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Project PHaEDRA - Cecilia H. Payne #11

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[[front cover]]

[[label]]
KG
^[[11366
101]]
[[/label]]

11
APERTURES cSTARS and others

Cygni
Cygni
Canis Majoris

Capella

Pleiades 6°

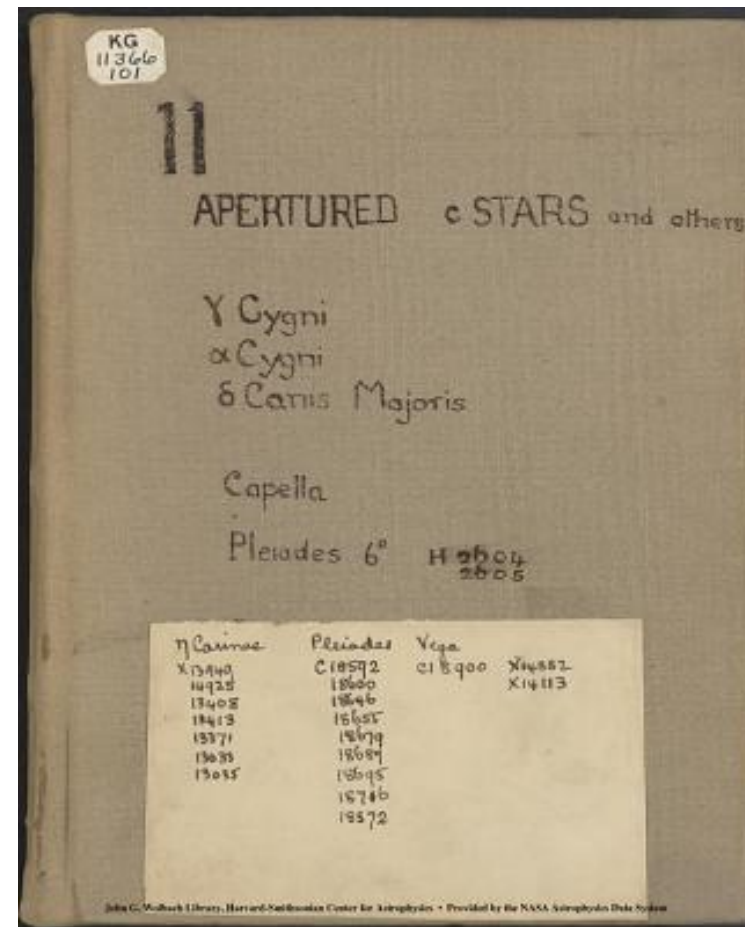
H 2604
2605

[[column 1]]
Carinae
14925
13408
13413
13371
13033
13035
[[/column 1]]

[[column 2]]
Pleiades
C18592
18600
18646
18655
18629
18689
18695
18706
18572
[[/column 2]]

[[column 3]]
Vega
CI 8900
[[/column 3]]

[[column 4]]
X14882
X14113
[[/column 4]]

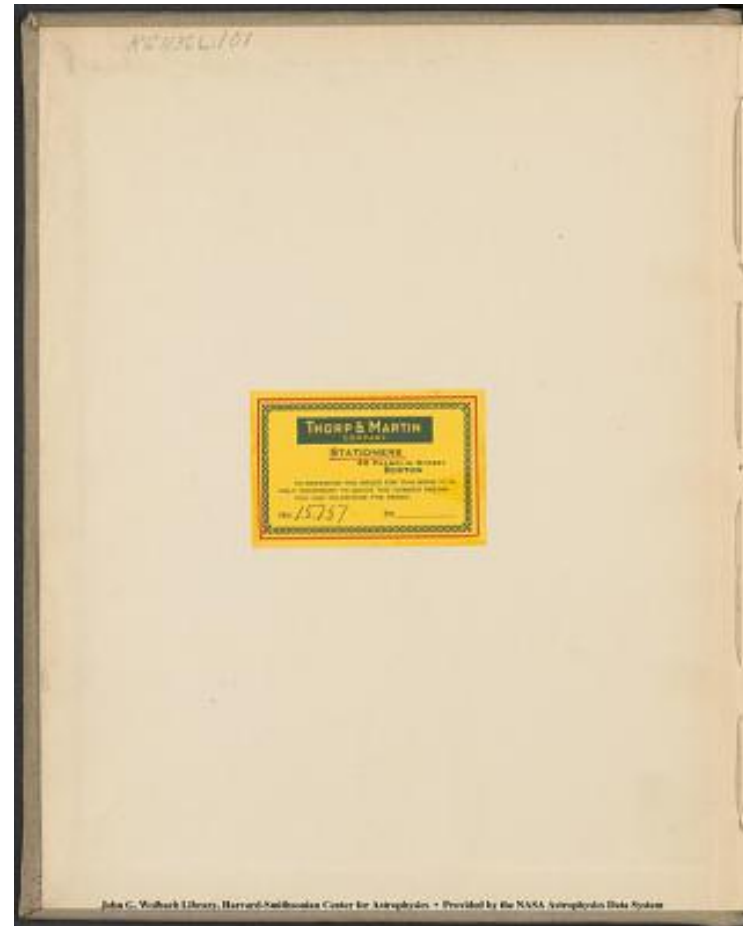


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[[label]]
THORP & MARTIN
COMPANY
[[underlined]]STATIONERS[[/underlined]]
66 FRANKLIN STREET
BOSTON

IN RENEWING THE ORDER FOR THIS BOOK IT IS ONLY
NECESSARY TO QUOTE THE NUMBER BELOW.
YOU CAN TELEPHONE THE ORDER.

NO. ^[[15751]]
PR [[blank line]]
[[/label]]



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[[image - horizontal line with short vertical lines. appears to be the start of a graph]]



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Series
 | b | a | g | k | m
 1 | 5015 He | 4481 Mg+ | 1) 3933 Ca+ | same | same
 beta < | ~~4861~~ | ~~4861~~ | | | |
 2 | ~~4861~~ | ~~4861~~ | He | 3933 Ca+ | 2) 3970 Ca+ |
 |
 beta < | 4923 | | | | |
 3 | 4713 He | | 3) | 4005 Fe | | |
 4 | ~~4437~~ | ~~4437~~ | ~~4471 He~~ | | 4) 4031 Mn | | |
 5 | ~~4387~~ | ~~4387~~ | ~~4437 He~~ | | 5) 4041 Mn | | |
 gamma > | | | | |
 6 | 4387 | | 6) 4046 Fe | | |
 gamma > | | | | |
 7 | 4267 C+ | | 7) 4064 Fe | | |
 8 | 4144 | | 8) 4072 Fe | | |
 9 | 4121 | | 9) 4077 Sr+ | | |
 delta > | | | | |
 10 | 4026 | | 10) 4144 Fe | | |
 11 | 4009 | | 11) 4172 Fe+ | | |
 >
 12 | 3965 | | 12) 4170 Fe+ | | |
 >13 | 3889 | | 13) 4202 Fe | | |
 14 | 3867 | | 14) 4215 Sr+ | | |
 >
		15) 4227 Ca		
		16) 4233 Fe+		
		17) 4250 Fe		
		18) 4272 Fe		
		~~4307 Fe~~ 4308 Ti+ ~~4307~~ }		
		19) 4314 Sc+		
		20) 4321 Sc+		
		21) 4352 Fe+		
		22) 4374 Sc+		
		23) 4395 Ti+		
		24) 4400 Sc+		
		25) 4416 Fe+		
		26) 4444 Ti+		
		27) 4501 Ti+		
		28) 4508 Fe+		
		29) 4515 Fe+		
		30) 4520 Fe+		
		31) 4534 Ti+		
		32) 4549 Ti+		
		33) 4554 Ba+		
		34) 4583 Fe+		
		35) 4607 Sr		

Series				
b	a	g	k	m
1	5015 He	4481 Mg+	3933 Ca+	
2	4861	4861		
3	4713 He		4005 Fe	
4	4437	4437	4031 Mn	
5	4387	4387	4041 Mn	
6	4387		4046 Fe	
7	4267 C+		4072 Fe	
8	4144		4077 Sr+	
9	4121		4072 Fe	
10	4026		4144 Fe	
11	4009		4172 Fe+	
12	3965		4170 Fe+	
13	3889		4202 Fe	
14	3867		4215 Sr+	
15			4227 Ca	
16			4233 Fe+	
17			4250 Fe	
18			4272 Fe	
19			4314 Sc+	
20			4321 Sc+	
21			4352 Fe+	
22			4374 Sc+	
23			4395 Ti+	
24			4400 Sc+	
25			4416 Fe+	
26			4444 Ti+	
27			4501 Ti+	
28			4508 Fe+	
29			4515 Fe+	
30			4520 Fe+	
31			4534 Ti+	
32			4549 Ti+	
33			4554 Ba+	
34			4583 Fe+	
35			4607 Sr	

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Publications

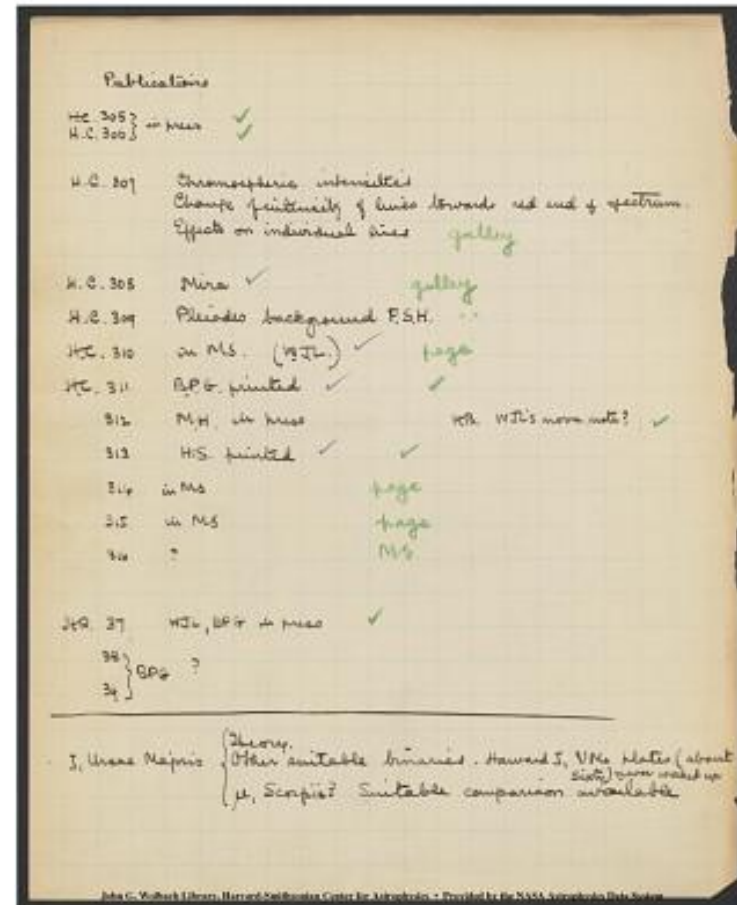
H.C. 305}
H.C. 306} in press

H.C. 307 Chromospheric intensities
Change of intensity of lines towards red end of spectrum
Effects on individual lines galley

H.C. 308 Mira galley
H.C. 309 Pleiades background F.S.H.
H.C. 310 in M.S. (W.J.L.) page
H.C. 311 B.P.G. printed
312 M.H. in press H.B. WJL's nova note?
313 H.S. printed
314 in MS page
315 in MS page
316 ? MS

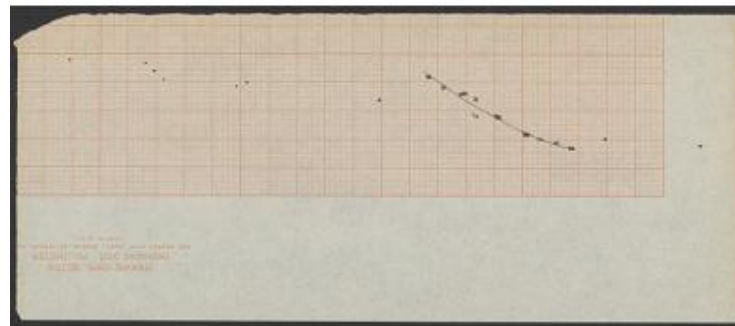
H.R. 37 WJL, BPG in press
38}
39} BPG ?

zeta ₁ Ursae Majoris {Theory
{Other suitable binaries. Harvard J. VMa plates (about sixty) never
worked up
{ μ ₁ Scorpii? Suitable comparison available.



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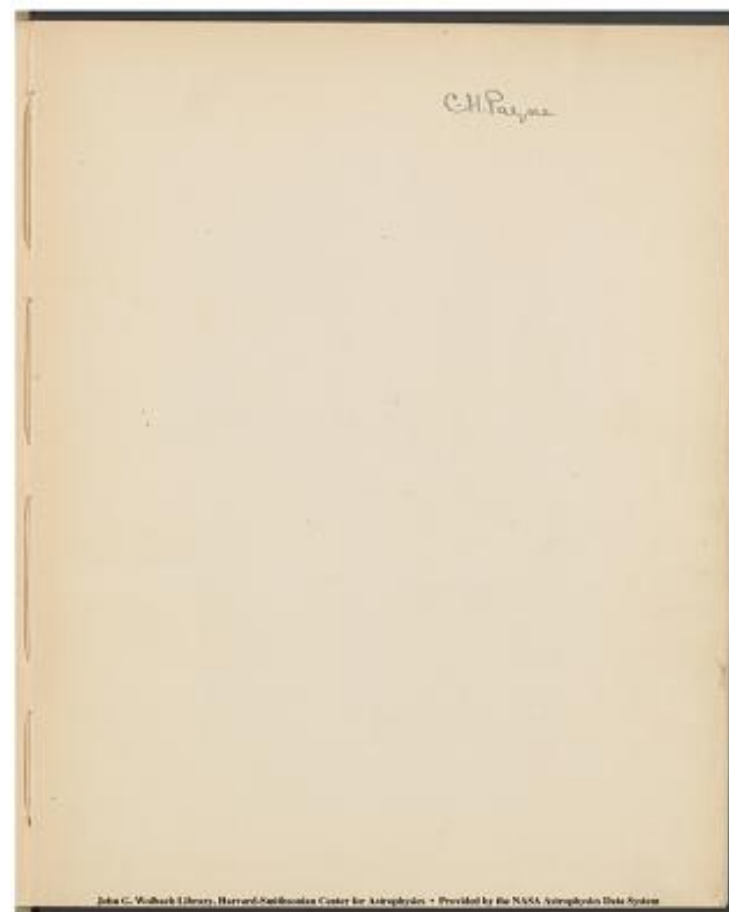
[[image - graph paper. data points with a line drawn through the points.
no text]]



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C. H. Payne



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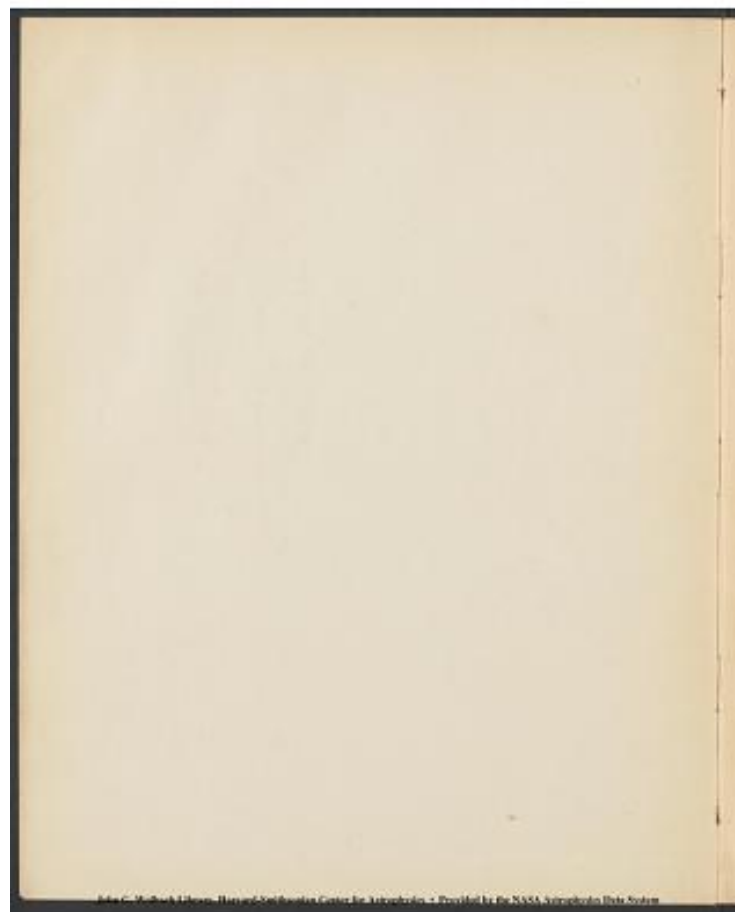
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[[/preprinted]]



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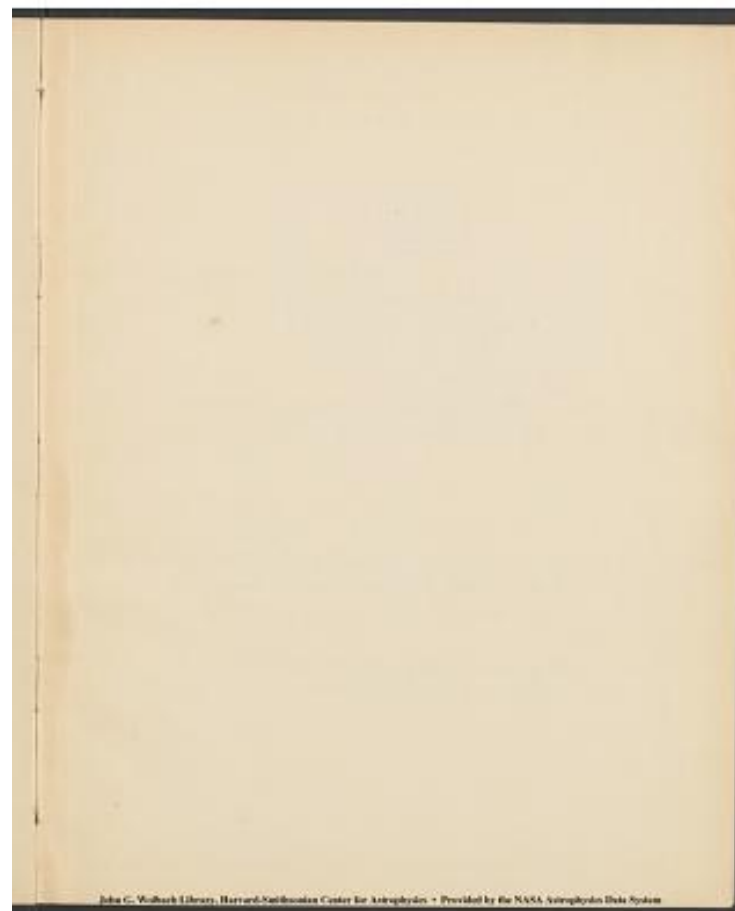
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[[/preprinted]]



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Apertured C stars
and related plates.

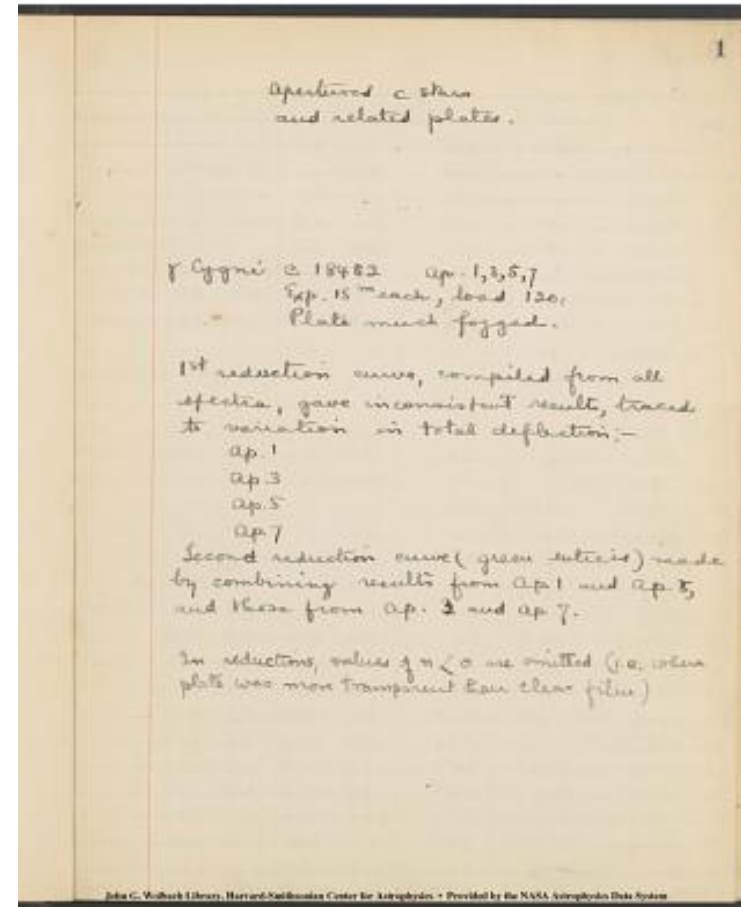
gamma Cygni C 18482 Ap. 1,3,5,7
Exp. 15^m each, load 120:
Plate much fogged.

