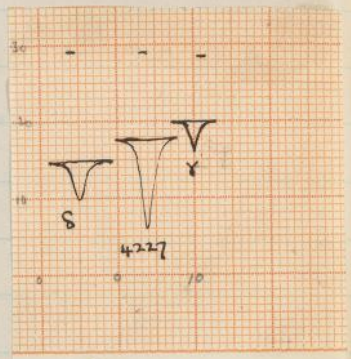
α Cen B μ=2605 2 pr X

No	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dn	dl
1	14.5	14.5	29	100	100	192	192	0	0
2	14.5	14.5	29	100	100	192	192	0	0
3	14	14.5	29	96.5	100	198	192	6	05
4	12.5	15	29	86.5	103.6	214	186	28	23
5	10	15	29	69	103.6	143	186	57	41
6	13	15	29	89.5	103.6	209	186	23	19
7	14.5	15	29	100	103.6	192	186	6	05
8	15	15	29	103.6	103.6	186	186	0	0
9	15	15	29	103.6	103.6	186	186	0	0
10	17.5	17.5	29	121	121	159	159	0	0
1	17	17.5	29	117	121	165	159	6	05
2	16.5	17.5	29	114	121	170	159	11	10
3	12	17.5	29	83	121	219	159	60	42
4	6.5	17.5	29	45	121	286	159	127	69
5	13	17.5	29	89.5	121	209	159	50	37
6	16.5	17.5	29	114	121	170	159	11	10
7	17.5	18	29	121	124	159	154	5	04
8	18	18	29	124	124	154	154	0	0
7	20	20	28.5	140	140	129	129	0	0
8	20	20	28.5	140	140	129	129	0	0
9	19.5	20	28.5	137	140	133	129	4	04
10	16.5	20	28.5	116	140	166	129	37	29
11	19.5	20	28.5	137	140	133	129	4	04
12	20	20	28.5	140	140	129	129	0	0
13	20	20	28.5	140	140	129	129	0	0

δ

γ

4227



α Cen B μ=2605
2 pr X

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1924phae.proj.112MP

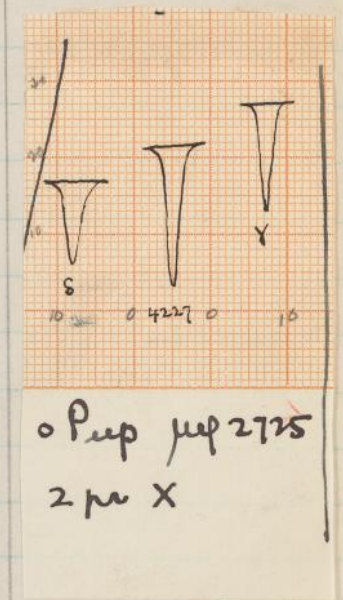
o Pup μ⁴ 2725, 2 per X

No	n	m+n	l+m+n	n	m+n	l+n	l+m+n	dm	dl
8.5	17	17	39	87	87	213	213	0	0
9	17	17	39	87	87	213	213	0	0
10	16	17	39	82	87	221	213	8	07
11	11.5	17	39	59	87	260	213	47	35
12	6	17	39	30.8	87	322	213	109	63
13	11.5	17	39	59	87	260	213	47	35
14	15	17	39	77	87	229	213	16	14
15	16.5	17	39	84.5	87	217	213	4	04
16	17	17	39	87	87	213	213	0	0
=1	21	21	39	108	108	180	180	0	0
2	21	21	39	108	108	180	180	0	0
3	20.5	21.5	39	105	110	184	176	8	07
4	16.5	21.5	39	84.5	110	217	176	41	31
5	3.5	21.5	39	18	110	374	176	198	84
6	12.5	21.5	39	64	110	251	176	75	50
7	20.5	21.5	39	105	110	184	176	8	07
8	21.5	21.5	39	110	110	176	176	0	0
9	22	22	39	113	113	171	171	0	0
=4	27	27	39	138.5	138.5	131	131	0	0
5	27	27	39	138.5	138.5	131	131	0	0
6	25	27	39	128	138.5	148	131	17	14
7	14	27	39	71.7	138.5	238	131	107	63
8	19	27	39	97.5	138.5	196	131	65	45
9	26.5	27	39	136	138.5	135	131	4	04
10	27	27	39	138.5	138.5	131	131	0	0
11	27	27	39	138.5	138.5	131	131	0	0

δ

4227

γ



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2 Cen A, Mcp 2607, HK = 18.5

No	n	m+n	l+m+n	n	m+n	[n]	[m+n]	dm	dl
2	24	24	30	160	160	97	97	0	0
3	24.5	24.5	30	163.5	163.5	91	91	0	0
4	24.5	24.5	30	163.5	163.5	91	91	0	0
5	24.5	25	30	163.5	167	91	85	6	05
6	24.5	25	30	163.5	167	91	85	6	05
7	24	25	30	160	167	97	85	12	10
8	24	25.5	30	160	170	97	79	18	15
9	23	25.5	30	153	170	108	79	29	23
10	22	26	30	147	173	117	73	44	33
11	19	26	30	126.5	173	150	73	77	51
12	13.5	26	30	90	173	208	73	135	71
13	8.5	26.5	30	56.5	176.5	264	66	198	84
14	10.5	26.5	30	70	176.5	241	66	175	80
15	15.5	26.5	30	103.5	176.5	186	66	120	67
16	19.5	26.5	30	130	176.5	145	66	79	52
17	22	26.5	30	147	176.5	117	66	51	37
18	23	26.5	30	153	176.5	108	66	42	32
19	24	27	30	160	180	97	57	40	31
20	24.5	27	30	163.5	180	91	57	34	27
21	25	27	30	167	180	85	57	28	23
22	25.5	27	30	170	180	79	57	22	18
23	26	27	30	173	180	73	57	16	14
24	26	27.5	30	173	183.5	73	47	26	21
25	26.5	27.5	30	176.5	183.5	66	47	19	16
26	26.5	27.5	30	176.5	183.5	66	47	19	16
27	26.5	27.5	30	176.5	183.5	66	47	19	16
28	25.5	27.5	30	170	183.5	79	47	32	26
29	23	27.5	30	153	183.5	108	47	61	43
30	20	27.5	30	133	183.5	140	47	93	58

K

H

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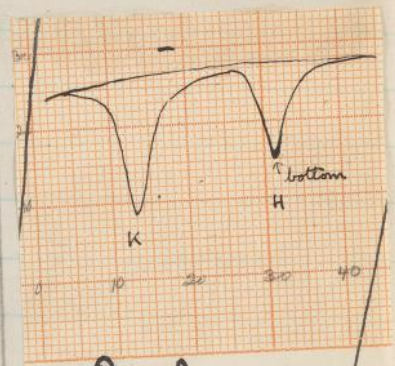
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α Cen^A, μ$_p$2607, HK = 18.5

No	n	m+n	l+m+n	n	m+n	n	m+n	[n]	[m+n]
31	16	27.5	30	107	183.5	181	47	134	71
31.5	15	27.5	30	100	183.5	192	47	145	74
32	16.5	27.5	30	110	183.5	176	47	129	70
33	21	27.5	30	140	183.5	129	47	82	53
34	23	27.5	30	153	183.5	108	47	61	43
35	24.5	27.5	30	163.5	183.5	91	47	44	33
36	26	27.5	30	173	183.5	73	47	26	21
37	26.5	27.5	30	176.5	183.5	66	47	19	16
38	27	27.5	30	180	183.5	57	47	10	09
39	27	27.5	30	180	183.5	57	47	10	09
40	27	27.5	30	180	183.5	57	47	10	09
41	27.5	27.5	30	183.5	183.5	47	47	0	0
42	27.5	27.5	30	183.5	183.5	47	47	0	0
43	28	28	30	187	187	36	36	0	0
44	28	28	30	187	187	36	36	0	0
45	28	28	30	187	187	36	36	0	0



α Cen^A μ$_p$2607

HK = 18.5

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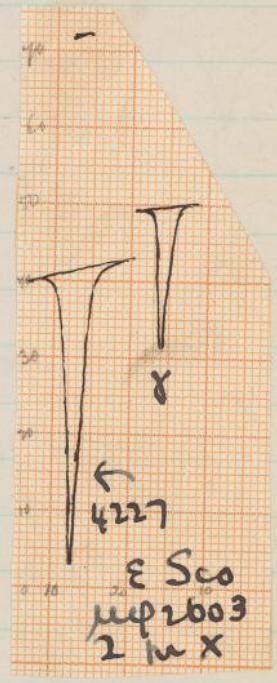
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ε Sco, μ Lup 2603, 2 pr X

No	n	m+n	ℓ+m+n	π	π+n	[n]	[m+n]	dm	dℓ
7	40	40	72	111	111	175	175	0	0
8	40	40	72	111	111	175	175	0	0
9	40	40.5	72	111	112.5	175	172	3	03
10	39	40.5	72	108.3	112.5	179	172	7	06
11	34	41	72	94.5	114	201	170	31	25
12	17.5	41	72	48.7	114	279	170	109	63
12.5	3	41	72	8.4	114	442	170	272	92
13	10	41.5	72	27.8	115	331	168	163	78
14	28	41.5	72	78	115	228	168	60	42
15	38	42	72	106	117	182	165	17	14
16	41	42	72	114	117	170	165	5	04
17	42	42.5	72	117	118	165	163	2	02
18	42.5	42.5	72	118	118	163	163	0	0
19	42.5	42.5	72	118	118	163	163	0	0
20	43	43	72	119.5	119.5	161	161	0	0
= 1	49	49	72	136	136	135	135	0	0
2	49	49	72	136	136	135	135	0	0
3	48	49.5	72	133.5	137.5	139	133	6	05
4	31.5	49.5	72	88	137.5	211	133	78	51
5	41	50	72	114	139	170	130	40	31
6	48	50	72	133.5	139	139	130	9	08
7	50	50	72	139	139	130	130	0	0
8	50	50	72	139	139	130	130	0	0
8.5	50	50	72	139	139	130	130	0	0