1st reduction curve, compiled from all spectra, gave inconsistent results,
traced to variation in total deflection:-

Ap.1
Ap.3
Ap.5
Ap.7

Second reduction curve (green entries made by combining results from
Ap.1 and Ap.5^{[[?]]}, and those from Ap.3 and Ap.7.

In reductions, values of $n < 0$ are omitted (i.e. where plate was more
transparent than clear film.)



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[[preprinted]] 2 [[/preprinted]] [[image]] graph [[/image]] [[underline]]
 Measures [[/underline]]
 c 18482 gamma Cygni Measured in fiftieths of an inch, from "light."
 mu phi [[?]] n l m + n (3)n (3)m+n (5)n (5)m+n (7)n (7)m+n
 1|3933|1|17|-2.0|8.7||^[[no tracing]]|^[[no tracing]]
 2|3945|13|18|2.5|7.3||
 3|3952|12|19|1.2|7.3||
 4|3956|13|19|3.0|7.9||
 5|3958|14|19|5.0|8.0||
 6|3970|2|20|-1.7|10.2|-2.7|4.0||
 7|3982|16|21|3.4|9.2|0.5|4.2||
 8|3894|20|22|7.4|9.6|2.0|4.3||
 9|3986|-|-|[[down arrow 7.0]]|^-^[[down arrow 9.8]]|-|-|
 10|3987|20|22|[[down arrow]]|[[down arrow]]|2.2|4.3||
 11|3989|-|-|[[down arrow]]|[[down arrow]]||
 12|3990|-|-|[[down arrow]]|[[down arrow]]||
 13|3994|20|23|7.0|10.0|2.1|4.7||
 14|3995|18|23|6.0|10.3|1.0|4.7||
 15|3997|20|23|-|-|[[down arrow]]|[[down arrow]]||
 16|4002.4|21|23|9.5|11.1|2.1|4.8||
 17|21|23|10.1|11.2|1.5|4.9||
 18|4005|19|23|7.6|11.6|3.2|5.0||
 19|4012|23|24|[10.2|12.2|3.8|5.0||
 20|4014|22|24|10.0|13.0|3.3|5.7||
 21|4018|21|25|10.4|13.3|4.1|5.8||
 22|4022-3|23|25|9.8|14.0|4.0|6.1||
 23|4028|21.5|25.4|8.9|14.4|2.2|6.3||
 24|4030|24.5|25.6|10.5|14.6|5.0|6.8||
 25|4031|20.5|25.9|7.2|14.7|3.8|6.8||
 26|4033|21.1|25.9|8.6|14.7|4.3|6.8||
 27|4035|23.0|25.9|10.0|14.6|5.7|7.0||
 28|4036|24.5|26.0|12.0|14.6|-|-||
 29|4041|23.6|26.0|11.0|14.7|4.2|7.1||
 30|4046|21.9|26.0|9.8|14.8|3.1|7.4||

2	Measured									
C 18482 gamma Cygni	Measured in fiftieths of an inch, from "light."									
HP 67	I	m	(3)n	(3)m	(5)n	(5)m	(7)n	(7)m		
1	3933	17	19	-2.0	8.7					
2	3945	13	18	2.5	7.3					
3	3952	12	19	1.2	7.3					
4	3956	13	19	3.0	7.9					
5	3958	14	19	5.0	8.0					
6	3970	2	20	-1.7	10.2	-2.7	4.0			
7	3982	16	21	3.4	9.2	0.5	4.2			
8	3894	20	22	7.4	9.6	2.0	4.3			
9	3986	-	-	7.0	9.8	-	-			
10	3987	20	22	2.2	4.3	2.2	4.3			
11	3989	-	-	-	-	-	-			
12	3990	-	-	-	-	-	-			
13	3994	20	23	7.0	10.0	2.1	4.7			
14	3995	18	23	6.0	10.3	1.0	4.7			
15	3997	20	23	-	-	-	-			
16	4002.4	21	23	9.5	11.1	2.1	4.8			
17	4005	19	23	7.6	11.6	3.2	5.0			
18	4012	23	24	10.2	12.2	3.8	5.0			
19	4014	22	24	10.0	13.0	3.3	5.7			
20	4018	21	25	10.4	13.3	4.1	5.8			
21	4022-3	23	25	9.8	14.0	4.0	6.1			
22	4028	21.5	25.4	8.9	14.4	2.2	6.3			
23	4030	24.5	25.6	10.5	14.6	5.0	6.8			
24	4031	20.5	25.9	7.2	14.7	3.8	6.8			
25	4033	21.1	25.9	8.6	14.7	4.3	6.8			
26	4035	23.0	25.9	10.0	14.6	5.7	7.0			
27	4036	24.5	26.0	12.0	14.6	-	-			
28	4041	23.6	26.0	11.0	14.7	4.2	7.1			
29	4046	21.9	26.0	9.8	14.8	3.1	7.4			
30										

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[[preprinted]] 3 [[/preprinted]]

[[underlined]] Reductions [[/underlined]]

^[[All erased entries are]] (From 1st reduction curve)

2nd reduction entries in green & red.

[[16 column table]]

Ap. 1 [n] | Ap. 1 [m+n] | Ap. 1 m | Ap. 3 [n] | Ap. 3 [m+n] | Ap. 3 m | Ap. 5
[n] | Ap. 5 [m+n] | Ap. 5 m | Ap. 7 [n] | Ap. 7 [m+n] | Ap. 7 m | Mean (m) |
Residuals hundredths of mag | dl %
2.64|1.20|1.44|4.07|2.35|1.85?|-|-|-|-|1.44|-|.73
[[/strickethrough]] 2.58|0.75|1.83|3.28|1.39|1.89[[/strickethrough]] | | | |
| | | |

1.50|1.12|.38|2.85|2.33|52|-|-|-|-|
|.45|[[underlined]]7[[/underlined]]|.7|7|.34
[[/strickethrough]] 1.01|0.69|.32|2.30|1.56|74| [[/strickethrough]] | | | |
| | | |

1.57|1.05|.52|3.08|2.33|75|-|-|-|-|
|.64|[[underlined]]12[[/underlined]]|.11|12|.45
[[/strickethrough]] 1.08|0.63|45|2.54|1.56|98 [[/strickethrough]] | | | |
| | | |

1.50|1.05|.45|2.79|2.25|54|-|-|-|-|
|.50|[[underlined]]5[[/underlined]]|.4|4|.37
[[/strickethrough]] 1.01|0.63|38|2.21|1.48|73 [[/strickethrough]] | | | |
| | | |

1.42|1.05|.37|2.56|2.26|30|-|-|-|-|
|.34|3|[[underlined]]4[[/underlined]]|.4|.27
[[/strickethrough]] 0.94|0.63|31|1.88|1.47|41 [[/strickethrough]] | | | |
| | | |

2.50 | 0.97 | 1.53 | 3.50 | 2.04 | 1.46 | 4.00 | 2.24 | 1.76 | - | - | - | 1.58
[[/underlined]] 5, 12 [[/underlined]], 18 | 13 | .77
[[/strickethrough]] 2.40 | 0.58 | 1.82 | 3.19 | 1.41 | 1.78 | 3.46 | 2.04 | 1.42
[[/strickethrough]] | | | |

[[/strickethrough]] 2.46 | 0.52 | 28 | 2.13 | 1.33 | 80 | 2.67 | 2.01 | 66
[[/strickethrough]]
1.81 | 0.90 | .38 | 2.75 | 2.14 | 61 | 2.73 | 2.28 | 45 | - | - | - | .48 |
[[underlined]] 10 [[/underlined]], 13, [[underlined]]3 [[/underlined]] | 10 | .36

[[/strickethrough]] 0.58 [[/strickethrough]] | | | [[/strickethrough]] 2.75
[[/strickethrough]] | 2.14 | 13 | 2.50 | 2.26 | 24
[[/strickethrough]] 2.40 | 0.46 | 12 | 1.55 | 1.29 | 26 | 2.40 | 2.00 | 40
[[/strickethrough]] - | - | - | .17 | [[underlined]]2, 4 [[/underlined]], 7 | 5 | .14

0.97 | 0.82 | 15 | 2.27

- | - | - | - | - | - | - | - | - | - | - | - |

0.97 | 0.82 | 15 | 2.35 | 2.05 | 20 | 2.48 | 2.26 | 22

~~0.58~~ | 0.46 | 12 | 1.60 | 1.27 | 33 | 2.35 | 2.00 | 35 | - | - |
- | .19 | 4 | 1,3 | 2.8 | \downarrow

- | - | - | - | - | - | - | - | - | - | - | - |

- | - | - | - | - | - | - | - | - | - | - | - |

~~0.58~~ | 0.41 | 17 | 1.60 | 1.25 | 35 | 2.38 | 1.94 | 44
~~0.98~~ | 0.74 | 24 | 2.35 | 2.09 | 26 | 2.49 | 2.24 | 25 | - | - | - | .25 |
1 | 1,0 | .81 | .21

~~0.69~~ | 0.41 | 28 | 1.73 | 1.23 | 50 | 2.58 | 1.94 | 64
~~1.12~~ | 0.74 | 38 | 2.45 | 2.09 | 36 | 2.65 | 2.24 | 2.24 | 41 | - | - | - | .38 |
0, 2 | 3 | 2 | .30

~~0.58~~ | 0.41 | 17 | ~~0.97~~ | 0.74 | 23 | - | - | - | - | - | - | .23 | - | - | .20

~~0.52~~ | 0.41 | 11 | 1.30 | 1.16 | 14 | 2.38 | 1.92 | 46
~~0.90~~ | 0.74 | 16 | 2.09 | 1.93 | 16 | 2.49 | 2.22 | 27 | - | - | - | .20 |
4,4 | 7 | 52 | .17

~~0.52~~ | 0.41 | 11 | 1.24 | 1.15 | 09 | 2.48 | 1.90 | 58
~~.90~~ | .74 | 16 | 2.04 | 1.94 | 0.10 | 2.57 | 2.20 | 37 | - | - | - | .21 |
5,11 | 16 | ~~20.04~~
~~11.6~~ | .18

~~0.63~~ | 0.41 | 22 | 1.52 | 1.11 | 41 | 2.17 | 1.88 | 29
~~1.05~~ | 0.74 | 31 | 2.29 | 1.88 | 41 | 2.38 | 2.18 | 20 | - | - | - | .31 | 0,10,
11 | 8.6 | .25

~~0.41~~ | 0.36 | 05 | ~~0.74~~ | 0.64 | 10 | - | - | - | 2.29 | 2.18 | 11 | - | - | - | .10 | 0,1 | .7 | .09

0.82 | 0.64 | 18 | 2.09 | 1.75 | 34 | 2.32 | 2.13 | 19 | - | - | - | .29 |
6 | 10 | 5 | 7.3 | .20

0.90 | 0.54 | 36 | 2.00 | 1.67 | 33 | 2.23 | 2.12 | 11 | - | - | - | .27 | 9,6,
16 | 11.1 | .22

0.74 | 0.54 | 20 | 2.05 | 1.64 | 41 | 2.24 | 2.07 | 17 | - | - | - | .26 |
6 | 15 | 9 | 10.7 |
.21

0.83 | 0.50 | 33 | 2.15 | 1.61 | 54 | 2.48 | 2.05 | 43 | - | - | - | .43 |

10 , 11,0 | 8.6 | .33

0.59 | 0.48 | 11 | 1.99 | 1.58 | 41 | 2.18 | 2.02 | 16 | - | - | - | .23 |
12 , 18, 7 | 13.1 |
.20

0.94 | 0.45 | 49 | 2.33 | 1.57 | 76 | 2.29 | 2.02 | 27 | - | - | - | .51 |
2 , 25, 24 | 20.0 | .38

0.89 | 0.45 | 44 | 2.17 | 1.57 | 60 | 2.26 | 2.02 | 24 | - | - | - | .43 | 1, 17,
19 | 14.7 | .33

0.74 | 0.45 | 29 | 2.09 | 1.58 | 51 | 2.13 | 2.00 | 13 | - | - | - | .31 |
2 , 20, 18 | 15.6 | .25

0.59 | 0.44 | 15 | 1.84 | 1.58 | 26 | - | - | - | - | - | .20 | 5
6 | 5.5 | .17

~~0.93~~ | 0.44 | ~~0.44~~ | 49 | 1.94 | 1.57 | 37 |
2.28 | 1.98 | 30 | - | - | - | .39 | 10, 2, 9 | 6.9 |
.30

0.82 | 0.42 | 38 | 2.05 | 1.56 | 50 | 2.38 | 1.96 | 42 | - | - | - | .43 |
5, 7, 1 | 5 | .33

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[[preprinted]] 4 [[/preprinted]]

Measures

[[table 10 columns, 4 headline columns]]

[[/headline]] Aperture 1 | Aperture 3 | Aperture 5 | Aperture 7

[[/headline]]

| n | m+n | n | m+n | n | m+n | n | m+n

31	4048	24.3	25.9	11.2	14.8	5.5	7.6	-	-	
32	4050	23.5	25.9	12.5	14.8	5.5	7.8	-	-	
33	4052	-	-	-	-	-	-	-	-	
34	4054	22.5	25.9	9.3	14.9	3.6	8.0	-	-	
35	4057	24.6	25.9	11.1	14.9	4.9	8.0	-	-	
36	4059	24.6	25.9	12.7	14.9	6.0	8.0	-	-	
37	-	-	-	-	-	-	-	-	-	
38	4064	22.1	25.9	10.0	14.9	3.9	8.2	-0.3	2.2	
39	4067	23.8	26.0	11.0	14.9	4.6	8.3	0.3	2.2	
40	4072-4	23.8	26.0	10.9	14.9	4.4	8.7	-0.4	2.2	
41	4078	18.8	26.0	7.5	14.9	2.7	8.9	-0.5	2.2	
42	4083	-	-	-	6.9	9.0	-	-	-	
43	4085	24.8	26.4	12.0	14.9	6.4	9.1	-	-	
44	4087	23.7	26.4	10.7	14.9	5.5	9.2	-	-	
45	4087	23.7	26.4	10.7	14.9	5.5	9.2	-	-	
46	4092	[[arrow down]]	-	-	-	-	-	-	-	
47	4093	[[arrow down]]	25.1	26.3	13.9	14.9	8.2	9.4	0.0	2.2
48	4093	25.5	26.5	14.1	15.0	8.2	9.5	0.7	2.2	
49	4093	24.3	26.7	12.3	[[strikethrough]] 50	[[strikethrough]] 15.1	6.5	9.5	0.0	2.2
50	4098	24.2	26.7	9.0	15.2	4.9	9.5	-0.8	2.1	
51	4101	18.0	26.7	[[strikethrough]] 4.1	[[strikethrough]] 6.8	15.2	2.8	9.6	-1.2	2.0
52	4106	25.0	26.8	13.0	15.4	7.2	9.5	0.4	2.1	
53	4107	23.2	26.8	11.1	15.5	5.9	9.7	-0.9	2.0	
54	4109	-	-	-	-	-	-	-	-	
55	4111	25.2	26.8	14.4	15.6	7.1	9.9	0.4	2.0	
56	4113	-	-	-	8.2	9.9	-	-	-	
57	4115	-	-	-	-	-	-	-	-	
58	4119	23.5	26.8	11.0	15.9	6.8	9.9	-0.7	2.0	
59	4123	23.5	26.8	11.0	15.9	5.3	10.0	0.0	2.0	
60	4128	22.0	26.8	9.5	16.1	4.8	10.1	-0.9	2.0	
61	4132	22.6	26.8	11.1	16.1	5.0	10.1	0.0	2.0	

4

Measures

		Aperture 1		Aperture 3		Aperture 5		Aperture 7	
		n	m+n	n	m+n	n	m+n	n	m+n
31	4048	24.3	25.9	11.2	14.8	5.5	7.6	-	-
32	4050	23.5	25.9	12.5	14.8	5.5	7.8	-	-
33	4052	-	-	-	-	-	-	-	-
34	4054	22.5	25.9	9.3	14.9	3.6	8.0	-	-
35	4057	24.6	25.9	11.1	14.9	4.9	8.0	-	-
36	4059	24.6	25.9	12.7	14.9	6.0	8.0	-	-
37	-	-	-	11.9	14.9	4.6	8.1	-	-
38	4064	22.1	25.9	10.0	14.9	3.9	8.2	-0.3	2.2
39	4067	23.8	26.0	11.0	14.9	4.6	8.3	0.3	2.2
40	4072-4	23.8	26.0	10.9	14.9	4.4	8.7	-0.4	2.2
41	4078	18.8	26.0	7.5	14.9	2.7	8.9	-0.5	2.2
42	4083	-	-	-	-	6.9	9.0	-	-
43	4085	24.8	26.4	12.0	14.9	6.4	9.1	-	-
44	4087	23.7	26.4	10.7	14.9	5.5	9.2	-	-
45	4087	23.7	26.4	10.7	14.9	5.5	9.2	-	-
46	4092	-	-	-	-	-	-	-	-
47	4093	25.1	26.3	13.9	14.9	8.2	9.4	0.0	2.2
48	4093	25.5	26.5	14.1	15.0	8.2	9.5	0.7	2.2
49	4093	24.3	26.7	12.3	15.1	6.5	9.5	0.0	2.2
50	4098	24.2	26.7	9.0	15.2	4.9	9.5	-0.8	2.1
51	4101	18.0	26.7	4.1	15.2	2.8	9.6	-1.2	2.0
52	4106	25.0	26.8	13.0	15.4	7.2	9.5	0.4	2.1
53	4107	23.2	26.8	11.1	15.5	5.9	9.7	-0.9	2.0
54	4109	-	-	-	-	-	-	-	-
55	4111	25.2	26.8	14.4	15.6	7.1	9.9	0.4	2.0
56	4113	-	-	-	-	8.2	9.9	-	-
57	4115	23.5	26.8	11.0	15.9	6.8	9.9	-0.7	2.0
58	4123	23.5	26.8	11.0	15.9	5.3	10.0	0.0	2.0
59	4128	22.0	26.8	9.5	16.1	4.8	10.1	-0.9	2.0
60	4132	22.6	26.8	11.1	16.1	5.0	10.1	0.0	2.0

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[[preprinted]] 6 [[preprinted]]

Measures

[[table 10 columns, 4 headline]]

| | [[headline]] aperture 1 | aperture 3 | aperture 5 | aperture 7
[[/headline]]

	n	m+n	n	m+n	n	m+n	n	m+n		
61	4136	24.0	26.5	13.1	16.1	6.8	10.1	-	-	
62	4139	25.0	26.7	13.9	16.1	7.7	10.2	-	-	
63	4144	22.6	26.8	10.0	16.2	4.6	10.3	-	-	
64		25.8	26.8	-	7.9	10.4	-	-	-	
65	4149	24.8	26.9	11.7	16.2	6.0	10.4	-	-	
66		25.2	26.9	13.3	16.3	8.1	10.5	-	-	
67	4155	24.1	26.9	12.2	16.3	7.1	10.5	-	-	
68	4157	24.0	26.9	12.2	16.4	7.8	10.6	-	-	
69	4162	24.2	26.9	12.7	16.8	5.6	10.7	-	-	
70	4164	25.4	26.9	14.0	16.8	7.1	10.7	-	-	
71	4166	-	-	-	-	-	-	-	-	
92	4167	25.8	27.0	15.0	17.0	7.6	10.7	-	-	
73	4172	21.1	26.8	8.2	17.0	4.7	10.8	-	-	
74	4177	21.3	26.9	9.1	17.1	3.8	10.9	-	-	
75	4182	25.1	27.0	12.0	17.1	6.4	10.9	-	-	
76	4184	24.2	27.0	12.1	17.1	5.2	10.9	-	-	
77	4188	23.4	27.0	11.0	17.2	5.7	11.0	-	-	
78	4191	24.9	27.1	12.8	17.3	8.0	11.0	-	-	
79	4196	25.1	27.1	12.5	17.4	7.0	11.1	-	-	
80	4198	23.3	27.2	10.5	17.6	5.1	11.1	-	-	
81	4202	24.1	27.3	11.5	17.6	6.0	11.1	-	-	
82	4205	23.5	27.4	10.5	17.6	4.5	11.1	-	-	
83	4209	24.8	27.5	13.5	17.6	7.0	11.2	0.4	2.9	
84		24.8	27.5	14.0	17.7	7.4	11.2	0.4	2.9	
85	4215	24.3	27.5	10.6	17.8	5.8	11.2	0.3	3.0	
86	4219	25.4	27.6	14.7	17.9	9.2	11.3	1.1	3.1	
87	4222	26.0	27.8	13.9	17.9	8.0	11.4	0.8	3.1	
88	4225	24.0	27.9	11.0	17.9	5.0	11.5	0.0	3.2	
89	4227	22.3	27.9	10.4	17.9	4.2	11.6	0.0	3.2	
90	4233	24.8	28.0	[[11.6?]]	17.9	6.2	11.7	0.0	3.3	

6		Measured									
		Aperture 1		Aperture 3		Aperture 5		Aperture 7			
		av	max	av	max	av	max	av	max		
61	4136	24.0	26.5	13.1	16.1	6.8	10.1	-	-		
62	4139	25.0	26.7	13.9	16.1	7.7	10.2	-	-		
63	4144	22.6	26.8	10.0	16.2	4.6	10.3	-	-		
64		25.8	26.8	-	-	7.9	10.4	-	-		
65	4149	24.8	26.9	11.7	16.2	6.0	10.4	-	-		
66		25.2	26.9	13.3	16.3	8.1	10.5	-	-		
67	4155	24.1	26.9	12.2	16.3	7.1	10.5	-	-		
68	4157	24.0	26.9	12.2	16.4	7.8	10.6	-	-		
69	4162	24.2	26.9	12.7	16.8	5.6	10.7	-	-		
70	4164	25.4	26.9	14.0	16.8	7.1	10.7	-	-		
71	4166	-	-	-	-	-	-	-	-		
72	4167	25.8	27.0	15.0	17.0	7.6	10.7	-	-		
73	4172	21.1	26.8	8.2	17.0	4.7	10.8	-	-		
74	4177	21.3	26.9	9.1	17.1	3.8	10.9	-	-		
75	4182	25.1	27.0	12.0	17.1	6.4	10.9	-	-		
76	4184	24.2	27.0	12.1	17.1	5.2	10.9	-	-		
77	4188	23.4	27.0	11.0	17.2	5.7	11.0	-	-		
78	4191	24.9	27.1	12.8	17.3	8.0	11.0	-	-		
79	4196	25.1	27.1	12.5	17.4	7.0	11.1	-	-		
80	4198	23.3	27.2	10.5	17.6	5.1	11.1	-	-		
81	4202	24.1	27.3	11.5	17.6	6.0	11.1	-	-		
82	4205	23.5	27.4	10.5	17.6	4.5	11.1	-	-		
83	4209	24.8	27.5	13.5	17.6	7.0	11.2	0.4	2.9		
84		24.8	27.5	14.0	17.7	7.4	11.2	0.4	2.9		
85	4215	24.3	27.5	10.6	17.8	5.8	11.2	0.3	3.0		
86	4219	25.4	27.6	14.7	17.9	9.2	11.3	1.1	3.1		
87	4222	26.0	27.8	13.9	17.9	8.0	11.4	0.8	3.1		
88	4225	24.0	27.9	11.0	17.9	5.0	11.5	0.0	3.2		
89	4227	22.3	27.9	10.4	17.9	4.2	11.6	0.0	3.2		
90	4233	24.8	28.0	[[11.6?]]	17.9	6.2	11.7	0.0	3.3		

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Ap. 1 [n] | Ap. 1 [m+n] | Ap. 1 m | Ap. 3 [n] | Ap. 3 [m+n] | Ap. 3 m | Ap. 5 [n] | Ap. 5 [m+n] | Ap. 5 m | Ap. 7 [n] | Ap. 7 [m+n] | Ap. 7 m | Mean m | Residuals .01m | .01m | dl %

0.64 | 0.37 | 27 | 1.74 | 1.44 | 30 | 2.01 | 1.74 | 27 | - | - | - | .28 | 1,2,1 | 1.4 | .23

0.54 | 0.35 | 19 | 1.65 | 1.44 | 21 | 1.94 | 1.73 | 21 | - | - | - | .20 | 1,1,1 | 1 | .17

0.77 | 0.33 | 44 | 2.04 | 1.43 | 61 | 2.23 | 1.72 | 51 | - | - | - | .52 | 8,9,1 | 6.9 | .38

0.47 | 0.33 | 14 | - | - | - | 1.92 | 1.71 | 21 | - | - | - | .17 | 3,4 | 3.6 | .15

0.55 | 0.32 | 23 | 1.87 | 1.43 | 44 | 2.10 | 1.71 | 39 | - | - | - | .35 | 12,9,4 | 8.0 | .28

0.52 | 0.32 | 31 | 1.83 | 1.42 | 41 | 1.99 | 1.70 | 29 | - | - | - | .34 | 3,7,5 | 5.2 | .27

0.64 | 0.32 | 32 | 1.83 | 1.41 | 42 | 1.93 | 1.69 | 24 | - | - | - | .32 | 0,10,8 | 7.4 | .26

0.63 | 0.32 | 31 | 1.78 | 1.37 | 27 | 1.99 | 1.68 | 31 | - | - | - | .25 | 7,2,6 | 5.4 | .21

- | - | - | - | - | - | - | - | - | - | - | - | - | - | -

0.45 | 0.31 | 14 | 1.54 | 1.36 | 18 | 1.95 | 1.68 | 27 | - | - | - | .20 | 6,2,7 | 5.4 | .17

0.89 | 0.32 | 57 | 2.23 | 1.36 | 87 | 2.22 | 1.66 | 64 | - | - | - | .66 | 11,12,2 | 9.4 | .46

0.53 | 0.31 | 22 | 1.84 | 1.35 | 49 | 2.95 | 1.66 | 39 | - | - | - | .37 | 15,12,2 | 11.1 | .29

0.63 | 0.31 | 32 | 1.89 | 1.35 | 48 | 2.16 | 1.66 | 50 | - | - | - | .43 | 11,5,2 | 7.0 | .33

0.71 | 0.31 | 40 | 1.94 | 1.34 | 60 | 2.12 | 1.65 | 47 | - | - | - | .49 | 7,11,2 | 7.6 | .36

0.55 | 0.30 | 25 | 1.76 | 1.33 | 43 | 93 ~~1.86~~ ~~1.65~~ | 28 | - | - | - | .32 | 7,11,4 | 7.8 | .26

0.53 | 0.30 | 23 | 1.79 | 1.32 | 47 | 2.00 | 1.65 | 35 | - | - | - | .35 | 12,12,0 | 9.7 | .28

0.71 | 0.28 | 43 | 1.99 | 1.30 | 69 | 2.17 | 1.65 | 52 | - | - | - | .55 | 12,14,3 | 10.7 | .40

0.63 | 0.26 | 37 | 1.89 | 1.30 | 59 | 2.09 | 1.65 | 44 | - | - | - | .47 | 10,12,3 | 9.1 | .35

0.69 | 0.25 | 44 | 1.99 | 1.30 | 69 | 2.23 | 1.65 | 58 | - | - | - | .56 | 12,13,2 | 10.2 | .40

0.55 | 0.24 | 31 | 1.70 | 1.30 | 40 | 2.00 | 1.35 | 35 | 3.15 | 2.80 | 35 | .35 | 4,5,0 | 3.7 | .28

0.55 | 0.24 | 31 | 1.64 | 1.29 | 35 | 1.13 | 1.65 | 48 | 3.15 | 2.80 | 35 | .37 | 6,2,11,2 | 6.4 | .29

0.61 | 0.23 | 38 | 1.98 | 1.27 | 71 | 2.10 | 1.65 | 45 | 3.17 | 2.79 | 38 | .48 | 10,23,3,10 | 13.6 | .36

0.37 ~~0.44~~ ~~0.22~~ ~~0.17~~ | 15 | 1.57 ~~2~~ | 31 | 1.82 | 1.63 | 19 | 3.05 | 2.78 | 27 | .23 | 8,8,4,4 | 6.3 | .26

0.44 ~~0.64~~ ~~0.17~~ ~~0.17~~ | 27 | 1.65 | 1.26 | 39 | 1.92 | 1.63 | 29 | 3.07 | 2.78 | 29 | .31 | 4,8,2,2 | 5.1 | .25

0.64 ~~0.80~~ ~~0.17~~ | 47 | 1.94 | 1.26 | 68 | 2.18 | 1.62 | 56 | 3.22 | 2.76 | 46 | .54 | 7,14,2,8 | 8.8 | .34

0.80 | 0.17 | 63 | 2.00 | 1.26 | 74 | 2.27 | 1.61 | 66 | 3.22 | 2.76 | 46 | .62 | 1,12,4,16 | 10.1 | .44

0.55 | 0.17 | 38 | 1.78 | 1.26 | 62 | 2.07 | 1.60 | 47 | 3.22 | 2.75 | 47 | .48 | 10,14,1,1 | 8.6 | .36

Reductions

7

Ap. 1			Ap. 3			Ap. 5			Ap. 7			Mean	Residuals	μ	dl
[n]	[m+n]	Δm	[n]	[m+n]	Δm	[n]	[m+n]	Δm	[n]	[m+n]	Δm	Δm	Δm	Δm	Δm
0.64	0.37	27	1.74	1.44	30	2.01	1.74	27	-	-	-	.28	1,2,1	1.9	.43
0.54	0.33	19	1.65	1.44	21	1.94	1.73	21	-	-	-	.20	1,1,1	1	.17
0.77	0.33	44	2.04	1.43	61	2.23	1.72	51	-	-	-	.52	8,9,1	6.9	.58
0.47	0.33	14	-	-	-	1.92	1.71	21	-	-	-	.17	2,4	2.6	.15
0.55	0.32	23	1.87	1.42	44	2.10	1.71	39	-	-	-	.35	12,9,4	6.9	.28
0.52	0.32	20	1.66	1.42	24	1.90	1.70	20	-	-	-	.32	3,2,3	2	.18
0.63	0.32	31	1.83	1.42	41	1.99	1.70	29	-	-	-	.34	3,7,5	5.2	.23
0.64	0.32	32	1.83	1.41	42	1.93	1.69	24	-	-	-	.32	0,10,8	7.7	.24
0.63	0.32	31	1.78	1.37	41	2.13	1.68	45	-	-	-	.39	8,2,6	5.9	.33
0.50	0.25	14	1.41	1.27	27	1.89	1.68	31	-	-	-	.25	7,2,6	5.4	.21
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.45	0.34	14	1.64	1.36	18	1.95	1.68	27	-	-	-	.20	6,2,7	5.4	.17
0.89	0.32	57	2.23	1.34	87	2.22	1.69	55	-	-	-	.66	9,2,11	14.6	.61
0.53	0.32	55	2.01	1.35	78	2.00	1.66	64	-	-	-	.46	11,12,3	9.4	.44
0.52	0.31	22	1.89	1.35	49	2.05	1.66	39	-	-	-	.37	15,12,2	11.1	.21
0.63	0.31	32	1.83	1.35	48	2.16	1.66	50	-	-	-	.43	11,5,2	7.0	.33
0.71	0.31	40	1.94	1.34	60	2.12	1.65	47	-	-	-	.49	7,11,2	7.6	.34
0.55	0.30	25	1.76	1.33	43	1.86	1.65	28	-	-	-	.32	7,11,4	7.1	.25
0.53	0.30	23	1.79	1.32	47	2.00	1.65	35	-	-	-	.35	12,12,0	7.7	.27
0.71	0.28	43	1.99	1.30	69	2.17	1.65	52	-	-	-	.55	12,14,2	10.7	.49
0.63	0.26	37	1.89	1.30	59	2.09	1.65	44	-	-	-	.47	10,12,3	9.1	.35
0.69	0.25	44	1.99	1.28	69	2.23	1.65	58	-	-	-	.56	12,13,2	10.2	.48
0.55	0.24	31	1.70	1.30	40	2.00	1.65	35	3.15	2.80	35	.35	4,5,0	2.7	.27
0.55	0.24	31	1.64	1.29	35	1.13	1.65	48	3.15	2.80	35	.37	6,2,11,2	6.4	.47
0.61	0.23	38	1.98	1.27	71	2.10	1.65	45	3.17	2.79	38	.48	10,23,3,10	13.6	.36
0.37	0.22	15	1.57	1.24	31	1.82	1.63	19	3.05	2.78	27	.23	3,8,1,4	6.3	.16
0.44	0.21	27	1.65	1.24	39	1.92	1.63	29	3.07	2.78	29	.24	1,8,2,3	5.1	.17
0.64	0.20	47	1.94	1.26	68	2.18	1.62	56	3.22	2.76	46	.54	1,12,4,2	8.8	.31
0.80	0.17	63	2.00	1.26	74	2.27	1.61	66	3.22	2.76	46	.62	1,12,4,16	12.1	.50
0.55	0.17	38	1.78	1.26	62	2.07	1.60	47	3.22	2.75	47	.48	10,14,1,1	8.6	.29

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[[preprinted]] 8 [[/preprinted]] Measures

[[10 column table]]

	Aperture 1 n	Aperture 1 m+n	Aperture 3 n	Aperture 3 m+n	Aperture 5 n	Aperture 5 m+n	Aperture 7 n	Aperture 7 m+n	
91	4235	25.5	28.0	13.4	18.0	7.1	11.7	1.1	3.4
92	4239	26.0	28.0	13.8	18.0	7.9	11.7	0.9	3.5
93		27.0	28.0	15.0	18.0	9.9	11.8	1.5	3.6
94	4243	25.0	28.0	12.4	18.1	5.0	11.9	0.3	3.8
95	4247	26.0	28.1	13.9	18.2	7.5	11.9	1.6	3.9
96	4250	25.9	27.2	14.9	18.2	8.9	11.9	1.6	3.9
97	4258	26.2	25.9	14.5	18.2	8.0	12.0	1.9	3.9
98	4260	24.6	28.4	26.2	28.1	14.0	18.3	8.2	12.0
99	4272	26.7	28.5	12.5	18.6	7.8	12.1	1.8	4.0
100	4274	27.1	28.6	15.4	18.7	8.9	12.2	0.1	4.0
101		-	-	-	-	-	-	-	-
102		-	-	-	-	-	-	-	-
103		27.9	28.6	16.2	18.8	-	2.3	4.1	
104	4283	27.2	28.7	15.9	18.8	-	2.8	4.1	
105	4288	27.0	28.9	13.6	18.9	-	-	-	
106	4290	24.4	28.9	11.2	18.9	5.4	12.5	0.8	4.2
107	4294	27.0	29.0	14.3	18.9	8.0	12.6	1.6	4.4
108	4296	27.2	29.0	15.2	18.9	9.4	12.7	2.0	4.4
109	4299	24.5	29.0	10.9	18.9	5.0	12.8	0.3	4.4
110	4300	25.0	29.0	11.9	18.9	5.6	12.8	1.0	4.6
111	4306	27.2	29.1	14.1	18.9	8.0	12.8	1.7	4.7
112	4808. 4809	27.1	29.2	18.9	19.0	7.6	12.8	1.8	4.8
113	4315	25.9	29.2	11.3	19.0	5.8	12.9	1.1	4.9
114		-	17.3	19.0	11.0	12.9	2.6	5.0	
115	4821	27.9	29.3	15.9	19.1	9.0	12.9	2.5	5.1
116	4326	26.7	29.4	12.8	19.1	7.0	13.0	1.6	5.1
117	4381	28.1	29.5	15.0	19.1	8.6	13.0	3.0	5.2
118	4334	28.4	29.6	16.0	19.1	10.0	13.1	2.6	5.2
119	4337	24.6	29.6	9.9	19.2	4.0	13.1	0.9	5.2
120	4340	22.2	29.7	7.4	19.2	2.8	13.1	0.2	5.2

8

Measures

		Aperture 1		Aperture 3		Aperture 5		Aperture 7		
		n	m+n	n	m+n	n	m+n	n	m+n	
91	4235	25.5	28.0	13.4	18.0	7.1	11.7	1.1	3.4	
92	4239	26.0	28.0	13.8	18.0	7.9	11.7	0.9	3.5	
93		25.0	28.0	15.0	18.0	9.9	11.8	1.5	3.6	
94	4243	25.0	28.0	12.4	18.1	5.0	11.9	0.3	3.8	
95	4247	26.0	28.1	13.9	18.2	7.5	11.9	1.6	3.9	
96	4250	25.9	27.2	14.9	18.2	8.9	11.9	1.6	3.9	
97	4258	26.2	28.1	14.5	18.2	8.0	12.0	1.9	3.9	
98	4260	24.6	28.4	26.2	28.1	14.0	18.3	8.2	12.0	
99	4272	26.7	28.5	12.5	18.6	7.8	12.1	1.8	4.0	
100	4274	27.1	28.6	15.4	18.7	8.9	12.2	0.1	4.0	
101		-	-	-	-	-	-	-	-	
102		-	-	-	-	-	-	-	-	
103		27.9	28.6	16.2	18.8	-	-	2.3	4.1	
104	4283	27.2	28.7	15.9	18.8	-	-	2.8	4.1	
105	4288	27.0	28.9	13.6	18.9	-	-	-	-	
106	4290	24.4	28.9	11.2	18.9	5.4	12.5	0.8	4.2	
107	4294	27.0	29.0	14.3	18.9	8.0	12.6	1.6	4.4	
108	4296	27.2	29.0	15.2	18.9	9.4	12.7	2.0	4.4	
109	4299	24.5	29.0	10.9	18.9	5.0	12.8	0.3	4.4	
110	4300	25.0	29.0	11.9	18.9	5.6	12.8	1.0	4.6	
111	4306	27.2	29.1	14.1	18.9	8.0	12.8	1.7	4.7	
112	4308 4309 4315	27.1	29.2	18.9	19.0	7.6	12.8	1.8	4.8	
113		28.9	29.2	11.3	19.0	5.8	12.9	1.1	4.9	
114		-	-	19.0	19.0	11.0	12.9	2.6	5.0	
115	4821	27.9	29.3	15.9	19.1	9.0	12.9	2.5	5.1	
116	4326	26.7	29.4	12.8	19.1	7.0	13.0	1.6	5.1	
117	4381	28.1	29.5	15.0	19.1	8.6	13.0	3.0	5.2	
118	4334	28.4	29.6	16.0	19.1	10.0	13.1	2.6	5.2	
119	4337	24.6	29.6	9.9	19.2	4.0	13.1	0.9	5.2	
120	4340	22.2	29.7	7.4	19.2	2.8	13.1	0.2	5.2	

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Measures

[[table 10 columns, 4 headline columns]]

[[headline]]									
[[headline]]		Aperture 1		Aperture 3		Aperture 5		Aperture 7	
[[headline]]		n	m+n	n	m+n	n	m+n	n	m+n
121	4344	27.0	29.8						
122	4345	27.0	29.9	17.1	19.2	10.5	13.1	3.7	5.7
123	4352	27.0	29.9	17.1	19.2	10.5	13.1	3.7	5.7
124		28.7	30.0	17.0	19.4	10.9	13.1	3.7	5.9
125	4359	28.5	30.0	15.8	19.4	8.2	13.1	3.1	5.9
126		-	-	18.2	19.4	11.4	13.2	4.1	5.9
127	4367	27.8	30.0	15.7	19.4	8.8	13.2	3.0	5.9
128	4375	27.0	30.0	13.0	19.4	6.8	13.2	0.9	5.9
129	4384	26.2	30.1	11.0	19.6	5.9	13.2	1.5	6.0
130	4391	29.0	30.1	16.4	19.7	10.0	13.3	3.0	6.0
131	4395	28.0	30.1	14.3	19.8	8.3	13.4	2.1	6.0
132	4400	27.1	30.1	13.6	19.8	7.0	13.5	1.4	6.1
133	4405	29.2	30.1	17.2	19.9	11.2	13.5	3.7	6.1
134	4408	28.3	30.1	15.6	19.9	8.2	13.6	2.0	6.1
135	4415	28.0	30.1	14.0	19.9	7.4	13.7	2.3	6.2
136	4416	27.6	30.1	13.0	19.9	7.5	13.7	1.7	6.3
137	4423	29.0	30.2	16.1	19.9	10.0	13.8	2.7	6.3
138	4427	29.3	30.2	17.3	20.0	10.1	13.8	4.0	6.3
139	4430	29.3	30.2	16.1	20.0	9.9	13.8	3.1	6.5
140	4435	28.8	30.2	15.6	20.0	9.5	13.9	2.9	6.5
141	4444	27.1	30.4	12.3	20.0	7.0	14.0	2.0	6.6
142	4450	29.2	30.4	16.5	20.0	9.9	14.1	3.3	6.8
143	4455	28.8	30.4	15.8	20.2	8.6	14.1	4.3	6.8
144	4459	29.0	30.4	16.5	20.2	9.9	14.1	3.3	6.8
145	4462	29.0	30.5	15.8	20.2	9.9	14.1	3.5	6.9
146	4467	29.5	30.5	15.0	20.2	8.4	14.2	5.2	7.0
147	4467	28.6	30.6	15.0	20.2	8.4	14.2	5.2	7.0
148	4482	30.0	30.6	16.7	20.2	10.8	14.2	5.2	7.0
149	4482	29.2	30.6	16.0	20.2	9.8	14.5	3.5	7.0
150	4495	29.5	30.6	16.6	20.2	9.6	14.7	3.0	7.0