4227

γ



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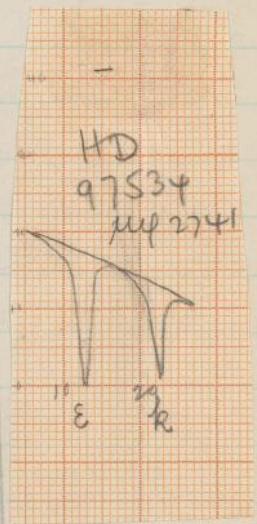
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HD 97534, μ Leo 2741

No	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
6	20	20	41	97.5	97.5	196	196	0	0
7	19	19.5	41	93	95	203	200	3	03
8	18	19	41	88	93	211	203	8	07
E 9	17.5	19	41	85.3	93	215	203	12	10
10	16.5	18.5	41	80.5	90	224	208	16	14
11	14.5	18	41	70.7	88	240	211	29	23
12	6.5	17.5	41	31.7	85.3	320	215	105	62
13	1	17	41	4.9	83	486	219	267	91
14	12	16.5	41	58.5	80.5	261	224	37	29
15	15.5	16.5	41	75.5	80.5	232	224	8	07
16	16	16	41	78	78	228	228	0	0
17	15.5	15.5	41	75.5	75.5	232	232	0	0
18	14.5	15	41	70.7	73	240	236	4	04
19	14	14.5	41	68.3	70.7	244	240	4	04
20	12.5	14	41	61	68.3	256	244	12	10
21	10	14	41	48.7	68.3	279	244	35	28
k 22	5	13	41	24.4	63.5	344	252	92	57
23	1.5	13	41	7.3	63.5	453	252	201	814
24	6	12.5	41	29.3	61	326	256	70	48
25	10.5	12	41	51.3	58.5	274	261	13	11
26	11	11.5	41	53.5	56	270	265	5	04
27	10.5	11	41	51.3	53.5	274	270	4	04
	10.5	10.5	41	51.3	51.3	274	274	0	0



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1924phae.proj.1124P

Mp 2635, c Carinae, 2 pr X

No	n	n+n	b m+n	m	m+n	[m]	[m+n]	dm	dl
7	49	49	70	140	140	129	129	0	0
8	49.5	49.5	70	141.5	141.5	126	126	0	0
9	49.5	50	70	141.5	143	126	124	2	02
10	49	50	70	140	143	129	124	5	04
11	49	50.5	70	140	144	129	122	7	06
12	48.5	50.5	70	139	144	130	122	8	07
13	47.5	51	70	136	146	135	119	16	14
14	46	51	71	131.5	146	142	119	23	19
15	41	51.5	70	117	147	165	114	48	36
16	31	51.5	70	88.5	147	210	117	93	58
17	11	52	70	91.4	149	320	114	206	85
18	4.5	52	70	12.9	149	407	114	293	93
19	19.5	52	70	55.7	149	266	114	152	75
20	33	52.5	70	94.3	150	201	113	88	56
21	43	53	70	123	151.5	156	111	45	34
22	47	53	70	134	151.5	138	111	27	22
23	49.5	53	70	141.5	151.5	126	111	15	13
24	51	53.5	70	146	153	119	108	11	10
25	52	54	70	149	154	114	106	8	07
26	52.5	54	70	150	154	113	106	7	06
27	53.5	54.5	70	153	156	108	103	5	04
28	54	54.5	70	154	156	106	103	3	03
29	54.5	54.5	70	156	156	103	103	0	0
30	55	55	70	157	157	102	102	0	0
=2	59	59	71	166	166	86	86	0	0
3	59	59	71	166	166	86	86	0	0
4	58.5	59	71	165	166	88	86	2	02
5	58	59	71	163.5	166	91	86	5	04
6	58	59.5	71	163.5	168	91	83	8	07

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1924phae.proj..1124P

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1924phae.proj.1124P

Mel 2635, ζ Carinae, 2 per X

No	n	m+n	[m+n]	n	m+n	[n]	[m+n]	dm	dl
7	57.5	59.5	71	162	168	93	83	10	09
8	56.5	59.5	71	159	168	98	83	15	13
9	55	59.5	71	155	168	105	83	22	18
10	51	59.5	71	144	168	122	83	39	30
11	38.5	59.5	71	108.5	168	149	83	96	59
12	32.5	59.5	71	91.5	168	206	83	123	68
13	43	59.5	71	121	168	159	83	76	50
14	52	59.5	71	146.5	168	118	83	35	28
15	54.5	59.5	71	154	168	106	83	23	19
16	56.5	59.5	71	159	168	98	83	15	13
17	58	59.5	71	163	168	92	83	9	08
18	58.5	59.5	71	165	168	88	83	5	04
19	59.5	59.5	71	168	168	83	83	0	0
20	60	60	71	169	169	81	81	0	0
21	60	60	71	169	169	81	81	0	0
6	63.5	63.5	72.5	175	175	69	69	0	0
7	63.5	63.5	72.5	175	175	69	69	0	0
8	63	63.5	72.5	174	175	71	69	2	02
9	62.5	63.5	72.5	172.5	175	74	69	5	04
10	62	63.5	72.5	171	175	77	69	8	07
11	61.5	63.5	72.5	170	175	79	69	10	09
12	60	63.5	72.5	165.5	175	87	69	18	15
13	56.5	63.5	72.5	156	175	103	69	34	27
14	42	63.5	72.5	116	175	166	69	97	59
15	48	63.5	72.5	132.5	175	141	69	72	48
16	57.5	63.5	72.5	159	175	98	69	29	23
17	60.5	63.5	72.5	167	175	85	69	16	14
18	62	63.5	72.5	171	175	77	69	8	07
19	62.5	63.5	72.5	172.5	175	74	69	5	04

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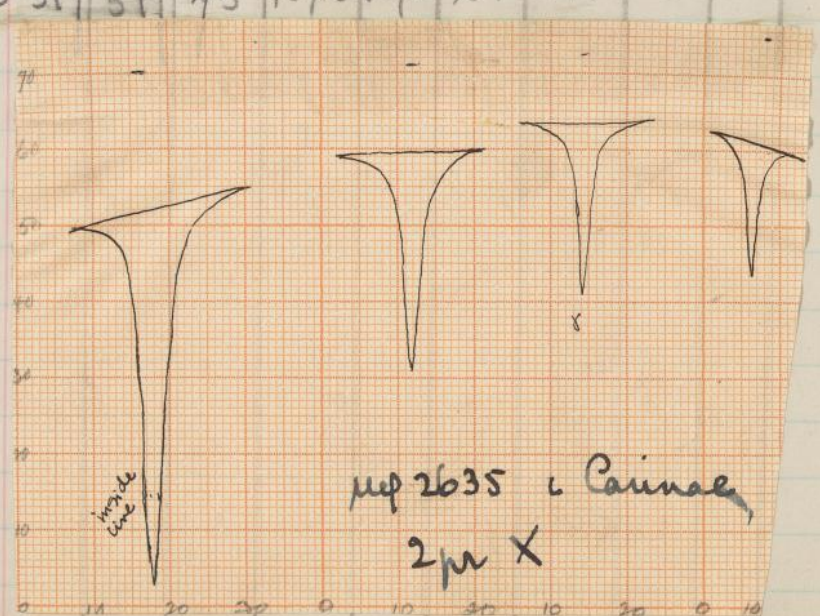
1924phae.proj.1124P

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μ² 2635, ι Carinae, 2-pr X

No	n	m+n	L=m+n	π	m+n	[π]	[m+n]	dm	dl
20	63	63.5	72.5	174	175	71	69	2	02
21	63.5	63.5	72.5	175	175	69	69	0	0
22	64	64	72.5	176.5	176.5	66	66	0	0
23	64	64	72.5	176.5	176.5	66	66	0	0
Σ 23.5	64	64	72.5	176.5	176.5	66	66	0	0
= 1	62.5	62.5	75	167	167	85	85	0	0
2	62	62	75	165	165	88	88	0	0
3	61.5	62	75	164	165	90	88	2	02
4	60	62	75	160	165	97	88	9	08
5	57.5	61.5	75	153	164	108	90	18	15
6	46	61.5	45	123	164	156	90	66	46
6.5	43.5	61	45	116	163	166	92	74	49
7	50	61	75	133	163	140	92	48	36
8	56.5	60.5	75	151	161.5	111	94	17	14
9	58.5	60.5	75	156	161.5	103	94	9	08
10	59.5	60	75	159	160	98	97	1	01
11	59.5	59.5	75	159	159	98	98	0	0
12	59.5	59.5	75	159	159	98	98	0	0
13	59	59	75	157.5	157.5	101	101	0	0