10		Measured							
		Aperture 1		Aperture 3		Aperture 5		Aperture 7	
121	4344	27.0	29.8	19.0	19.2	7.5	13.1	1.6	5.5
122	4345	27.1	29.9	19.1	19.2	7.5	13.1	3.7	5.7
123	4352	27.0	29.9	19.2	19.3	7.7	13.0	1.3	5.7
124		27.7	30.0	19.0	19.4	7.9	13.1	3.7	5.9
125	4359	28.5	30.0	15.5	19.4	5.2	13.1	3.1	5.9
126		-	-	18.2	19.4	11.4	13.2	4.1	5.9
127	4367	27.8	30.0	15.7	19.4	8.8	13.2	3.0	5.9
128	4375	27.0	30.0	13.0	19.4	6.8	13.2	0.9	5.9
129	4384	26.2	30.1	11.0	19.6	5.9	13.2	1.5	6.0
130	4391	29.0	30.1	16.4	19.7	10.0	13.3	3.0	6.0
131	4395	28.0	30.1	14.3	19.8	8.3	13.4	2.1	6.0
132	4400	27.1	30.1	13.6	19.8	7.0	13.5	1.4	6.1
133	4405	29.2	30.1	17.2	19.9	11.2	13.5	3.7	6.1
134	4408	28.3	30.1	15.6	19.9	8.2	13.6	2.0	6.1
135	4415	28.0	30.1	14.0	19.9	7.4	13.7	2.3	6.2
136	4416	27.6	30.1	13.0	19.9	7.5	13.7	1.7	6.3
137	4423	29.0	30.2	16.1	19.9	10.0	13.8	2.7	6.3
138	4427	29.3	30.2	17.3	20.0	10.1	13.8	4.0	6.3
139	4430	29.3	30.2	16.1	20.0	9.9	13.8	3.1	6.5
140	4435	28.8	30.2	15.6	20.0	9.5	13.9	2.9	6.5
141	4444	27.1	30.4	12.3	20.0	7.0	14.0	2.0	6.6
142	4450	29.2	30.4	16.5	20.0	9.9	14.1	3.3	6.8
143	4455	28.8	30.4	15.8	20.2	8.6	14.1	4.3	6.8
144	4459	29.0	30.4	16.5	20.2	9.9	14.1	3.3	6.8
145	4462	29.0	30.5	15.8	20.2	9.9	14.1	3.5	6.9
146	4467	29.5	30.5	15.0	20.2	8.4	14.2	5.2	7.0
147	4467	28.6	30.6	15.0	20.2	8.4	14.2	5.2	7.0
148	4482	30.0	30.6	16.7	20.2	10.8	14.2	5.2	7.0
149	4482	29.2	30.6	16.0	20.2	9.8	14.5	3.5	7.0
150	4495	29.5	30.6	16.6	20.2	9.6	14.7	3.0	7.0

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Reductions

Aperture 1	Aperture 3	Aperture 5	Aperture 7	Mean
Residuals	al			
[n] | [m+n] | m | [n] | [m+n] | m | [n] | [m+n] | m | [n] | [m+n] | m | m |				
.01m | .01^[[m]]%				
0.31 | -0.22 | 53 | 1.64 | 1.15 | 49 | 1.96 | 1.49 | 47 | 2.96 | 2.52 | 44 | .48				
| 5, 1, 1, 4 | 3.3 | .36				
0.05 | -0.25 | 30 | 1.35 | 1.15 | 20 | 1.70 | 1.49 | 21 | 2.70 | 2.48 | 22 | .23				
| 7, 3, 2, 1 | 4 | .19				
0.31 | -0.25 | 56 | 1.72 | 1.14 | 58 | 2.13 | 1.50 | 63 | 3.00 | 2.48 | 52 | .57				
| 1, 1, 6, 5 | 4 | .41				
0.05 | -0.27 | 32 | 1.36 | 1.13 | 23 | 1.66 | 1.49 | 17 | 2.70 | 2.46 | 24 | .24				
| 8, 1, 7, 0 | 5.3 | .20				
0.09 | -0.27 | 36 | 1.46 | 1.13 | 33 | 1.90 | 1.49 | 41 | 2.78 | 2.46 | 32 | .36				
| 0, 3, 5, 4 | 3.6 | .28				
- | - | - | 1.25 | 1.13 | 12 | 1.62 | 1.48 | 14 | 2.65 | 2.46 | 19 | .15 | 3,				
1, 4 | - | 3 | .13				
0.20 | -0.27 | 47 | 1.48 | 1.13 | 35 | 1.82 | 1.48 | 34 | 2.79 | 2.46 | 33 | .37				
| 10, 2, 3, 4 | 5.6 | .29				
0.31 | -0.27 | 58 | 1.75 | 1.13 | 62 | 2.01 | 1.48 | 53 | 3.07 | 2.46 | 61 | .58				
| 0, 4, 5, 3 | 3.6 | .41				
0.42 | -0.28 | 70 | 1.94 | 1.11 | 83 | 2.10 | 1.48 | 62 | 2.98 | 2.45 | 53 | .67				
| 3, 16, 5, 14 | 11.0 | .46				
-0.02 | -0.28 | 26 | 1.41 | 1.10 | 31 | 1.75 | 1.47 | 28 | 2.79 | 2.45 | 34 | .30				
| 4, 1, 2, 4 | 3 | .24				
0.17 | -0.28 | 45 | 1.61 | 1.09 | 52 | 1.85 | 1.47 | 38 | 2.90 | 2.45 | 45 | .45				
| 0, 7, 7, 0 | 5 | .34				
0.30 | -0.28 | 58 | 1.68 | 1.08 | 60 | 2.00 | 1.46 | 54 | 3.00 | 2.44 | 56 | .57				
| 1, 3, 3, 1 | 2.2 | .41				
-0.07 | -0.28 | 21 | 1.34 | 1.08 | 26 | 1.63 | 1.46 | 17 | 2.70 | 2.44 | 26 | .22				
| 1, 5, 5, 4 | 3.8 | .18				
0.12 | -0.28 | 40 | 1.48 | 1.08 | 40 | 1.89 | 1.45 | 44 | 2.85 | 2.44 | 41 | .41				
| 1, 1, 3, 0 | 1.7 | .31				
0.17 | -0.28 | 45 | 1.64 | 1.08 | 46 | 1.97 | 1.44 | 53 | 2.87 | 2.43 | 44 | .47				
| 2, 1, 6, 3 | 3.6 | .35				
0.23 | -0.28 | 51 | 1.75 | 1.08 | 67 | 1.96 | 1.44 | 52 | 2.95 | 2.42 | 53 | .56				
| 5, 11, 4, 3 | 6.5 | .40				
-0.02 | -0.30 | 28 | 1.44 | 1.08 | 36 | 1.75 | 1.43 | 32 | 2.83 | 2.42 | 41 | .34				
| 6, 2, 2, 7 | 4.7 | .27				
-0.10 | -0.30 | 20 | 1.33 | 1.07 | 26 | 1.74 | 1.43 | 31 | 2.67 | 2.42 | 25 | .26				
| 6, 0, 5, 1 | 4 | .21				
-0.10 | -0.30 | 20 | 1.44 | 1.07 | 37 | 1.76 | 1.43 | 33 | 2.78 | 2.40 | 38 | .32				
| 12, 7, 1, 6 | 7.6 | .26				
0.01 | -0.30 | 31 | 1.48 | 1.07 | 41 | 1.79 | 1.43 | 36 | 2.80 | 2.40 | 40 | .37				
| 6, 4, 1, 3 | 4 | .29				
0.30 | -0.37 | 67 | 1.82 | 1.07 | 75 | 2.00 | 1.42 | 58 | 2.91 | 2.39 | 52 | .63				
| 4, 12, 5, 11 | 8.7 | .44				
-0.07 | -0.37 | 30 | 1.41 | 1.07 | 34 | 1.76 | 1.42 | 34 | 2.75 | 2.36 | 39 | .34				
| 4, 0, 0, 5 | 3.1 | .27				
0.01 | -0.37 | 38 | 1.46 | 1.05 | 41 | 1.86 | 1.42 | 44 | 2.82 | 2.36 | 46 | .42				
| 4, 1, 2, 4 | 3 | .32				
-0.02 | -0.37 | 35 | 1.41 | 1.05 | 36 | 1.74 | 1.42 | 32 | 2.63 | 2.36 | 27 | .32				
| 3, 4, 0, 5 | 3.6 | .26				
-0.02 | -0.40 | 38 | 1.46 | 1.05 | 41 | 1.76 | 1.42 | 34 | 2.73 | 2.36 | 37 | .38				
| 0, 3, 4, 1 | 2.6 | .30				
-0.15 | -0.40 | 25 | 1.54 | 1.05 | 49 | 1.65 | 1.41 | 24 | 2.78 | 2.36 | 42 | .35				
| 10, 14, 11, 7 | 11.9 | .28				

Reductions

11

Aperture 1	Aperture 3	Aperture 5	Aperture 7	Mean	Residuals	μ	σ
[n] | [m+n] | m | [n] | [m+n] | m | [n] | [m+n] | m | [n] | [m+n] | m | m |							
.01m | .01^[[m]]%							
0.31 | -0.22 | 53 | 1.64 | 1.15 | 49 | 1.96 | 1.49 | 47 | 2.96 | 2.52 | 44 | .48							
| 5, 1, 1, 4 | 3.3 | .36							
0.05 | -0.25 | 30 | 1.35 | 1.15 | 20 | 1.70 | 1.49 | 21 | 2.70 | 2.48 | 22 | .23							
| 7, 3, 2, 1 | 4 | .19							
0.31 | -0.25 | 56 | 1.72 | 1.14 | 58 | 2.13 | 1.50 | 63 | 3.00 | 2.48 | 52 | .57							
| 1, 1, 6, 5 | 4 | .41							
0.05 | -0.27 | 32 | 1.36 | 1.13 | 23 | 1.66 | 1.49 | 17 | 2.70 | 2.46 | 24 | .24							
| 8, 1, 7, 0 | 5.3 | .20							
0.09 | -0.27 | 36 | 1.46 | 1.13 | 33 | 1.90 | 1.49 | 41 | 2.78 | 2.46 | 32 | .36							
| 0, 3, 5, 4 | 3.6 | .28							
- | - | - | 1.25 | 1.13 | 12 | 1.62 | 1.48 | 14 | 2.65 | 2.46 | 19 | .15 | 3,							
1, 4 | - | 3 | .13							
0.20 | -0.27 | 47 | 1.48 | 1.13 | 35 | 1.82 | 1.48 | 34 | 2.79 | 2.46 | 33 | .37							
| 10, 2, 3, 4 | 5.6 | .29							
0.31 | -0.27 | 58 | 1.75 | 1.13 | 62 | 2.01 | 1.48 | 53 | 3.07 | 2.46 | 61 | .58							
| 0, 4, 5, 3 | 3.6 | .41							
0.42 | -0.28 | 70 | 1.94 | 1.11 | 83 | 2.10 | 1.48 | 62 | 2.98 | 2.45 | 53 | .67							
| 3, 16, 5, 14 | 11.0 | .46							
-0.02 | -0.28 | 26 | 1.41 | 1.10 | 31 | 1.75 | 1.47 | 28 | 2.79 | 2.45 | 34 | .30							
| 4, 1, 2, 4 | 3 | .24							
0.17 | -0.28 | 45 | 1.61 | 1.09 | 52 | 1.85 | 1.47 | 38 | 2.90 | 2.45 | 45 | .45							
| 0, 7, 7, 0 | 5 | .34							
0.30 | -0.28 | 58 | 1.68 | 1.08 | 60 | 2.00 | 1.46 | 54 | 3.00 | 2.44 | 56 | .57							
| 1, 3, 3, 1 | 2.2 | .41							
-0.07 | -0.28 | 21 | 1.34 | 1.08 | 26 | 1.63 | 1.46 | 17 | 2.70 | 2.44 | 26 | .22							
| 1, 5, 5, 4 | 3.8 | .18							
0.12 | -0.28 | 40 | 1.48 | 1.08 | 40 | 1.89 | 1.45 | 44 | 2.85 | 2.44 | 41 | .41							
| 1, 1, 3, 0 | 1.7 | .31							
0.17 | -0.28 | 45 | 1.64 | 1.08 | 46 | 1.97 | 1.44 | 53 | 2.87 | 2.43 | 44 | .47							
| 2, 1, 6, 3 | 3.6 | .35							
0.23 | -0.28 | 51 | 1.75 | 1.08 | 67 | 1.96 | 1.44 | 52 | 2.95 | 2.42 | 53 | .56							
| 5, 11, 4, 3 | 6.5 | .40							
-0.02 | -0.30 | 28 | 1.44 | 1.08 | 36 | 1.75 | 1.43 | 32 | 2.83 | 2.42 | 41 | .34							
| 6, 2, 2, 7 | 4.7 | .27							
-0.10 | -0.30 | 20 | 1.33 | 1.07 | 26 | 1.74 | 1.43 | 31 | 2.67 | 2.42 | 25 | .26							
| 6, 0, 5, 1 | 4 | .21							
-0.10 | -0.30 | 20 | 1.44 | 1.07 | 37 | 1.76 | 1.43 | 33 | 2.78 | 2.40 | 38 | .32							
| 12, 7, 1, 6 | 7.6 | .26							
0.01 | -0.30 | 31 | 1.48 | 1.07 | 41 | 1.79 | 1.43 | 36 | 2.80 | 2.40 | 40 | .37							
| 6, 4, 1, 3 | 4 | .29							
0.30 | -0.37 | 67 | 1.82 | 1.07 | 75 | 2.00 | 1.42 | 58 | 2.91 | 2.39 | 52 | .63							
| 4, 12, 5, 11 | 8.7 | .44							
-0.07 | -0.37 | 30 | 1.41 | 1.07 | 34 | 1.76 | 1.42 | 34 | 2.75 | 2.36 | 39 | .34							
| 4, 0, 0, 5 | 3.1 | .27							
0.01 | -0.37 | 38 | 1.46 | 1.05 | 41 | 1.86 | 1.42 | 44 | 2.82 | 2.36 | 46 | .42							
| 4, 1, 2, 4 | 3 | .32							
-0.02 | -0.37 | 35 | 1.41 | 1.05 | 36 | 1.74 | 1.42 | 32 | 2.63 | 2.36 | 27 | .32							
| 3, 4, 0, 5 | 3.6 | .26							
-0.02 -0.40 38 1.46 1.05 41 1.76 1.42 34 2.73 2.36 37 .38							
0, 3, 4, 1 2.6 .30							
-0.15 -0.40 25 1.54 1.05 49 1.65 1.41 24 2.78 2.36 42 .35							
10, 14, 11, 7 11.9 .28							

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0.07	-0.43	50	1.54	1.05	49	1.88	1.41	47	2.70	2.36	34	.45
5, 4, 2, 11	6.4	.34										
-0.27	-0.43	16	1.38	1.05	33	1.67	1.41	26	2.53	2.35	18	.23
7, 10, 3, 5	6.7	.19										
-0.07	-0.43	36	1.44	1.05	39	1.76	1.39	37	2.73	2.35	28	.38
2, 1, 1, 0	1.4	.30										
-0.15	-0.43	28	1.40	1.05	35	1.78	1.37	41	2.79	2.35	44	.37
0, 2, 4, 7	6.1	.29										

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Measures

		Aperture 1		Aperture 3		Aperture 5		Aperture 7		
		[n]	[m+n]	[n]	[m+n]	[n]	[m+n]	[n]	[m+n]	
151	4495	29.9	30.6	17.0	20.2	11.7	14.7	3.6	7.1	
152	4501	29.9	30.6	17.0	20.3	11.7	14.8	3.6	7.1	
153	4508	30.2	30.6	18.2	20.5	-	-	4.9	7.1	
154	4515	30.1	30.6	18.1	20.5	12.0	14.8	4.9	7.2	
155	-	29.9	30.6	17.5	20.6	11.1	14.9	3.6	7.2	
156	4528	29.6	30.6	16.3	20.7	11.0	15.0	3.0	7.2	
157	4534	-?	-?	16.3	20.8	10.2	15.0	3.1	7.2	
158	4541	30.0	30.7	18.9	20.9	12.2	15.1	4.9	7.2	
159	4544	30.0	30.7	18.4	20.9	12.2	15.2	4.9	7.2	
160	4550	29.6	30.7	16.1	20.9	11.1	15.2	3.7	7.3	
161	4554	29.4	30.7	15.1	20.9	10.1	15.3	3.2	7.3	
162	-	-	-	19.0	20.9	13.9	15.4	5.6	7.3	
163	-	30.3	30.6	-	-	-	-	-	-	
164	4564	29.8	30.7	17.5	20.9	12.0	15.4	4.0	7.3	
165	4572	30.0	30.7	18.0	20.9	12.0	15.5	5.1	7.3	
166	4576	-	-	19.3	20.9	14.0	15.6	6.0	7.3	
167	4581	30.0	30.9	18.2	20.9	11.7	15.7	6.1	7.3	
168	4584	29.1	30.8	16.4	20.9	10.1	15.7	3.0	7.3	
169	4616	29.0	30.6	17.5	20.9	11.9	15.2	3.7	7.1	
170	4635	29.0	30.0	19.0	20.9	12.1	15.0	3.7	6.2	
171	4646	29.2	29.8	18.0	20.9	11.2	14.9	3.5	6.1	
172	4666	29.0	29.8	19.0	20.9	11.6	14.6	1.4	6.0	
173	-	-	-	-	-	-	-	-	-	
174	-	-	-	-	-	-	-	-	-	
175	-	-	-	-	-	-	-	-	-	
176	-	-	-	-	-	-	-	-	-	
177	4765	28.0	29.1	17.0	20.4	10.5	14.4	1.6	5.3	
178	4805	27.7	28.5	17.9	19.5					
		[[/strikethrough]]9.5[[/strikethrough]]^[[/strikethrough]]								
		[[/strikethrough]]12.4[[/strikethrough]]^[[/strikethrough]]								
179	4810	27.6	28.4	17.0	19.1	-	-	1.5	4.8	
180	4824	27.0	28.3	16.0	18.7	9.5	12.4	-0.6	4.5	

12		Measures									
		Aperture 1		Aperture 3		Aperture 5		Aperture 7			
		m	m+n	m	m+n	m	m+n	m	m+n		
151	4495	29.9	30.6	17.0	20.2	11.7	14.7	3.6	7.1		
152	4501	29.9	30.6	17.0	20.3	11.7	14.8	3.6	7.1		
153	4508	30.2	30.6	18.2	20.5	-	-	4.9	7.2		
154	4515	30.1	30.6	18.1	20.5	12.0	14.8	4.9	7.2		
155	-	29.9	30.6	17.5	20.6	11.1	14.9	3.6	7.2		
156	4528	29.6	30.6	16.3	20.7	11.0	15.0	3.0	7.2		
157	4534	-?	-?	16.3	20.8	10.2	15.0	3.1	7.2		
158	4541	30.0	30.7	18.9	20.9	12.2	15.1	4.9	7.2		
159	4544	30.0	30.7	18.4	20.9	12.2	15.2	4.9	7.2		
160	4550	29.6	30.7	16.1	20.9	11.1	15.2	3.7	7.3		
161	4554	29.4	30.7	15.1	20.9	10.1	15.3	3.2	7.3		
162	-	-	-	19.0	20.9	13.9	15.4	5.6	7.3		
163	-	30.3	30.6	-	-	-	-	-	-		
164	4564	29.8	30.7	17.5	20.9	12.0	15.4	4.0	7.3		
165	4572	30.0	30.7	18.0	20.9	12.0	15.5	5.1	7.3		
166	4576	-	-	19.3	20.9	14.0	15.6	6.0	7.3		
167	4581	30.0	30.9	18.2	20.9	11.7	15.7	6.1	7.3		
168	4584	29.1	30.8	16.4	20.9	10.1	15.7	3.0	7.3		
169	4616	29.0	30.6	17.5	20.9	11.9	15.2	3.7	7.1		
170	4635	29.0	30.0	19.0	20.9	12.1	15.0	3.7	6.2		
171	4646	29.2	29.8	18.0	20.9	11.2	14.9	3.5	6.1		
172	4666	29.0	29.8	19.0	20.9	11.6	14.6	1.4	6.0		
173	-	-	-	-	-	-	-	-	-		
174	-	-	-	-	-	-	-	-	-		
175	-	-	-	-	-	-	-	-	-		
176	-	-	-	-	-	-	-	-	-		
177	4765	28.0	29.1	17.0	20.4	10.5	14.4	1.6	5.3		
178	4805	27.7	28.5	17.9	19.5						
179	4810	27.6	28.4	17.0	19.1	-	-	1.5	4.8		
180	4824	27.0	28.3	16.0	18.7	9.5	12.4	-0.6	4.5		

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[[16 column table]]