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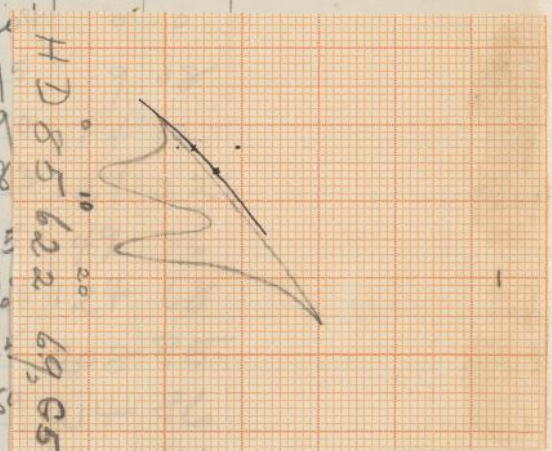
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1924phae.proj.1124P

HD 85622. 6.9. G5

No	h	m+n	l+m+n	w	m+w	[w]	[m+w]	dw	dl
0	10	10	53.5	37.4	37.4	304	3[illegible]		
1	10	11	53.5	37.4	41	304	29[illegible]		
2	10	11.5	53.5	37.4	43	304	29[illegible]		
3	9.5	12.5	53.5	35.5	46.7	310	28[illegible]		
4	8	13.5	53.5	30	50.5	324	27[illegible]		
5	4	14.5	53.5	15	54.3	392	26[illegible]		
6	1.5	15	53.5	5.6	56	473	26[illegible]		
7	1.5	16	53.5	5.6	59.7	473	25[illegible]		
8	3.5	17	53.5	13.1	63.5	405	252	153	76
9	6.5	18	53.5	24.3	67.3	344	245	99	60
10	9.5	18.5	53.5	35.5	69	310	243	67	46
11	12.5	19	53.5	46.7	71	283	239	44	33
12	15.5	20	53.5	58	74.7	262	234	28	23
13	16	21	53.5	60	78.5	258	227	31	25
14	13.5	22	53.5	50.5	82.3	275	220	55	40
15	6.5	23	53.5	24.3	86	344	214	130	70
16	3.5	23.5	53.5	13.1	88	405	211	194	83
17	5	24	53.5	18.7	89.7	371	208	163	78
18	13.5	25	53.5	50.5	93.5	275	202	73	49
19	19	26	53.6	71	97	239	197	42	32
20	21.5	26.5	53.5	80.5	99	224	193	31	25
21	24	27	53.5	89.7	101	208	190	18	15
22	26	28	53.5	97	104.5	197	185	12	10
23	27.5	28.5	53.5	103	106.5	187	182	5	04
24	28.5	29	53.5	106.5	108.5	182	179	3	03
25	29.5	29.5	53.5	110	110	176	176	0	0
26	30	30	53.5	112	112	173	173	0	0



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1924phae.proj.1124P

HD 85622. 6.9. G5

No	n	m+n	[m+n]	m	m+n	[m]	[m+n]	dm	dl
0	10	10	53.5	37.4	37.4	304	304	0	0
1	10	11	53.5	37.4	41	304	295	9	08
2	10	11.5	53.5	37.4	43	304	290	14	12
3	9.5	12.5 (19.4)	53.5	36.5 (31.0)	46.7 (52)	310	283	27	22
4	8	13.5	53.5	30	50.5	324	275	49	36
5	4	14.5	53.5	15	54.3	392	268	124	68
6	1.5	15	53.5	5.6	56 (62)	473	265	208	85
7	1.5	16	53.5	5.6	59.7	473	259	214	86
8	3.5	17	53.5	13.1	69.5	405	252	153	76
9	6.5	18	53.5	24.3 (22.0)	67.3	344	245	99	60
10	9.5	18.5	53.5	35.5	69	310	243	67	46
11	12.5	19	53.5	46.7	71	283	239	44	33
12	15.5	20	53.5	58	74.7	262	234	28	23
13	16	21	53.5	60	78.5	258	227	31	25
14	13.5	22	53.5	50.5	82.3	275	220	55	40
15	6.5	23	53.5	24.3	86	344	214	130	70
16	3.5	23.5	53.5	13.1	88	405	211	194	83
17	5	24	53.5	18.7	89.7	371	208	163	78
18	13.5	25	53.5	50.5	93.5	275	202	73	49
19	19	26	53.5	71	97	239	197	42	32
20	21.5	26.5	53.5	80.5	99	224	193	31	25
21	24	27	53.5	89.7	101	208	190	18	15
22	26	28	53.5	97	104.5	197	185	12	10
23	27.5	28.5	53.5	103	106.5	187	182	5	04
24	28.5	29	53.5	106.5	108.5	182	179	3	03
25	29.5	29.5	53.5	110	110	176	176	0	0
26	30	30	53.5	112	112	173	173	0	0