Aperture 1 [n]	Aperture 1 [m+n]	Aperture 1 m	Aperture 3 [n]	Aperture 3 [m+n]	Aperture 3 m	Aperture 5 [n]	Aperture 5 [m+n]	Aperture 5 m	Aperture 7 [n]	Aperture 7 [m+n]	Aperture 7 m	Mean	Residuals	μ	σ	
-0.25	-0.43	18	1.36	1.05	31	1.60	1.38	22	2.72	2.34	38	.27	9,4,5,11	7.8	.38	
-0.25	-0.43	18	1.36	1.04	32	1.60	1.37	23	2.72	2.34	38	.28	10,4,5,10	7.7	.28	
0.27	-0.43	16	1.24	1.02	22	-	-	2.57	2.33	24	.21	5,1,3	3.4	.18		
-0.30	-0.43	13	1.25	1.02	23	1.58	1.37	21	2.57	2.33	24	.20	7,3,1,4	4.3	.17	
-0.25	-0.43	18	1.31	1.01	20	1.65	1.36	29	2.72	2.33	39	.29	11,1,0,10	7.4	.23	
-0.17	-0.43	26	1.41	1.00	41	1.66	1.35	31	2.80	2.33	47	.36	10,5,5,11	8.2	.28	
-	-	-	1.41	0.99	42	1.68	1.35	33	2.78	2.33	45	.40	2,7,5	5.0	.31	
-0.26	-0.46	20	1.18	0.98	20	1.57	1.34	23	2.57	2.33	24	.22	2,2,1,2	1.7	.18	
-0.26	-0.46	20	1.23	0.98	25	1.57	1.33	24	2.57	2.33	24	.23	3,2,1,1	2	.19	
-0.17	-0.46	29	1.44	0.98	46	1.65	1.33	32	2.70	2.32	38	.36	7,10,4,2	6.4	.28	
-0.12	-0.46	34	1.54	0.98	56	1.74	1.32	42	2.76	2.32	34	.42	8,14,0,8	9	.32	
-	-	-	1.17	0.98	19	1.43	1.32	11	2.49	2.32	17	.12	7,1,5,6	5.2	.11	
-0.37	-0.43	06	-	-	-	-	-	-	-	-	-	-	-	-	-	
-0.24	-0.46	12	1.31	0.98	33	1.58	1.32	26	2.62	2.32	30	.25	13,8,1,5	8.0	.21	
-0.26	-0.46	26	1.27	0.98	29	1.58	1.31	27	2.55	2.32	23	.25	5,4,2,2	3.4	.21	
-	-	-	1.10	0.98	12	1.42	1.30	12	2.45	2.32	13	.12	0,0,1	.57	.11	
-0.26	-0.52	26	1.24	0.98	26	1.60	1.29	31	2.44	2.32	12	.24	2,2,7,12	7.0	.20	
-0.05	-0.49	44	1.41	0.98	43	1.74	1.29	45	2.80	2.32	48	.45	1,2,0,3	2	.34	
-0.02	-0.43	21	1.32	0.98	33	1.66	1.33	33	2.70	2.34	36	.31	10	3.1	.25	
-0.02	-0.27	25	1.17	0.98	19	1.57	1.35	22	2.70	2.43	27	.24	1,5,2,3	3.1	.20	
-0.07	-0.22	15	1.26	0.98	28	1.64	1.36	28	2.73	2.44	29	.25	10,3,3,4	5.8	.21	
-0.02	-0.22	20	1.17	0.98	19	1.60	1.33	27	3.00	2.45	[55]	.22	2,3,5	3.6	.18	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0.17	-0.05	22	1.36	1.03	33	1.75	1.30	45	2.96	2.53	[43]	.33	11,0,12	9.3	.26	
.22	+0.09	13	1.26	1.14	12	-	-	-	[[strikethrough]]	2.97	[[/strikethrough]]	2.88	2.56	[32]	.12	1.0
.23	0.10	13	1.36	[[strikethrough]]	1.22	[[/strikethrough]]	1.17	19	-	-	-	-	-	-	-	
-	-	-	2.98	2.57	[47]	.16	3,3	3	.14	-	-	-	-	-	-	

Reductions

13

Aperture 1	Aperture 3	Aperture 5	Aperture 7	Mean	Residuals	μ	σ
19	1.36	1.05	31	1.60	1.38	22	2.72
18	1.36	1.04	32	1.60	1.37	23	2.72
16	1.24	1.02	22	-	-	2.57	2.33
13	1.25	1.02	23	1.58	1.37	21	2.57
18	1.31	1.01	20	1.65	1.36	29	2.72
26	1.41	1.00	41	1.66	1.35	31	2.80
4	1.41	0.99	42	1.68	1.35	33	2.78
20	1.18	0.98	20	1.57	1.34	23	2.57
20	1.23	0.98	25	1.57	1.33	24	2.57
29	1.44	0.98	46	1.65	1.33	32	2.70
34	1.54	0.98	56	1.74	1.32	42	2.76
19	1.43	1.32	11	2.49	2.32	17	.12
06	-	-	-	-	-	-	-
12	1.31	0.98	33	1.58	1.32	26	2.62
26	1.27	0.98	29	1.58	1.31	27	2.55
12	1.42	1.30	12	2.45	2.32	13	.12
26	1.24	0.98	26	1.60	1.29	31	2.44
44	1.41	0.98	43	1.74	1.29	45	2.80
21	1.32	0.98	33	1.66	1.33	33	2.70
25	1.17	0.98	19	1.57	1.35	22	2.70
15	1.26	0.98	28	1.64	1.36	28	2.73
20	1.17	0.98	19	1.60	1.33	27	3.00
22	2,3,5	3.6	.18	-	-	-	-
11,0,12	9.3	.26	-	-	-	-	-
2.97	[[strikethrough]]	2.88	2.56	[32]	.12	1.0	.22
1.17	19	-	-	-	-	-	-
2.98	2.57	[47]	.16	3,3	3	.14	-

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0.21 | 0.11 | 20 | 1.45 | 1.20 | 25 | 1.79 | 1.55 | 26 | 3.40 | 2.61 | [79] | 23 |
3,2,1 | 2.2 | .19

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Measures

[[table 10 columns, 4 headline columns]]

[[headline]] Aperture 1 Aperture 3 Aperture 5 Aperture 7									
[[headline]]									
	n	m+n	n	m+n	n	m+n	n	m+n	
181	4848	26.0	27.2	14.5	17.7	7.7	11.3	-1.8	4.1
182	4854	24.0	27.0	13.0	17.3	6.1	11.1	-1.2	4.0
183	4861	20.0	26.8	9.9	17.1	3.2	10.8	-2.5	3.9
184		24.0	26.2	14.0	16.9	6.1	10.1	-0.2	3.8
185		24.7	26.0	15.6	16.7	7.7	9.9	0.6	3.8
186		23.6	25.8	13.8	16.3	6.9	9.6	0.2	3.8
187		23.6	25.4	13.2	16.0	6.1	9.1	-	-
188		23.9	25.2	13.4	15.6	6.2	8.9	-	-
189		23.9	25.0	14.4	15.5	7.0	8.7	-	-
190		23.0	24.5	12.3	1 [[strikethrough]]	?	5.2	5.0	|
191		20.5	23.5	10.5	14.7	4.0	7.6	-	-
192		20.0	23.2	11.0	14.5	4.0	7.5	-	-
193		-	-	-	-	-	-	-	-
194		-	-	-	-	-	-	-	-
196		-	-	[[strikethrough]]12.3	[[/strikethrough]]	-	-	-	-
200		19.1	20.7	10.0	11.9	2.9	6.0	-	-
207		14.2	18.4	7.2	10.1	2.3	5.1	-	-

14 Measures									
		Aperture 1		Aperture 3		Aperture 5		Aperture 7	
		n	m+n	n	m+n	n	m+n	n	m+n
181	4848	26.0	27.2	14.5	17.7	7.7	11.3	-1.8	4.1
182	4854	24.0	27.0	13.0	17.3	6.1	11.1	-1.2	4.0
183	4861	20.0	26.8	9.9	17.1	3.2	10.8	-2.5	3.9
184		24.0	26.2	14.0	16.9	6.1	10.1	-0.2	3.8
185		24.7	26.0	15.6	16.7	7.7	9.9	0.6	3.8
186		23.6	25.8	13.8	16.3	6.9	9.6	0.2	3.8
187		23.6	25.4	13.2	16.0	6.1	9.1	-	-
188		23.9	25.2	13.4	15.6	6.2	8.9	-	-
189		23.9	25.0	14.4	15.5	7.0	8.7	-	-
190		23.0	24.5	12.3	1 [[strikethrough]]	?	5.2	5.0	|
191		20.5	23.5	10.5	14.7	4.0	7.6	-	-
192		20.0	23.2	11.0	14.5	4.0	7.5	-	-
193		-	-	-	-	-	-	-	-
194		-	-	-	-	-	-	-	-
196		-	-	[[strikethrough]]12.3	[[/strikethrough]]	-	-	-	-
200		19.1	20.7	10.0	11.9	2.9	6.0	-	-
207		14.2	18.4	7.2	10.1	2.3	5.1	-	-

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Comparison of Cyg and CMa.

[[4 column table]]

	Cyg C18482	CMa (H.R. 28)	Diff (-)
H	.68	.61	-.07
H	1.06	1.12	+.06
H	.77	.86	+.09
H	1.58	2.25?	-
[[?]]	1.44	2.25?	-
4227	.62	.70	+.08
4215	.48	.51	+.03

[[/table]]

Very similar intensities and spectra

Seems probable that CMa has too great central intensities for H and K

16

Comparison of Cyg and CMa.

	Cyg C18482	CMa (H.R. 28)	Diff (-)
H	.68	.61	-.07
H	1.06	1.12	+.06
H	.77	.86	+.09
H	1.58	2.25?	-
[[?]]	1.44	2.25?	-
4227	.62	.70	+.08
4215	.48	.51	+.03

Very similar intensities and spectra
Seems probable that CMa has too great central
intensity for H and K

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Series	lut	dl	m
4325.77	35	.36	.49
4307.91	35	.32	.42
4271.76	35	.33	.44
4750.79	25	.21	.25
4202.03	30	0.24	0.35 .47
4147.68	10	0.09	0.15 | .17

4143.87	30	.38	.52
4132.06	25	.35	.47
4071.75	40	.28	.35
4063.60	45	.32	.41
4045.82	60r	.33	.43
4005.25	25	.25	.31
3969.26	30	-	-

4494.57	12	.22	.27
4482.26	6	.30	.38
4459.13	10	.30	.38
4447.73	9	.27	? .34
4442.35	12	-	-
4430.62	6	.26	.32
4408.42	6	.32	.41
4407.72	5	|	^[[squiggle]]

4352.74	9	.41	.5 9 9 ⁷
4315.09	10	.42	.59
4282.41	12	.19	.23

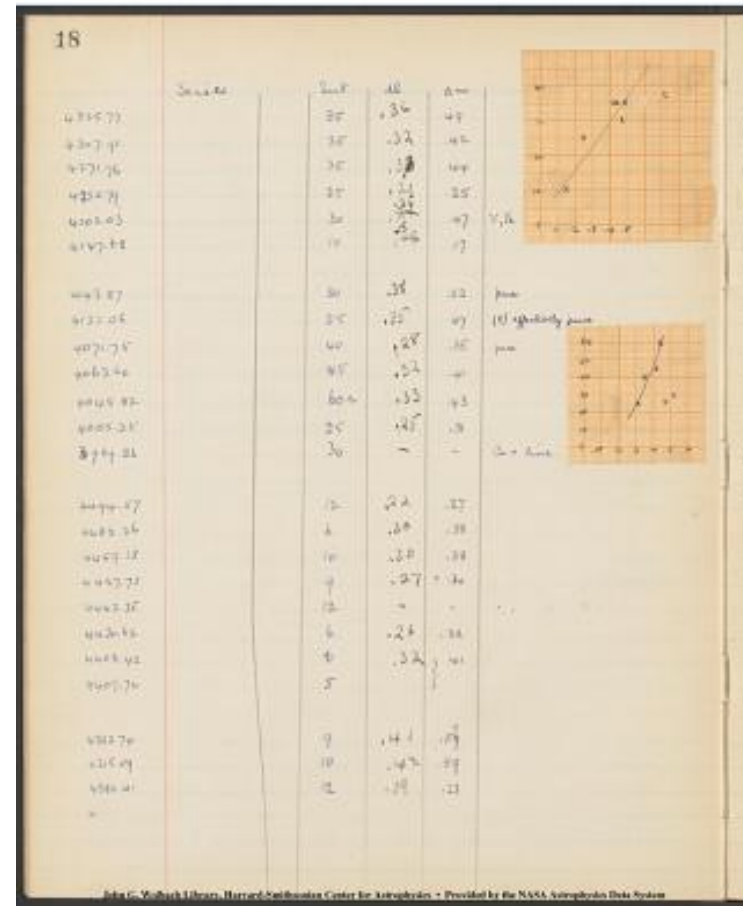
V, Fe [[graph]]

pure

(V) effectively pure

pure

Ca + line [[graph]]



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Lonziid Iron. [[?]] | E.p. | sns | lb | delta mu

4666.75 | 24F-14F' | 2.82 | .. | .18 | .22 |

4629.33 | | 4 | .. | .. |

4582.84 | | .. | .20 | .24 |

4555.90 | 6 | .32 | .42 | (Beta alpha+)

4534.17 | | .. | .31 | .40 |

4520.24 | 6 | .23 | ? | .29 |

4515.33 | 6 | .17 | .20 |

4491.41 | 4 | .29 | } | .37 |

4489.21 | 4 | } |

4472.93 | | .. | .19 | .23 |

46.20.52 | 24F-14D' | 2.82 | .. | - | - |

4585.84 | | 8 | .34 | .45 |

4576.31 | 4 | .11 | .12 |

4549.48 | 4 | .28 | .36 |

4541.52 | | .. | .18 | .22 |

4522.64 | 6 | - | - |

4508.29 | | 8 | .18 | .21 |

5169.03 | 1[degree] | 5-16p' | 2.88 | 8 | | |

5018.44 | | 8 | | |

4923.92 | | 10 | | |

20					
Lonziid Iron	E.p.	sns	lb	delta mu	
4666.75	24F-14F'	2.82	..	.18	.22
4629.33			4	..	..
4582.84			..	.20	.24
4555.90			6	.32	.42 (Beta alpha+)
4534.17			..	.31	.40
4520.24			6	.23	? .29
4515.33			6	.17	.20
4491.41			4	.29	} .37
4489.21			4	}	
4472.93			..	.19	.23
46.20.52	24F-14D'	2.82	..	-	-
4585.84			8	.34	.45
4576.31			4	.11	.12
4549.48			4	.28	.36
4541.52			..	.18	.22
4522.64			6	-	-
4508.29			8	.18	.21
5169.03	1° 5-16p'	2.88	8		
5018.44			8		
4923.92			10		

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Ionized Titanium | Series | E.P. | Int. | dl | delta m

4571.98 | $1^{[2]}H-1^{[2]}G^{[1]}$ | 1.57 | 15 | .21 | .25
[[image line graph]]

4549.64 | | 25 | .28 | .36

4529.46 | | 1 | - | -

4053.84 | $2^{[2]}G-2^{[2]}F^{[1]}$ | 1.88 | 4 | .33 | .43

4028.55 | | 5 | .33 | .43

Ionized Yttrium

4422.60 | $1^{[3]}D-1^{[3]}P^{[1]}$ | 0.6 | 10 | .27 | .34

4398.03 | | 15 | .41 | ? .57

4358.72 | | 8 | .28 | .36

4309.61 | | 20 | .32 | .42

4235.71 | | 6 | .28 | .36

4199.28 | | 3 | - | -

4900.11 | $1^{[3]}F-1^{[3]}D^{[1]}$ | 0.93 | 30 | | |

4883.69 | | 50 | | |

4854.88 | | 30 | .30 | .38 [[image graph]]

4823.32 | | 10 | .19 | .23

4786.57 | | 5 | .11 | <.12

Ionized Scandium

4431.35 | $1^{[3]}F-1^{[3]}F^{[1]}$ | 0.60 | 4 | .25 | .31

4470.66 | | 1 | - | -

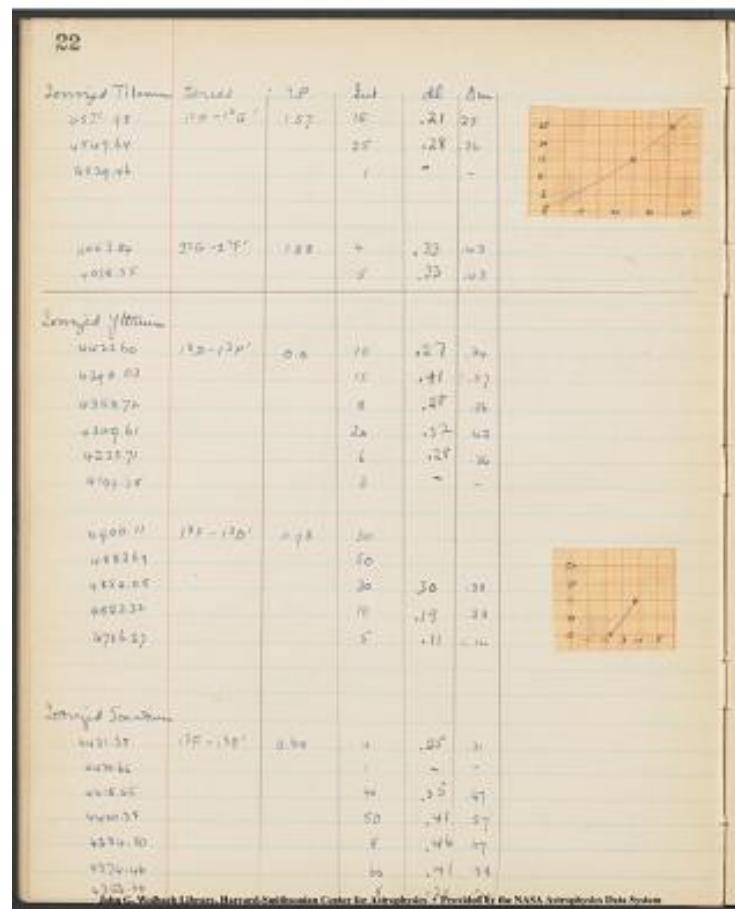
4415.55 | | 40 | .35 | .47

4400.38 | | 50 | .41 | .57

4384.80 | | 8 | .46 | .67

4374.46 | | 60 | .41 | .58

4354.66 | | 8 | .20 | .24



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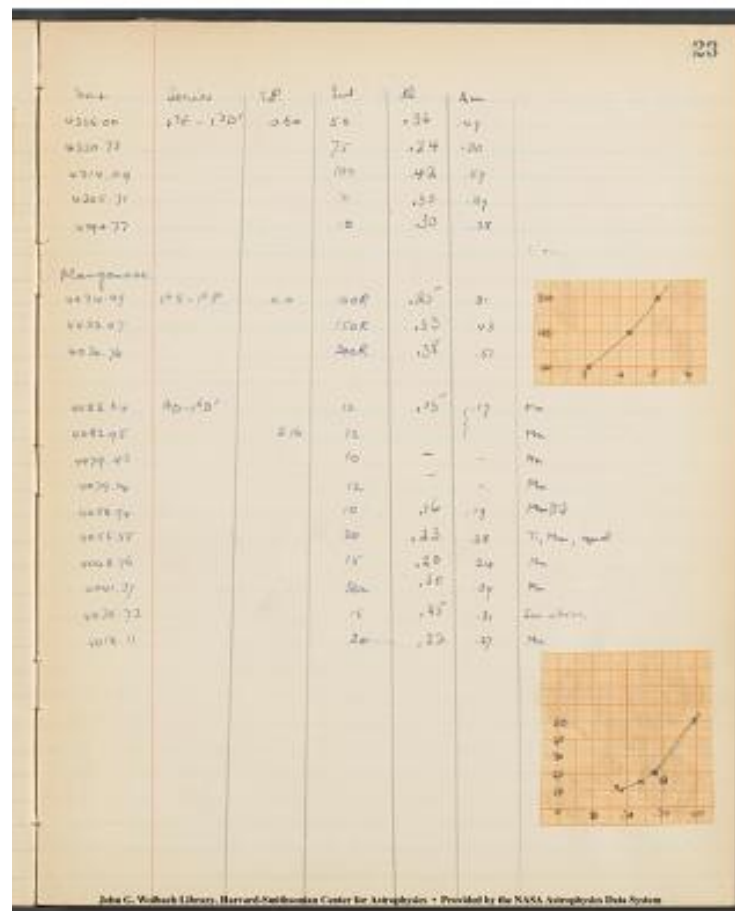
Sct	Series	E.P.	Int.	dl	delta m
4325.00	1 [^] [[3]]F-1 [^] [[3]]D [^] [[1]]	0.60	50	.36	.49
4320.73		75	.24	.30	
4314.09		100	.42	.59	
4305.71		10	.30	.39	
4294.77		10	.30	.38	

Manganese

4034.49	1 [^] [[6]]S-1 [^] [[6]]P	0.0	100R	.25	.31	[[image graph]]
4033.07		150R	.33	.43		
4030.76		200R	.38	.57		

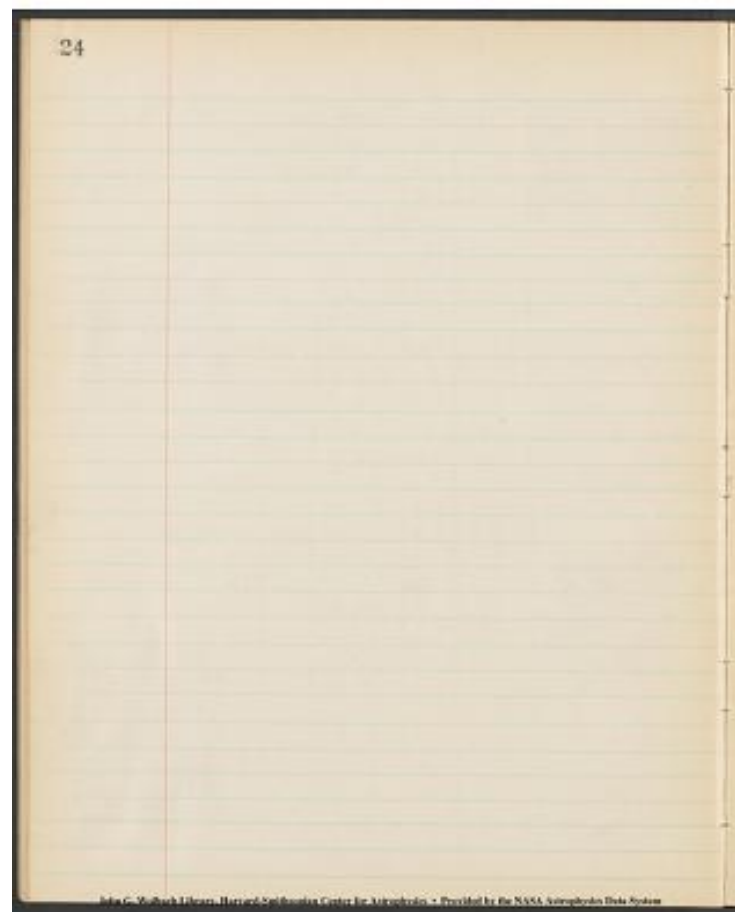
4083.64	1 [^] [[6]]D-1 [^] [[6]]D [^] [[1]]	12	.15	.17	Mn
4082.95	2.15	12			Mn
4079.43	10	-	-	-	Mn
4079.24	12	-	-	-	Mn
4058.94	10	.16	.19		Mn, (Ti)
4055.55	20	.23	.28		Ti, Mn, equal
4048.76	15	.20	.24		Mn
4041.37	50r	.30	.39		Mn
4035.73	15	.25	.31		See above
4018.11	20	.22	.27		Mn

[[image graph]]

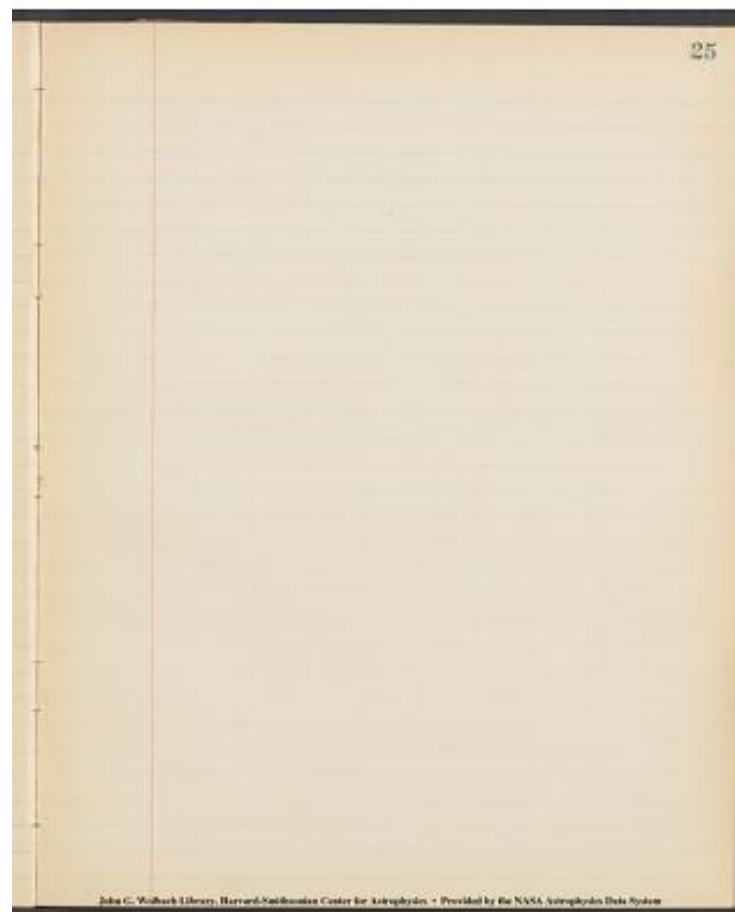


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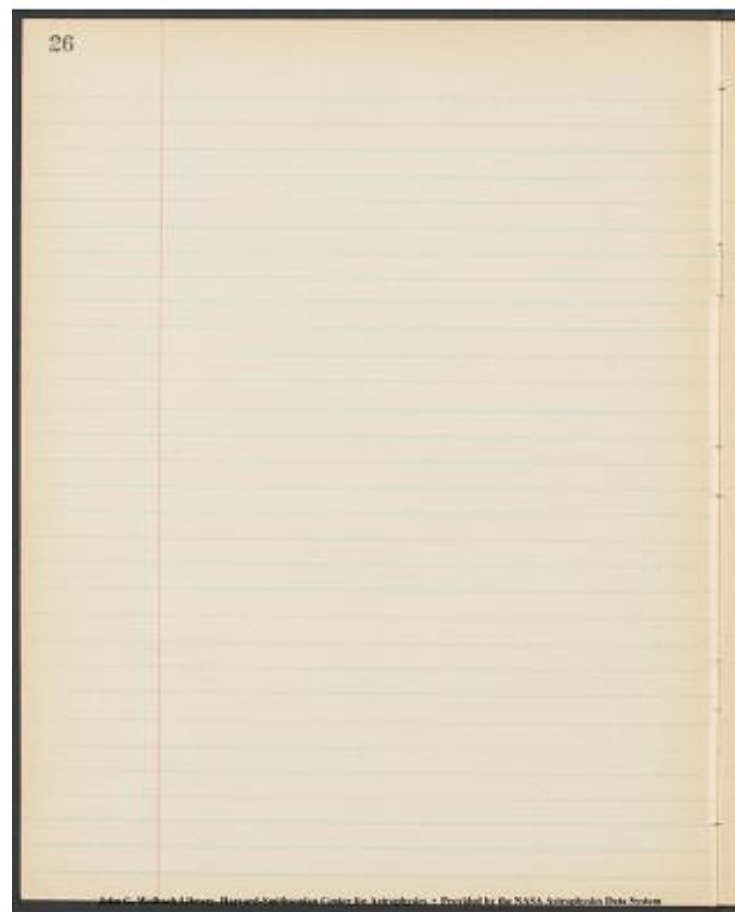
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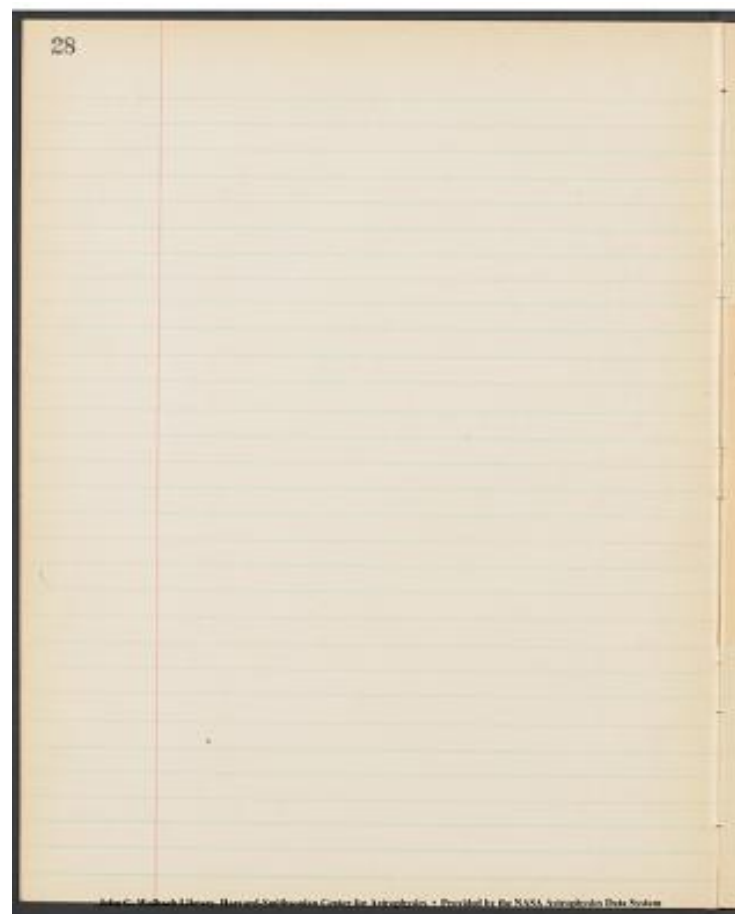
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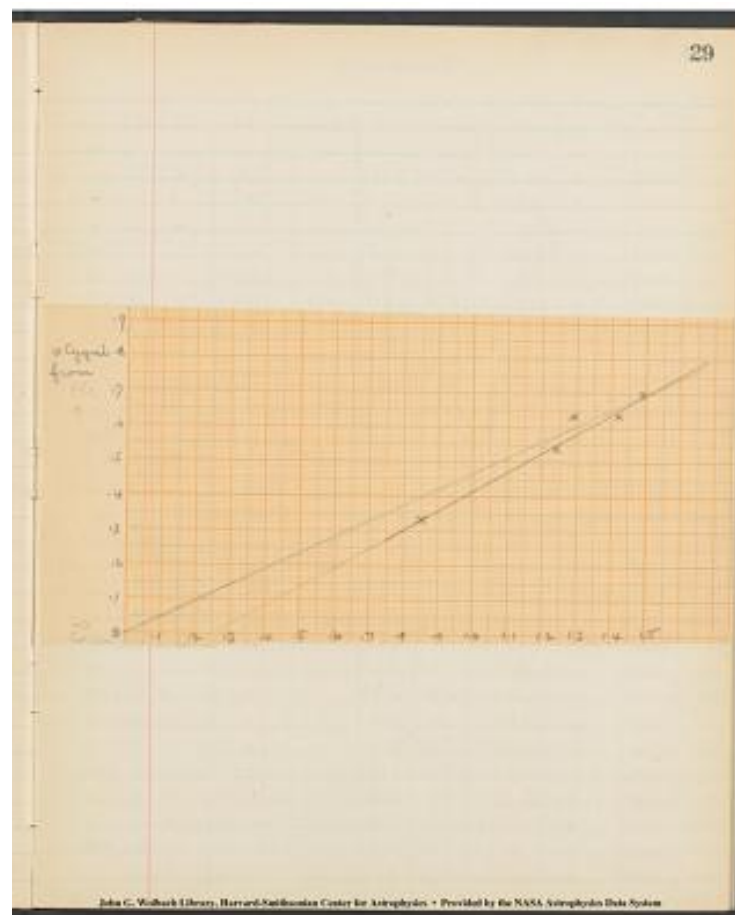
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[[image - 2 line graphs connecting data points with straight lines]]



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Aperture 1 [n] | Aperture 1 [m+n] | Aperture 1 | Aperture 3 [n] | Aperture 3 [m+n] | Aperture 3 | Aperture 5 [n] | Aperture 5 [m+n] | Aperture 5 | Aperture 7 [n] | Aperture 7 [m+n] | Aperture 7 | Mean | Residuals | | dl
1.34 | 2.67 | 1.33 [strike through] | 1.03 [strike through] | 1.03 [strike through] | 2.00 [strike through] | 2.00 [strike through] | 2.00 | 1.07 | 0.77 | 1.60 | .83 | - | - | - | -
1.08 | 25, [[underlined]] | 1.25 [underlined] | 20.4 | .63
2.68 | 2.83 | 15 | 1.87 | 2.13 | .26 | - | - | - | - | - | - | .20 | [[underlined]] 5
[underlined], 6 | 5.5 | .17
2.68 | 2.90 | 22 | 1.88 | 2.20 | 32 | - | - | - | - | - | - | .27 | [[underlined]] 5
[underlined], 5 | 5 | .22
2.75 | 2.94 | 19 | 1.87 | 2.25 | 38 | - | - | - | - | - | - | .28 | [[underlined]] 9
[underlined], 10 | 9.5 | .23
2.57 | 3.00 | 43 | 1.67 | 2.30 | 63 | - | - | - | - | - | - | .53 | [[underlined]] 10
[underlined], 10 | 10 | .39
2.64 | 3.07 | 43 | 1.95 | 2.36 | 41 | - | - | - | - | - | - | .42 | 1, [[underlined]] 1
[underlined], 1 | 1 | .32
2.98 | 3.10 | 12 | 2.20 | 2.39 | 19 | - | - | - | - | - | - | 16 | [[underlined]] 4
[underlined], 5 | 4.5 | .14
2 [strike through] | 3 [strike through] | .99 | 3.22 | 23 | 2.21 | 2.47 | 26 | - | - | - | - | - | 24 | [[underlined]] 1 [underlined], 2 | 1.7 | .20
3.10 | 3.27 | 17 | 2.33 | 2.54 | 21 | - | - | - | - | - | - | 19 | [[underlined]] 2
[underlined], 2 | 2 | .16
2.12 [strike through] | 5 [strike through] | 3.4 [strike through] | 3 [strike through] | 10 | 1.28 | 1.57 [strike through] | 65 [strike through] | 2.69 | 1.03
| 0.72 | 2.00 | 1.28 | - | - | - | 1.20 | 8, [underlined] 17 [underlined], 8 |
11.7 | .67
3.20 | 3.49 | 29 | 1.81 | 2.87 | 1.06 | 1.60 | 2.50 | 19.0 | 0.75 | 1.62 | .87 |
.78 | [[underlined]] 49 [underlined], 28, 12, 9 | 29.2 | .51
3.39 | 3.53 | 24 | - | - | 1.86 | 2.08 | 32 | - | - | 28 | [[underlined]] 4
[underlined], 4 | 4 | .23
2.23 | 3.54 | 21 | - | - | 1.74 | 2.10 | 36 | 0.77 | 1.60 | [83] | 29 |
[[underlined]] 8 [underlined], 8 | 8 | .23
3.29 | 3.60 | 31 | - | - | 1.81 | 2.21 | .40 | 1.10 | 1.65 | .55 | 42 |
[[underlined]] 11, 2 [underlined], 13 | 9.9 | .32
2.82 | 3.82 | 1.00 | - | - | 1.18 | 2.28 | 1.10 | 0.50 | 1.74 | 1.24 | 1.11 |
[[underlined]] 11, 1 [underlined], 13 | 9.8 | .64
3.63 | 3.83 | 20 | - | - | 2.76 | 2.36 | 20 | 0.90 | 1.78 | [88] | 20 | 0.0 | 0 |
.17
2.58 | 4.05 | 1.47 | 2.07 | 3.32 | 1.25 | 0.80 | 2.57 | 1.67 | 0.35 | 1.85 |
1.50 | 1.47 | 0, [[underlined]] 22 [underlined], 20, [[underlined]] 3
[underlined] | 14.9 | .74
2.47 | 4.03 | 1.56 | 1.96 | 3.38 | 1.42 | 1.00 | 2.55 | 1.55 | 0.44 | 1.88 |
1.44 | 1.49 | 7, [[underlined]] 7 [underlined], 6, [[underlined]] 5
[underlined] | 6.3 | .75
3.54 | 4.04 | 0.20 | 3.17 | 3.38 | .21 | 2.24 | 2.57 | 33 | 1.42 | 1.88 | 46 |
.30 | [[underlined]] 10, 9 [underlined], 3, 16 | 10.6 | .24
4.03 | 4.14 | 11 | 3.22 | 3.42 | 20 | - | - | - | - | - | 16 | [[underlined]] 5
[underlined], 4 | 4.6 | .14
3.77 | 4.15 | 38 | 3.27 | 3.43 | 16 | - | - | - | - | - | 27 | 11, [[underlined]]
11 [underlined], 11 | 11 | .22
4.08 | 4.15 | 03 | 3.27 | 3.43 | 16 | - | - | - | - | - | 12 | [[underlined]] 5
[underlined], 4 | 4.6 | .11
4.08 | 4.15 | 07 | 3.24 | 3.44 | 20 | - | - | - | - | - | 14 | [[underlined]] 7
[underlined], 6 | 6.6 | .12
4.05 | 4.23 | 18 | 3.23 | 3.45 | 22 | 2.58 | 2.83 | 25 | - | - | - | 22 |
[[underlined]] 4 [underlined], 0, 3 | 2.8 | .18
4.14 | 4.24 | 10 | 3.31 | 3.45 | 14 | 2.58 | 2.83 | 25 | - | - | - | 16 |
[[underlined]] 6, 2 [underlined], 9 | 6.3 | .14

Reductions

31

Aperture 1	Aperture 2	Aperture 3	Aperture 4	Aperture 5	Aperture 6	Mean	Standard	μ	dl
(m)	Count	(m)	Count	(m)	Count	(m)	Count		
120	2.6	100	2.0	107	2.7	160	2.2	-	-
200	2.2	15	1.8	2.3	26	-	-	-	-
240	2.2	22	1.7	2.3	32	-	-	-	-
270	2.1	19	1.7	2.5	38	-	-	-	-
280	2.1	48	1.8	2.3	62	-	-	-	-
290	2.0	42	1.8	2.3	41	-	-	-	-
290	2.1	32	2.0	2.3	19	-	-	-	-
300	2.2	23	2.0	2.4	26	-	-	-	-
310	2.0	17	2.3	2.5	21	-	-	-	-
308	2.0	182	2.0	103	2.2	2.00	1.78	-	-
320	2.0	20	1.8	2.7	106	1.6	2.80	1.42	2.78
330	2.0	-	-	-	16	2.0	3.2	-	-
340	2.1	-	-	-	17	2.1	3.6	2.77	1.62
350	2.0	-	-	-	187	2.0	1.90	1.00	1.60
360	2.0	100	-	-	1.8	2.2	1.0	1.00	1.70
370	2.0	2.0	-	-	2.0	2.3	2.0	1.92	1.78
380	2.0	2.0	1.2	1.3	1.8	2.1	1.7	1.80	1.65
390	2.0	1.6	1.6	2.3	1.8	2.1	1.85	1.90	1.8
400	2.0	2.0	1.7	2.3	2.1	2.2	2.5	2.3	1.92
410	2.0	1.1	2.2	2.3	2.0	-	-	-	-
420	2.0	2.8	2.2	2.3	1.6	-	-	-	-
430	2.0	0.3	2.2	2.4	1.6	-	-	-	-
440	2.0	0.7	2.0	2.4	2.0	-	-	-	-
450	2.3	1.9	2.2	2.4	2.2	2.1	2.1	2.0	-
460	2.3	2.0	2.3	2.4	1.4	2.5	2.1	2.5	-
470	2.3	0.7	2.3	2.4	0.9	-	-	-	-
480	2.3	1.2	2.3	2.4	1.0	-	-	-	-
490	2.3	0.8	2.3	2.4	0.9	-	-	-	-
500	2.3	1.2	2.3	2.4	1.0	-	-	-	-
510	2.3	0.8	2.3	2.4	0.9	-	-	-	-
520	2.3	1.2	2.3	2.4	1.0	-	-	-	-
530	2.3	0.8	2.3	2.4	0.9	-	-	-	-
540	2.3	1.2	2.3	2.4	1.0	-	-	-	-
550	2.3	0.8	2.3	2.4	0.9	-	-	-	-
560	2.3	1.2	2.3	2.4	1.0	-	-	-	-
570	2.3	0.8	2.3	2.4	0.9	-	-	-	-
580	2.3	1.2	2.3	2.4	1.0	-	-	-	-
590	2.3	0.8	2.3	2.4	0.9	-	-	-	-
600	2.3	1.2	2.3	2.4	1.0	-	-	-	-
610	2.3	0.8	2.3	2.4	0.9	-	-	-	-
620	2.3	1.2	2.3	2.4	1.0	-	-	-	-
630	2.3	0.8	2.3	2.4	0.9	-	-	-	-
640	2.3	1.2	2.3	2.4	1.0	-	-	-	-
650	2.3	0.8	2.3	2.4	0.9	-	-	-	-
660	2.3	1.2	2.3	2.4	1.0	-	-	-	-
670	2.3	0.8	2.3	2.4	0.9	-	-	-	-
680	2.3	1.2	2.3	2.4	1.0	-	-	-	-
690	2.3	0.8	2.3	2.4	0.9	-	-	-	-
700	2.3	1.2	2.3	2.4	1.0	-	-	-	-
710	2.3	0.8	2.3	2.4	0.9	-	-	-	-
720	2.3	1.2	2.3	2.4	1.0	-	-	-	-
730	2.3	0.8	2.3	2.4	0.9	-	-	-	-
740	2.3	1.2	2.3	2.4	1.0	-	-	-	-
750	2.3	0.8	2.3	2.4	0.9	-	-	-	-
760	2.3	1.2	2.3	2.4	1.0	-	-	-	-
770	2.3	0.8	2.3	2.4	0.9	-	-	-	-
780	2.3	1.2	2.3	2.4	1.0	-	-	-	-
790	2.3	0.8	2.3	2.4	0.9	-	-	-	-
800	2.3	1.2	2.3	2.4	1.0	-	-	-	-
810	2.3	0.8	2.3	2.4	0.9	-	-	-	-
820	2.3	1.2	2.3	2.4	1.0	-	-	-	-
830	2.3	0.8	2.3	2.4	0.9	-	-	-	-
840	2.3	1.2	2.3	2.4	1.0	-	-	-	-
850	2.3	0.8	2.3	2.4	0.9	-	-	-	-
860	2.3	1.2	2.3	2.4	1.0	-	-	-	-
870	2.3	0.8	2.3	2.4	0.9	-	-	-	-
880	2.3	1.2	2.3	2.4	1.0	-	-	-	-
890	2.3	0.8	2.3	2.4	0.9	-	-	-	-
900	2.3	1.2	2.3	2.4	1.0	-	-	-	-
910	2.3	0.8	2.3	2.4	0.9	-	-	-	-
920	2.3	1.2	2.3	2.4	1.0	-	-	-	-
930	2.3	0.8	2.3	2.4	0.9	-	-	-	-
940	2.3	1.2	2.3	2.4	1.0	-	-	-	-
950	2.3	0.8	2.3	2.4	0.9	-	-	-	-
960	2.3	1.2	2.3	2.4	1.0	-	-	-	-
970	2.3	0.8	2.3	2.4	0.9	-	-	-	-
980	2.3	1.2	2.3	2.4	1.0	-	-	-	-
990	2.3	0.8	2.3	2.4	0.9	-	-	-	-
1000	2.3	1.2	2.3	2.4	1.0	-	-	-	-