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1924phae.proj.11142

Trial solutions corresponding to various backgrounds

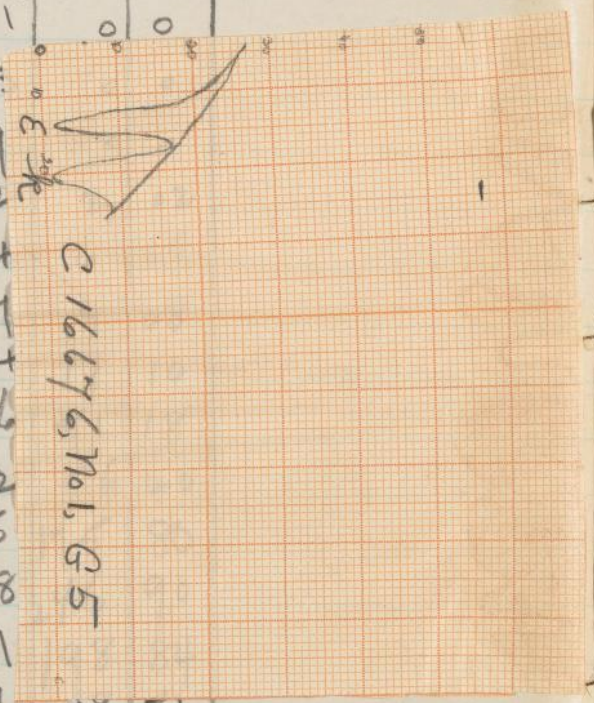
dm	dl	dm	dl	dm	dl
10	9				
19	16				
24	20				
37	29				
59	42				
134	71				
218	87				
224	87				
163	78				
109	63				
77	51				
54	39				
38	30				
41	31				
65	45				
140	72				
204	85				
173	80				
83	53				
52	38				
41	31				
28	23				
22	18				
15	13				
13	11				
10	9				

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1924phae.proj.1124P

C 16676, No 1, G 5

No	h	m+n	m	n	$\bar{n}$	m+$\bar{n}$	Σn	$\Sigma(m+n)$	dm	dl
4	27	27	57		94.7	94.7	201	201	0	0
5	26.5	26.5	57		93	93	203	203		
6	25.5	25.5	57		89.5	89.5	209	209		
E 7	24.5	25	57		86	84.5	214	212		
8	23.5	24.5	57		82.5	86	220	214		
9	22.5	24	57		79	84	226	217		
10	21	23	57		73.5	80.5	235	224		
11	19	22.5	57		66.5	79	247	226		
12	12.5	21.5	57		44	75.5	288	232		
13	3.5	21	57		12.3	73.5	410	235		
135	1.5	20.5	57		5.3	72	484	238		
14	2.5	20	57		8.8	70	439	241		
15	8.5	19	57		29.8	66.5	325	247	78	51
16	15.5	18.5	57		54.5	65	268	249	19	16
17	17	17.5	57		59.5	61.5	259	256	3	03
18	12	16.5	57		42	58	293	262	31	25
19	4.5	15.5	57		15.8	54.5	387	268	119	67
20	1	14.5	57		3.5	51	—	274	—	—
k 21	1.5	13	57		5.3	45.5	484	285	199	84
22	5.5	12	57		19.3	42	367	293	74	49
23	7	11	57		24.6	38.6	343	302	41	31
24	8.5	10	57		29.8	35	325	311	14	12
25	8.5	9	57		29.8	31.6	325	320	5	04
26	8	8	57		28	28	330	330	0	0



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1924phae.proj.1124P

C 16676, No 1, G 5

No	n	m+n	m+n	$\bar{n}$	m+$\bar{n}$	Σ_n	Σ_{m+n}	dm	dl
4	27	27	57	94.7	94.7	201	201	0	0
5	26.5	26.5	57	93	93	203	203	0	0
6	25.5	25.5	57	89.5	89.5	209	209	0	0
E 7	24.5	25	57	86	84.5	214	212	2	02
8	23.5	24.5	57	82.5	86	220	214	6	05
9	22.5	24	57	79	84	226	217	9	08
10	21	23	57	73.5	80.5	235	224	11	10
11	19	22.5	57	66.5	79	247	226	21	18
12	12.5	21.5	57	44	76.5	288	232	56	40
13	3.5	21	57	12.3	73.5	410	235	175	80
13.5	1.5	20.5	57	5.3	72	484	238	246	90
14	2.5	20	57	8.8	70	439	241	198	84
15	8.5	19	57	29.8	66.5	325	247	78	51
16	15.5	18.5	57	54.5	65	268	249	19	16
17	17	17.5	57	59.5	61.5	259	256	3	03
18	12	16.5	57	42	58	293	262	31	25
19	4.5	15.5	57	15.8	54.5	387	268	119	67
20	1	14.5	57	3.5	51	—	274	—	—
K 21	1.5	13	57	5.3	45.5	484	285	199	84
22	5.5	12	57	19.3	42	367	293	74	49
23	7	11	57	24.6	38.6	343	302	41	31
24	8.5	10	57	29.8	35	325	311	14	12
25	8.5	9	57	29.8	31.6	325	320	5	04
26	8	8	57	28	28	330	330	0	0