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4.15 | 4.24 | 09 | 3.35 | 3.46 | 11 ~~0~~ |
 2.55 | 2.83 | 28 | - | - | - | 16 | 7, 5, 12 | 8.5 |
 .14
 4.16 | 4.24 | 08 | 3.37 | 3.46 | 09 | - | - | - | - | 8 | 0, 1 | .22 | .07
 4.15 | 9.27 | 12 | 3.31 | 3.47 | 16 | - | - | - | - | 14 | 2
~~2~~ | 2 | .12
 4.17 | 4.27 | 10 | 3.32 | 3.51 | 14 | - | - | - | - | 12 | 2
~~2~~ | 2 | .11

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Measures

[[11 column table]]

No.	Line.	Elr.	Aperture 1	Aperture 1	Aperture 3	Aperture 3	Aperture 5	Aperture 5	Aperture 7	Aperture 7
30	4077		36.1	37.5	26.3	27.6	-	-	-	-
31	4101		21.4	38.1	9.3	27.9	3.0	11.6	0.9	10.2
32	4122		37.0	38.0	26.0	28.0	16.7	19.1	7.0	10.2
33	4128		38.2	23.6	27.9	14.0	19.1	4.9	10.3	
34	4131		35.4	38.2	24.2	27.9	15.2	19.1	7.0	10.3
35	4167		36.6	38.7	26.3	27.9	16.4	19.9	-	-
36	4173-4		34.1	38.7	22.3	27.9	14.0	19.9	5.4	10.4
37	4179		34.0	38.6	20.1	27.8	13.0	20.0	4.9	10.6
38	4233		33.9	39.0	21.0	27.4	15.7	20.9	4.5	10.5
39	4242		37.8	39.1	25.0	27.7	-	8.0	11.4	
40	4249		37.7	39.1	25.5	27.6	-	7.0	11.6	
41	4258		37.9	39.2	26.0	27.7	-	-	-	
42	4262		38.0	39.2	26.2	28.0	-	-	-	
43			38.7	39.3	26.4	28.2	19.5	21.4	-	-
44			38.6	39.3	26.5	28.2	19.0	21.5	-	-
45			37.8	39.3	26.0	28.2	18.8	21.7	-	-
46			38.0	39.3	25.3	28.3	18.8	21.7	-	-
47			37.9	39.3	25.3	28.3	19.0	21.8	-	-
48			38.0	39.5	25.0	28.3	18.4	21.9	-	-
49	4302		37.0	39.6	23.9	28.4	16.2	21.9	-	-
50	4308		38.1	39.5	26.7	28.4	19.0	21.9	-	-
51	4315		37.1	39.6	25.8	28.5	17.9	21.9	-	-
52	4321		38.1	39.5	27.4	28.8	19.8	22.0	-	-
53	4326		38.1	39.5	26.7	28.9	20.0	22.1	-	-
54	4340		25.9	40.2	11.8	29.0	6.2	22.2	1.8	12.5
55	4352		37.0	40.2	24.0	29.1	16.5	22.3	7.0	12.6
56	4385		37.4	40.8	25.5	29.9	17.6	22.9	7.6	12.9
57	4390		40.0	40.9	28.4	30.0	28.4	23.0	10.1	13.1
58	4395		38.3	40.9	26.8	30.0	18.3	22.9	12.6	13.1
59	4400		39.9	40.9	27.8	30.0	20.8	23.0	10.1	13.1
60	4405		40.2	40.9	28.9	30.1	21.6	23.1	-	-

32										
Measured										
No.	Line.	Elr.	Aperture 1	Aperture 3	Aperture 5	Aperture 7	Aperture 1	Aperture 3	Aperture 5	Aperture 7
30	4077		36.1	37.5	26.3	27.6	-	-	-	-
31	4101		21.4	38.1	9.3	27.9	3.0	11.6	0.9	10.2
32	4122		37.0	38.0	26.0	28.0	16.7	19.1	7.0	10.2
33	4128		38.2	23.6	27.9	14.0	19.1	4.9	10.3	
34	4131		35.4	38.2	24.2	27.9	15.2	19.1	7.0	10.3
35	4167		36.6	38.7	26.3	27.9	16.4	19.9	-	-
36	4173-4		34.1	38.7	22.3	27.9	14.0	19.9	5.4	10.4
37	4179		34.0	38.6	20.1	27.8	13.0	20.0	4.9	10.6
38	4233		33.9	39.0	21.0	27.4	15.7	20.9	4.5	10.5
39	4242		37.8	39.1	25.0	27.7	-	8.0	11.4	
40	4249		37.7	39.1	25.5	27.6	-	7.0	11.6	
41	4258		37.9	39.2	26.0	27.7	-	-	-	
42	4262		38.0	39.2	26.2	28.0	-	-	-	
43			38.7	39.3	26.4	28.2	19.5	21.4	-	-
44			38.6	39.3	26.5	28.2	19.0	21.5	-	-
45			37.8	39.3	26.0	28.2	18.8	21.7	-	-
46			38.0	39.3	25.3	28.3	18.8	21.7	-	-
47			37.9	39.3	25.3	28.3	19.0	21.8	-	-
48			38.0	39.5	25.0	28.3	18.4	21.9	-	-
49	4302		37.0	39.6	23.9	28.4	16.2	21.9	-	-
50	4308		38.1	39.5	26.7	28.4	19.0	21.9	-	-
51	4315		37.1	39.6	25.8	28.5	17.9	21.9	-	-
52	4321		38.1	39.5	27.4	28.8	19.8	22.0	-	-
53	4326		38.1	39.5	26.7	28.9	20.0	22.1	-	-
54	4340		25.9	40.2	11.8	29.0	6.2	22.2	1.8	12.5
55	4352		37.0	40.2	24.0	29.1	16.5	22.3	7.0	12.6
56	4385		37.4	40.8	25.5	29.9	17.6	22.9	7.6	12.9
57	4390		40.0	40.9	28.4	30.0	28.4	23.0	10.1	13.1
58	4395		38.3	40.9	26.8	30.0	18.3	22.9	12.6	13.1
59	4400		39.9	40.9	27.8	30.0	20.8	23.0	10.1	13.1
60	4405		40.2	40.9	28.9	30.1	21.6	23.1	-	-

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No.	Line	Elt.	Aperture 1		Aperture 3		Aperture 5		Aperture 7	
61	4417		38.9	41.0	26.0	30.2	17.9	23.2	7.8	13.1
62	4444		39.9	41.3	28.0	30.7	20.2	23.6	10.0	13.2
63	4450		40.6	41.5	29.1	30.9	20.9	23.8	9.7	13.4
64	4469		40.0	41.6	28.8	31.0	20.1	23.9	8.9	13.5
65	4471		40.4	41.6	30.0	31.1	21.4	23.9	9.5	13.6
66	4482		38.6	41.9	25.1	31.2	17.0	24.0	6.9	13.7
67	4489-91		40.3	41.9	29.4	31.3	21.0	24.0	9.2	13.8
68	4		40.1	41.9	29.0	31.3	21.5	24.0	10.6	13.8
69	4501		41.0	42.1	29.9	31.3	21.4	24.1	10.7	13.9
70	4508		41.1	42.3	28.6	31.4	20.8	24.1	9.1	13.9
71	4515		41.6	42.4	28.9	31.6	21.1	24.2	10.0	13.9
72	4520,22		39.9	42.5	27.9	31.8	20.1	24.5	8.9	13.9
73			41.8	42.6	30.8	31.8	23.2	24.6	-	-
74	4534		41.8	42.6	29.1	31.9	21.9	24.5	-	-
75	4541		40.9	42.4	30.5	31.9	21.7	24.5	-	-
76	4549		39.4	42.5	27.2	32.0	18.8	25.0	9.1	14.7
77	4556		39.9	42.4	27.8	32.0	20.2	24.9	8.1	14.7
78	4558		40.5	42.3	29.0	32.1	21.1	25.0	10.3	14.5
79	4564		41.4	42.3	30.5	32.1	22.5	24.9	11.1	14.5
80	4572-76		41.0	42.3	29.9	32.2	21.9	24.9	10.8	14.2
81			41.5	42.3	30.4	32.2	22.2	24.9	11.0	14.2
82	4584		39.4	42.3	27.0	32.0	18.8	24.9	7.6	14.1
83	4586		40.8	42.3	29.6	32.0	21.6	24.9	10.0	14.0
84	4619		40.9	42.2	29.0	31.5	20.9	24.7	9.8	13.8
85	4629		41.0	42.2	28.9	31.4	20.5	24.4	8.2	13.6
86	4634		41.9	42.2	29.1	31.3	20.4	24.3	10.4	13.5
87	4731		39.4	41.0	27.9	29.5	18.6	21.4	-	-
88	4824		35.7	37.0	23.0	25.1	14.0	16.2	4.4	8.0
89	4836		35.5	36.5	23.1	24.9	-	-	-	-
90	4848		33.5	35.2	20.0	24.1	-	-	-	-

34		Measures									
No.	Line	Aperture 1	Aperture 3	Aperture 5	Aperture 7						
61	4417	38.9	41.0	26.0	30.2	17.9	23.2	7.8	13.1		
62	4444	39.9	41.3	28.0	30.7	20.2	23.6	10.0	13.2		
63	4450	40.6	41.5	29.1	30.9	20.9	23.8	9.7	13.4		
64	4469	40.0	41.6	28.8	31.0	20.1	23.9	8.9	13.5		
65	4471	40.4	41.6	30.0	31.1	21.4	23.9	9.5	13.6		
66	4482	38.6	41.9	25.1	31.2	17.0	24.0	6.9	13.7		
67	4489-91	40.3	41.9	29.4	31.3	21.0	24.0	9.2	13.8		
68	4	40.1	41.9	29.0	31.3	21.5	24.0	10.6	13.8		
69	4501	41.0	42.1	29.9	31.3	21.4	24.1	10.7	13.9		
70	4508	41.1	42.3	28.6	31.4	20.8	24.1	9.1	13.9		
71	4515	41.6	42.4	28.9	31.6	21.1	24.2	10.0	13.9		
72	4520,22	39.9	42.5	27.9	31.8	20.1	24.5	8.9	13.9		
73		41.8	42.6	30.8	31.8	23.2	24.6	-	-		
74	4534	41.8	42.6	29.1	31.9	21.9	24.5	-	-		
75	4541	40.9	42.4	30.5	31.9	21.7	24.5	-	-		
76	4549	39.4	42.5	27.2	32.0	18.8	25.0	9.1	14.7		
77	4556	39.9	42.4	27.8	32.0	20.2	24.9	8.1	14.7		
78	4558	40.5	42.3	29.0	32.1	21.1	25.0	10.3	14.5		
79	4564	41.4	42.3	30.5	32.1	22.5	24.9	11.1	14.5		
80	4572-76	41.0	42.3	29.9	32.2	21.9	24.9	10.8	14.2		
81		41.5	42.3	30.4	32.2	22.2	24.9	11.0	14.2		
82	4584	39.4	42.3	27.0	32.0	18.8	24.9	7.6	14.1		
83	4586	40.8	42.3	29.6	32.0	21.6	24.9	10.0	14.0		
84	4619	40.9	42.2	29.0	31.5	20.9	24.7	9.8	13.8		
85	4629	41.0	42.2	28.9	31.4	20.5	24.4	8.2	13.6		
86	4634	41.9	42.2	29.1	31.3	20.4	24.3	10.4	13.5		
87	4731	39.4	41.0	27.9	29.5	18.6	21.4	-	-		
88	4824	35.7	37.0	23.0	25.1	14.0	16.2	4.4	8.0		
89	4836	35.5	36.5	23.1	24.9	-	-	-	-		
90	4848	33.5	35.2	20.0	24.1	-	-	-	-		

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Reductions

Aperture 1	Aperture 3	Aperture 5	Aperture 7	Mean
Residuals	dl			
[n] | [m+n]	[n] | [m+n]	[n] | [m+n]	[n] | [m+n]	||| |
4.37 | 4.65 | 28 | 3.38 | 3.71 | 33 | 2.75 | 3.18 | 33 | 1.90 | 2.38 | 48 | 36 |				
8, 3, 3, 12 | 7.5 | .28				
4.46 | 4.52 | 06 | 3.53 | 3.74 | 21 | 2.94 | 3.19 | 25 | 2.11 | 2.39 | 28 | 20 |				
14, 1, 5, 8 | 8.5 | .17				
^[[4.53]]4.47^[[down arrow]] | 4.57 | 04 | 3.62 | 3.75 | 13 | 2.98 | 3.21 | 23 |				
2.08 | 2.40 | 32 | 18 | 14, 5, 5, 14 | 10.5 | .15				
^[[down arrow]]4.52 | 4.58 | 11 | 3.59 | 3.76 | 17 | 2.93 | 3.21 | 23 | 2.00 |				
2.41 | 41 | 23 | 12, 6, 0, 18 | 11.2 | .19				
^[[down arrow]]4.58 | 06 | 3.68 | 3.77 | 09 | 3.02 | 3.21 | 19 | 2.06 | 2.42 |				
36 | 17 | 11, 8, 2, 19 | 11.7 | .15				
4.35 | 4.64 | 29 | 3.32 | 3.78 | 46 |				
[[strikethrough]]2.99[[/strikethrough]]^[[2.68]] | 3.22 | 54 | 1.80 | 2.43 | 63 |				
48 | 19, 2, 6, 15 | 12.5 | .36				
4.50 | 4.64 | 14 | 3.64 | 3.79 | 15 |				
[[strikethrough]]3.03[[/strikethrough]]^[[2.99]] | 3.22 | 23 | 2.04 | 2.44 | 40 |				
23 | 9, 8, 0, 17 | 10.4 | .19				
4.49 | 4.64 | 15 | 3.61 | 3.79 | 18 | 3.03 | 3.22 | 19 | 2.16 | 2.44 | 28 | 20 |				
5, 2, 1, 8 | 4.9 | .17				
4.55 | 4.63 | 05 | 3.67 | 3.79 | 12 | 3.02 | 3.23 | 21 | 2.17 | 2.45 | 28 | 16 |				
11, 4, 5, 12 | 8.7 | .14				
4.56 | 4.65 | 09 | 3.58 | 3.80 | 22 | 2.98 | 3.23 | 25 | 2.03 | 2.45 | 42 | 24 |				
15, 2, 1, 18 | 11.8 | .20				
4.53 | 4.66 | 13 | 3.60 | 3.81 | 21 | 3.00 | 3.24 | 24 | 2.11 | 2.45 | 34 | 23 |				
10, 2, 1, 11 | 7.5 | .19				
4.46 | 4.66 | 20 | 3.52 | 3.84 | 32 | 2.93 | 3.26 | 33 | 2.00 | 2.45 | 45 | 32 |				
12, 0, 1, 13 | 8.9 | .26				
4.60 | 4.67 | 07 | 3.75 | 3.85 | 10 | 3.16 | 3.27 | 11 | - | - | - | 09 | 2, 1, 2 |				
1.7 | .08				
4.60 | 4.67 | 07 | 3.62 | 3.85 | 23 | 3.05 | 3.26 | 21 | - | - | - | 17 | 10, 6, 4 |				
7.1 | .15				
4.54 | 4.66 | 12 | 3.74 | 3.85 | 11 | 3.03 | 3.26 | 23 | - | - | - | 15 | 3, 4, 8 |				
5.5 | .13				
4.42 | 4.66 | 24 | 3.48 | 3.86 | 38 | 2.82 | 3.31 | 49 | 2.03 | 2.52 | 48 | 40 |				
16, 2, 9 | 10.7 | .31				
4.46 | 4.66 | 20 | 3.53 | 3.86 | 33 | 2.94 | 3.30 | 36 | 1.94 | 2.52 | 60 | 37 |				
17, 4, 1, 23 | 14.4 | .29				
4.52 | 4.65 | 13 | 3.61 | 3.86 | 25 | 3.00 | 3.31 | 31 | 2.15 | 2.51 | 36 | 26 |				
13, 1, 5, 10 | 8.6 | .21				
4.57 | 4.65 | 08 | 3.74 | 3.86 | 12 | 3.10 | 3.30 | 20 | 2.22 | 2.51 | 29 | 18 |				
10, 6, 2, 11 | 8.0 | .15				
4.56 | 4.65 | 09 | 3.67 | 3.87 | 20 | 3.05 | 3.30 | 25 | 2.20 | 2.48 | 28 | 20 |				
11, 0, 5, 8 | 7.3 | .17				
4.57 | 4.65 | 08 | 3.75 | 3.87 | 12 | 3.08 | 3.30 | 22 | 2.21 | 2.48 | 27 | 17 |				
9, 5, 5, 10 | 7.6 | .15				
4.42 | 4.65 | 13 | 3.53 | 3.86 | 33 | 3.03 | 3.30 | 27 | 1.87 | 2.47 | 60 | 33 |				
20, 0, 6, 27 | 17.0 | .26				
4.54 | 4.65 | 11 | 3.65 | 3.86 | 21 | 3.03 | 3.30 | 27 | 2.11 | 2.46 | 35 | 24 |				
13, 3, 3, 11 | 8.5 | .20				
4.54 | 4.64 | 10 | 3.61 | 3.80 | 19 | 2.98 | 3.28 | 30 | 2.08 | 2.44 | 36 | 24 |				
14, 5, 6, 12 | 10.7 | .20				
4.56 | 4.64 | 08 | 3.60 | 3.79 | 19 | 2.97 | 3.26 | 29 | 1.95 | 2.42 | 49 | 26 |				
18, 7, 3, 23 | 15.1 | .21				

Reductions

35

Aperture 1 | Aperture 3 | Aperture 5 | Aperture 7 | Mean | Residuals | dl

28 | 3.38 | 3.71 | 33 | 2.75 | 3.18 | 33 | 1.90 | 2.38 | 48 | 36 |

8, 3, 3, 12 | 7.5 | .28

4.46 | 4.52 | 06 | 3.53 | 3.74 | 21 | 2.94 | 3.19 | 25 | 2.11 | 2.39 | 28 | 20 |

14, 1, 5, 8 | 8.5 | .17

^[[4.53]]4.47^[[down arrow]] | 4.57 | 04 | 3.62 | 3.75 | 13 | 2.98 | 3.21 | 23 |

2.08 | 2.40 | 32 | 18 | 14, 5, 5, 14 | 10.5 | .15

^[[down arrow]]4.52 | 4.58 | 11 | 3.59 | 3.76 | 17 | 2.93 | 3.21 | 23 | 2.00 |

2.41 | 41 | 23 | 12, 6, 0, 18 | 11.2 | .19

^[[down arrow]]4.58 | 06 | 3.68 | 3.77 | 09 | 3.02 | 3.21 | 19 | 2.06 | 2.42 |

36 | 17 | 11, 8, 2, 19 | 11.7 | .15

4.35 | 4.64 | 29 | 3.32 | 3.78 | 46 |

[[strikethrough]]2.99[[/strikethrough]]^[[2.68]] | 3.22 | 54 | 1.80 | 2.43 | 63 |

48 | 19, 2, 6, 15 | 12.5 | .36

4.50 | 4.64 | 14 | 3.64 | 3.79 | 15 |

[[strikethrough]]3.03[[/strikethrough]]^[[2.99]] | 3.22 | 23 | 2.04 | 2.44 | 40 |

23 | 9, 8, 0, 17 | 10.4 | .19

4.49 | 4.64 | 15 | 3.61 | 3.79 | 18 | 3.03 | 3.22 | 19 | 2.16 | 2.44 | 28 | 20 |

5, 2, 1, 8 | 4.9 | .17

4.55 | 4.63 | 05 | 3.67 | 3.79 | 12 | 3.02 | 3.23 | 21 | 2.17 | 2.45 | 28 | 16 |

11, 4, 5, 12 | 8.7 | .14

4.56 | 4.65 | 09 | 3.58 | 3.80 | 22 | 2.98 | 3.23 | 25 | 2.03 | 2.45 | 42 | 24 |

15, 2, 1, 18 | 11.8 | .20

4.53 | 4.66 | 13 | 3.60 | 3.81 | 21 | 3.00 | 3.24 | 24 | 2.11 | 2.45 | 34 | 23 |

10, 2, 1, 11 | 7.5 | .19

4.46 | 4.66 | 20 | 3.52 | 3.84 | 32 | 2.93 | 3.26 | 33 | 2.00 | 2.45 | 45 | 32 |

12, 0, 1, 13 | 8.9 | .26

4.60 | 4.67 | 07 | 3.75 | 3.85 | 10 | 3.16 | 3.27 | 11 | - | - | - | 09 | 2, 1, 2 |