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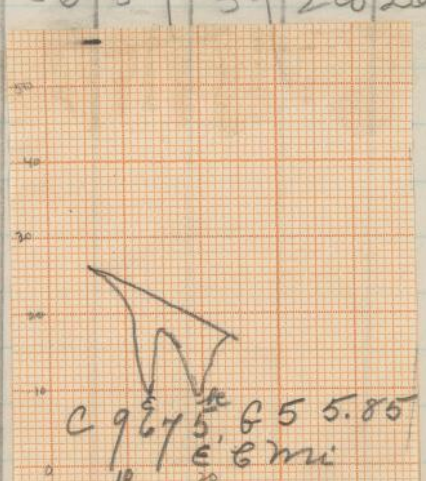
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1924phae.proj.1124P

C 9675, G 5, 5.85, ε & mi

No	n	mtn	ltmtn	$\bar{n}$	$\overline{mtn}$	[n]	[mtn]	dn	dl
5	26	26	56	93	93	203	203	0	0
6	25.5	25.5	56	91	91	206	206	0	0
7	25	25.5	56	89	91	209	206	3	03
8	24	25	56	85.5	89	215	209	6	05
9	23	24.5	56	82	84.5	221	212	9	08
10	21.5	24	56	76.7	85.5	230	215	15	13
11	17.5	23.5	56	62.5	84	254	217	37	29
12	12	23	56	43	82	290	221	69	47
13	9.5	22.5	56	34	80.5	313	224	89	56
14	16	22	56	57	78.5	263	227	36	28
15	17.5	21.5	56	62.5	76.7	254	230	24	20
16	16.5	21	56	59	75	260	233	27	22
17	15	20.5	56	53.5	73	270	236	34	27
18	12	20	56	43	71.5	290	239	51	37
19	9	19.5	56	32.2	69.5	319	242	77	51
20	10.5	19	56	37.5	68	304	244	60	42
21	13.5	18.5	56	48.3	66	279	248	31	25
22	15.5	18	56	55.5	64.3	266	250	16	14
23	17	17	56	60.7	60.7	257	257	0	0
24	17	17	56	60.7	60.7	257	257	0	0
24.5	16.5	16.5	56	59	59	260	260	0	0



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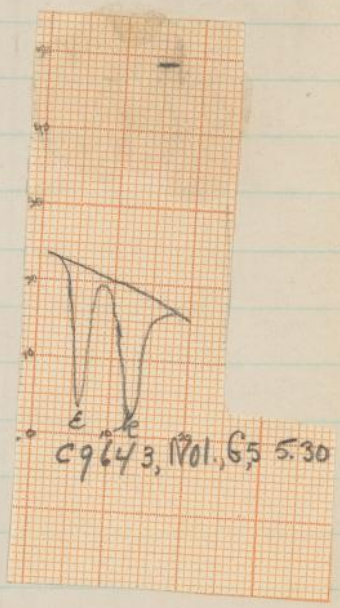
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1924phae.proj.112P

C 9643, No 1, G5, 5.30

No	n	m+n	l+m+n	$\bar{n}$	$\overline{m+n}$	[n]	[m+n]	dm	dl
1	23.5	23.5	49	96	96	198	198	0	0
2	23	23	49	94	94	201	201	0	0
3	22.5	23	49	92	94	205	201	4	04
4	19.5	22.5	49	79.5	92	225	205	20	17
5	12	22	49	49	89.7	278	209	69	44
6	3.5	22	49	14.3	89.7	396	209	187	82
7	13	21.5	49	53	87.7	271	212	59	42
8	19.5	21	49	79.5	85.7	225	215	10	09
9	19.5	20.5	49	79.5	83.6	225	218	7	06
10	16.5	20	49	67.5	81.5	245	222	23	19
11	12	20	49	49	81.5	278	222	56	40
12	5.5	19.5	49	22.4	79.5	351	225	126	69
12.5	2	19.5	49	8.3	79.5	443	225	218	84
13	2.5	19	49	10.2	77.5	426	229	197	84
14	8	18.5	49	32.6	75.5	318	232	86	55
15	14.5	18	49	59.3	73.5	259	235	24	20
16	15.5	18	49	63.5	73.5	252	235	17	14
17	16	17	49	65.3	69.5	249	242	7	06
18	16.5	16.5	49	67.5	67.5	245	245	0	0
19	16	16	49	65.3	65.3	249	249	0	0
20	15.5	15.5	49	63.5	63.5	252	252	0	0



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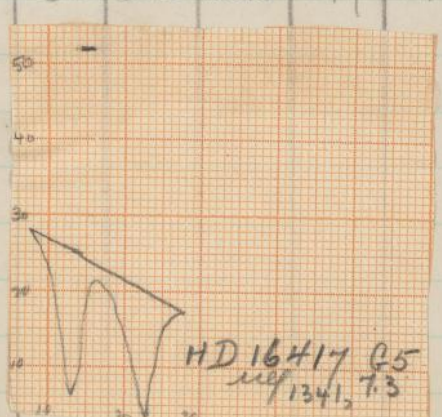
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1924phae.proj.1124P

HD 16417, G5, mp 1341, 7.3

No	n	m+n	l+m+n	x	m+n	[x]	[m+n]	dm	dl
7.5	28	28	52	108	108	180	180	0	0
8	27.5	27.5	52	106	106	182	182	0	0
9	25.5	27	52	98	104	195	185	10	09
10	23	27	52	88.5	104	210	185	25	21
11	18.5	26	52	71	100	239	192	47	35
12	12	26	52	46.3	100	283	192	91	57
13	6.5	25.5	52	25	98	341	195	146	74
14	9.5	25	52	36.5	96	307	198	109	63
15	18	24	52	69.3	92.3	242	204	38	30
16	21.5	23.5	52	82.7	90.5	220	207	13	11
17	21	23	52	80.7	88.5	224	210	14	12
18	20	22.5	52	77	86.5	229	214	15	13
19	16.5	22	52	63.5	84.5	252	217	35	28
20	14	21.5	52	54	82.7	269	220	49	36
21	10	21	52	38.5	80.7	302	224	78	61
22	5.5	20.5	52	21.2	79	357	226	131	70
23	4	20	52	15.4	77	388	229	159	77
24	10	19	52	38.5	73	302	236	66	46
25	14.5	18.5	52	55.7	71	266	239	27	22
26	16	18	52	61.5	69.3	256	242	14	12
27	17	17.5	52	65.5	67.3	249	245	4	04
28	17	17	52	66.5	65.5	249	249	0	0



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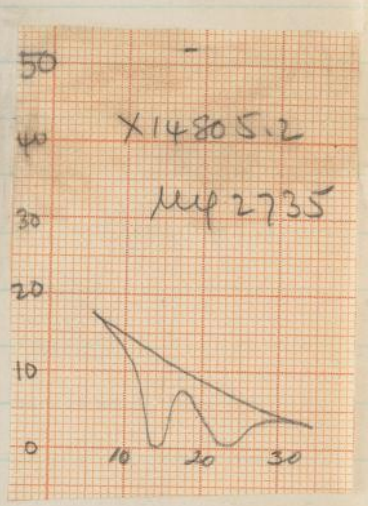
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1924phae.proj.1124P

X 14805.2, MP 2735

No	h	m+n	h+m+n	n	m+n	[n]	[m+n]	dm	dl
6	17.5	17.5	52	67.3	67.3	245	245	0	0
7	16.5	16.5	52	63.5	63.5	252	252	0	0
8	15	16	52	57.7	61.5	263	256	7	06
9	14	15.5	52	53.9	59.5	270	259	11	10
10	12.5	15	52	48	57.7	280	263	17	14
11	11	14	52	42.3	53.9	292	270	22	18
12	8	13.5	52	30.8	52	322	278	49	36
13	2	13	52	7.7	50	449	276	173	80
14	0	12	52	—	46	—	—	—	
15	0.5	11.5	52	—	44.3	—	—	—	
16	5	11	52	19.3	42.3	368	292	76	50
17	7.5	10.5	52	28.8	40.5	328	296	32	26
18	7	10	52	26.8	38.5	335	302	33	26
19	5.5	9.5	52	21.3	36.5	357	307	50	37
20	4	9	52	15.4	34.6	390	322	68	51
21	2.5	8.5	52	9.6	32.7	432	317	115	65
22	1	8	52	3.9	30.8	—	322	—	—
23	0.5	7.5	52	—	28.8	—	328	—	—
24	0.5	7	52	—	26.8	—	335	—	—
25	1	6.5	52	3.9	25	—	341	—	—
26	2.5	6	52	9.6	23	432	349	83	53
27	3	5.5	52	11.5	21	416	358	58	41
28	3.5	5	52	13.5	19.3	403	368	35	28
29	4	4.5	52	15.4	17.3	390	377	13	11
30	4	4.5	52	15.4	17.3	390	377	13	11
31	4	4	52	15.4	15.4	390	390	0	0
32	3.5	3.5	52	13.5	13.5	403	403	0	0
33	3.5	3.5	52	13.5	13.5	403	403	0	0
34	3	3	52	11.5	11.5	416	416	0	0



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