1.7 | .08

4.60 | 4.67 | 07 | 3.62 | 3.85 | 23 | 3.05 | 3.26 | 21 | - | - | - | 17 | 10, 6, 4 |

7.1 | .15

4.54 | 4.66 | 12 | 3.74 | 3.85 | 11 | 3.03 | 3.26 | 23 | - | - | - | 15 | 3, 4, 8 |

5.5 | .13

4.42 | 4.66 | 24 | 3.48 | 3.86 | 38 | 2.82 | 3.31 | 49 | 2.03 | 2.52 | 48 | 40 |

16, 2, 9 | 10.7 | .31

4.46 | 4.66 | 20 | 3.53 | 3.86 | 33 | 2.94 | 3.30 | 36 | 1.94 | 2.52 | 60 | 37 |

17, 4, 1, 23 | 14.4 | .29

4.52 | 4.65 | 13 | 3.61 | 3.86 | 25 | 3.00 | 3.31 | 31 | 2.15 | 2.51 | 36 | 26 |

13, 1, 5, 10 | 8.6 | .21

4.57 | 4.65 | 08 | 3.74 | 3.86 | 12 | 3.10 | 3.30 | 20 | 2.22 | 2.51 | 29 | 18 |

10, 6, 2, 11 | 8.0 | .15

4.56 | 4.65 | 09 | 3.67 | 3.87 | 20 | 3.05 | 3.30 | 25 | 2.20 | 2.48 | 28 | 20 |

11, 0, 5, 8 | 7.3 | .17

4.57 | 4.65 | 08 | 3.75 | 3.87 | 12 | 3.08 | 3.30 | 22 | 2.21 | 2.48 | 27 | 17 |

9, 5, 5, 10 | 7.6 | .15

4.42 | 4.65 | 13 | 3.53 | 3.86 | 33 | 3.03 | 3.30 | 27 | 1.87 | 2.47 | 60 | 33 |

20, 0, 6, 27 | 17.0 | .26

4.54 | 4.65 | 11 | 3.65 | 3.86 | 21 | 3.03 | 3.30 | 27 | 2.11 | 2.46 | 35 | 24 |

13, 3, 3, 11 | 8.5 | .20

4.54 | 4.64 | 10 | 3.61 | 3.80 | 19 | 2.98 | 3.28 | 30 | 2.08 | 2.44 | 36 | 24 |

14, 5, 6, 12 | 10.7 | .20

4.56 | 4.64 | 08 | 3.60 | 3.79 | 19 | 2.97 | 3.26 | 29 | 1.95 | 2.42 | 49 | 26 |

18, 7, 3, 23 | 15.1 | .21

4.61 | 4.64 | 03 | 3.62 | 3.79 | 17 | 2.95 | 3.25 | 30 | 2.15 | 2.41 | 26 | 19 |
 16, 2, 11, 7 | 10.4 | .16
 4.42 | 4.56 | 14 | 3.52 | 3.65 | 13 | 2.80 | 3.03 | 23 | - | - | - | 17 | 3, 4,
 6 | 4.5 | .15
 4.13 | 4.23 | 10 | 3.15 | 3.32 | 17 | 2.46 | 1.62 | 16 | 1.49 | 1.92 [[43]] 14 |
 4, 3, 2 | 3.2 | .12
 4.11 | 4.19 | 09 | 3.15 | 3.29 | 14 | - | - | - | - | - | - | 12 | 3, 2 |
 2.6 | .11
 3.96 | 4.10 | 14 | 2.92 | 3.24 | 32 | - | - | - | - | - | - | 23 | 9, 9 |
 9 | .19

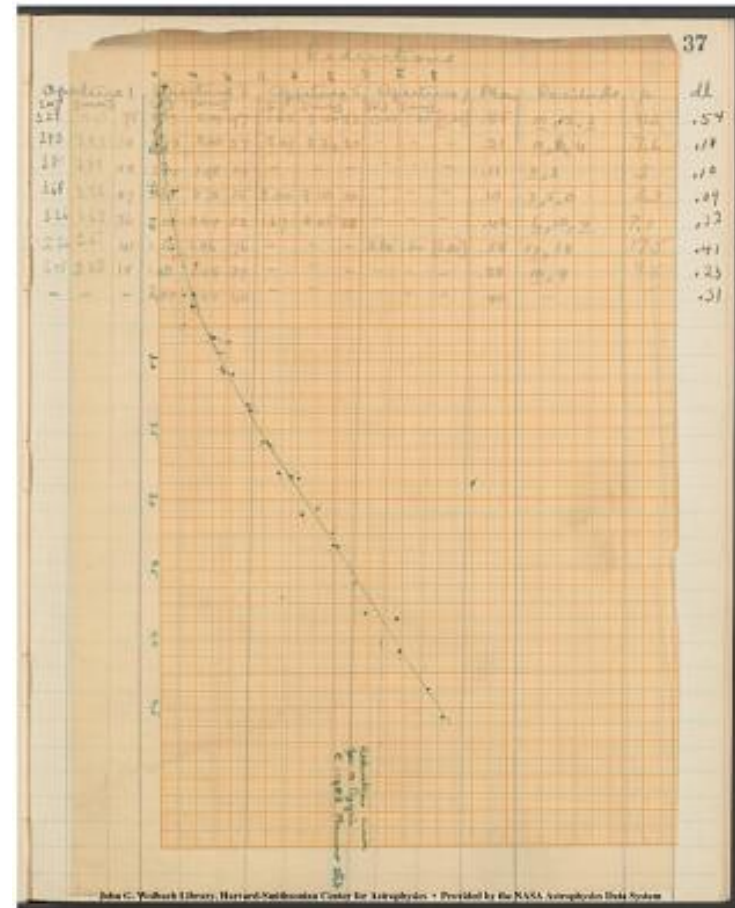
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[[graph]]

Reductions

Aperture 1		Aperture 3		Aperture 5		Aperture 7	
Mean	Residuals	dl					
[n]	[m+n]	[n]	[m+n]	[n]	[m+n]	[n]	[m+n]
3.28	4.03	75	2.77	7	3.77	4	97
1.30	.85	10	12.3	4.2	.54		
3.83	3.93	10	2.73	3.00	27	2.09	2.34
11	8.7	4	7.6	.18			
3.81	3.88	08	2.77	4	2.98	14	-
3	.10						
3.65	3.72	07	2.60	2.75	15	2.00	2.10
3.5	0	3.3	.09				
3.26	3.62	36	2.12	2.64	52	1.67	2.05
6	10.4	7.1	.32				
2.26	2.67	41	1.10	1.86	76	-	-
.58	17.18	17.5	.41				
2.05	2.23	18	1.08	1.45	37	-	-
10.9	9.5	.23					
-	-	1.40	40	-	-	-	-
-	.31						



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[[16 column table]]

Aperture 1 [n] | Aperture 1 [m+n] | Aperture 1 | Aperture 3 [n] | Aperture 3 [m+n] | Aperture 3 | Aperture 5 [n] | Aperture 5 [m+n] | Aperture 5 | Aperture 7 [n] | Aperture 7 [m+n] | Aperture 7 | Mean | Residuals | | dl
 3.28 | 4.03 | 75 | 2.17 | 3.14 | 97 | 1.62 | 2.44 | 82 | 0.50 | 1.80 | [1.30] |
 .85 | 10,12,3 | 9,2 | .54
 3.83 | 3.93 | 10 | 2.73 | 3.00 | 27 | 2.09 | 2.34 | 25 | - | - | - | .21 | 11,6,4 |
 7.6 | .18
 3.81 | 3.88 | 08 | 2.84 | 2.98 | 14 | - | - | - | - | - | .11 | 3,3 | 3 | .10
 3.66 | 3.72 | 07 | 2.60 | 2.75 | 15 | 2.00 | 2.10 | 10 | - | - | - | .10 | 3,5,0 |
 3.3 | .09
 3.26 | 3.62 | 36 | 2.12 | 2.64 | 54 | 1.67 | 2.05 | 38 | - | - | - | .42 | 6,10,4 |
 7.1 | .32
 2.26 | 2.67 | 41 | 1.10 | 1.86 | 76 | - | - | - | 0.60 | 1.60 | [1.00] | .58 | 17,18 |
 17.5 | .41
 2.05 | 2.23 | 18 | 1.08 | 1.45 | 37 | - | - | - | - | - | .28 | 10,9 | 9.5 | .23
 - | - | - | 1.00 | 1.40 | 40 | - | - | - | - | - | .40 | - | - | .31

Reductions

37

Aperture 1	Aperture 3	Aperture 5	Aperture 7	Mean	Residuals	μ	dl
3.28 3.28	4.03 2.17	75 3.14	97 1.62	2.44 82	0.50 1.80	[1.30]	.85
110 3.93	10 2.73	800 3.00	27 2.09	2.34 25	-	-	.21
11 3.81	08 2.84	2.98 14	-	-	-	-	.11
116 3.72	07 2.60	2.75 15	2.00 2.10	10	-	-	.10
123 3.62	36 2.12	2.64 54	1.67 2.05	38	-	-	.42
126 3.26	41 1.10	1.86 76	-	-	0.60	1.60	[1.00]
130 2.26	18 1.08	1.45 37	-	-	-	-	.23
-	-	-	1.00	1.40	40	-	-

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Cygni C18483. Long slit.

[[17 column table]]

No. | Line | Aperture 1 n | Aperture 1 m+n | Aperture 3 n | Aperture 3 m+n | Ap. 1 [n] | Ap. 1 [m+n] | Ap. 1 | Ap 3 [n] | Ap 3 [m+n] | Ap 3 | Mean
| Resid. | | dl | dl2

1 | | *7 | 40 | 0 | 15 | 0.28 ~~0.3~~ | 1.32
~~1.1~~ | 1.14 ~~0.80~~
~~0.0~~ | 0.0 ~~.52~~
~~0.5~~ | .52 ~~.50~~
~~1.14~~ | .65 ~~1.04~~

2 | | | | | | | | | | | | | | | | |
3 | | | | | | | | | | | | | | | | |
4 | | | | | | | | | | | | | | | | |
5 | | | | | | | | | | | | | | | | |
6 | | | | | | | | | | | | | | | | |
7 | | | | | | | | | | | | | | | | |

8 | | *39 | 47 | 23 | 28 | 1.28 ~~1.08~~ | 1.52 ~~1.28~~ | 24 ~~.20~~
~~0.80~~ | 0.68 ~~0.92~~
~~0.80~~ | .12 ~~.12~~
~~.18~~ | .16 ~~.24~~

9 | | | | | | | | | | | | | | | | |
10 | | *21 | 56 | ~~0.64~~ | 1.49 ~~0.74~~
~~75~~ | 1.90 | 1.16 | | | 1.16 ~~.75~~
~~.75~~ | 1.20
11 | | *45 | 59 | ~~1.23~~ | 1.58 ~~1.46~~
~~35~~ | 2.00 | 54 | | | .54 ~~.35~~

12 | | | | | | | | | | | | | | | | |
13 | | | | | | | | | | | | | | | | |
14 | | | | | | | | | | | | | | | | |
15 | | | | | | | | | | | | | | | | |
16 | | | | | | | | | | | | | | | | |
17 | | | | | | | | | | | | | | | | |

18 | | *27 | 74 | 12 | 52 | 0.91 ~~0.77~~ | 2.54 ~~1.98~~ | 1.64 ~~1.21~~
~~0.44~~ | 0.43 ~~1.75~~
~~1.40~~ | 1.31 ~~0.97~~
~~1.47~~ | 1.09 ~~1.47~~

19 | | | | | | | | | | | | | | | | |
20 | | | | | | | | | | | | | | | | |
21 | | | | | | | | | | | | | | | | |
22 | | | | | | | | | | | | | | | | |
23 | | | | | | | | | | | | | | | | |
24 | | | | | | | | | | | | | | | | |
25 | | | | | | | | | | | | | | | | |
26 | | | | | | | | | | | | | | | | |
27 | | | | | | | | | | | | | | | | |
28 | | | | | | | | | | | | | | | | |
29 | | | | | | | | | | | | | | | | |

38

Cygni C18483. Long slit.

No.	Line	Aperture 1 n	Aperture 1 m+n	Aperture 3 n	Aperture 3 m+n	Ap. 1 [n]	Ap. 1 [m+n]	Ap. 1	Ap 3 [n]	Ap 3 [m+n]	Ap 3	Mean	Resid.	dl	dl2
1		*7	40	0	15	0.28	0.3	1.32							
2															
3															
4															
5															
6															
7															
8		*39	47	23	28	1.28	1.08	1.52	24	.20					
9															
10		*21	56			0.64	1.49	0.74							
11		*45	59			1.23	1.58	1.46							
12															
13															
14															
15															
16															
17															
18		*27	74	12	52	0.91	0.77	2.54	1.98	1.64	1.21				
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															

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[[17 column table]]

No | Line | Aperture 1 n | Aperture 1 m+n | Aperture 3 n | Aperture 3 m+n
| Ap. 1 [n] | Ap. 1 [m+n] | Ap. 1 | Ap. 3 [n] | Ap. 3 [m+n] | Ap. 3 | Mea |

Res. | | dl % | dl2 %

90	|	|	|	|	|	|	|	|	|	|	|	|	|	|	|	|	|
91	|	*51	|	75	|	18	|	45	|	1.72	|	1.37	|	1.37	|		
92	|		|		|		|		|	2.58	|	2.02	|	2.02	|	86	|
93	|		|		|		|		|	0.64	|	0.64	|	0.57	|	1.46	|
94	|		|		|		|		|	1.23	|	1.23	|	82	|	66	|
95	|		|		|		|		|	84	|	66	|	66	|		|
96	|		|		|		|		|		|		|		|		|
97	|		|		|		|		|		|		|		|		|
98	|		|		|		|		|		|		|		|		|

41																
No	Line	Aperture 1		Aperture 3		Ap. 1		Ap. 3		Mea. Res.		p. dl		dl2		
		n	m+n	n	m+n	[n]	[m+n]	[n]	[m+n]			%	%			
90																
91		851	75	18	45	1.72	2.58	86	1.46	1.46	1.46	83	84			
92																
93																
94																
95																
96		827	42	0	8	0.90	0.78	46	0.78	3+	40					
97																
98																

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[[preprinted]] 42 [[/preprinted]]
 alpha Cygni
 Lines of known series short slit reductions used

Ionized Titanium

| | | Int. | delta m | dl

[[image graphs overlain on page columns]]

4450.49 | 1^[[2]]D-1^[[2]]F^[[1]] | 1.08 | 4 | 18 | .15

4443.80 | | 25 | 28 | .25

4395.04 | | 25 | 21 | .18

4344.31 | 1^[[2]]D-1^[[2]]D^[[1]] | 1.08 | 3 | | |

4337.92 | | 10 | | |

4294.10 | | 8 | | |

4287.88 | | 2 | | |

4501.27 | 1^[[2]]G-1^[[2]]F^[[1]] | 12 | 25 | 16 | .14

4468.49 | | 25 | 23 | .9

4341.39 | (1^[[2]]G-1^[[2]]D^[[1]]) | | 2 | | |

3913.45 | 1^[[2]]G-1^[[2]]G^[[1]] | | 40 | 42 | .32

3900.53 | | 50 | 78 | .51

4417.71 | (1^[[4]]P-1^[[2]]D) | 1.16 | 8 | 36 | .28

4330.71 | 1^[[4]]P-1^[[4]]D^[[1]] | 1.16 | | |

4320.95 | | 1 | 12 | .11 | Sc+

4314.98 | | 5 | 23 | .19 | Fe

4312.88 | | 7 | | |

4307.89 | | 12 | 15 | .13

4301.93 | | 5 | 33 | .26 | Ca, Ti+

4300.05 | | 12 | 16 | .14

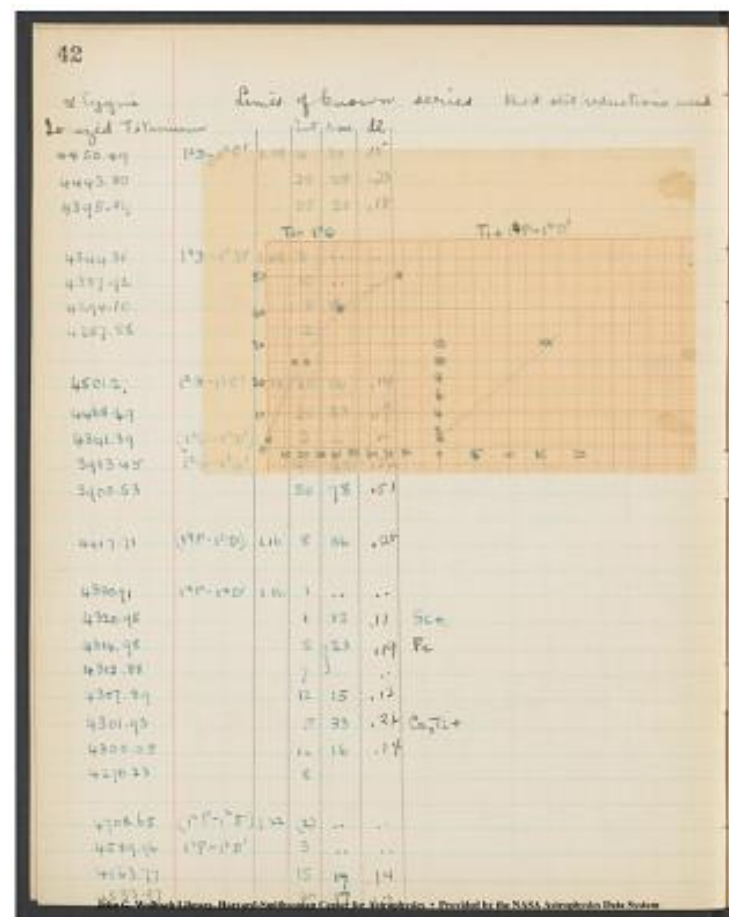
4290.23 | | 8 | | |

4708.65 | (1^[[2]]P-1^[[2]]F^[[1]]) | 1.22 | (2) | | |

4589.96 | 1^[[2]]P-1^[[2]]D^[[1]] | | 3 | | |

4563.77 | | 15 | 17 | .14

4533.97 | | 20 | 17 | .14



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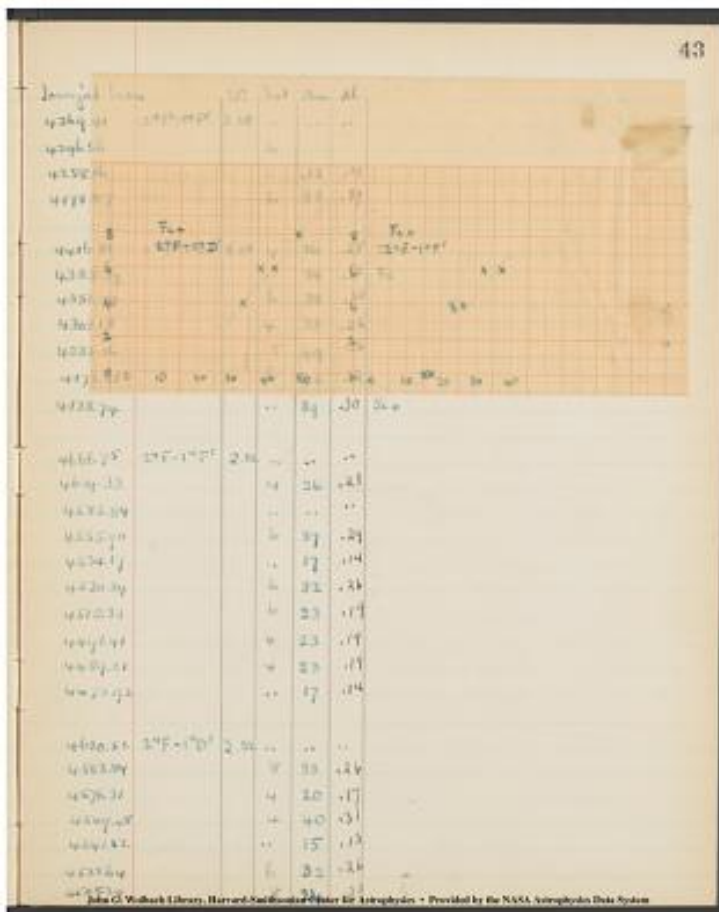
[[preprinted]] 43 [[/preprinted]]
 Ionized Iron
 | | | E.P. | Int. | delta m | dl
 [[image graph overlain on page]]

4369.41 | 2[^][[4]]P-1[^][[4]]P[^][[1]] | 2.68 | | |
 4296.56 | | 6 | | |
 4258.16 | | | .12 | .11
 4178.57 | | | 6 | .53 | .39

4416.81 | 2[^][[4]]P-1[^][[4]]D[^][[1]] | 2.69 | 4 | 36 | .28 | Fe
 4385.39 | | | 38 | .30 | Fe
 4356.77 | | 6 | 38 | .30
 4303.18 | | 4 | 33 | .26
 4233.16 | | 8 | 49 | |
 4173.48 | | 6 | 42 | .32
 4128.74 | | | 39 | .30 | Si+

4666.75 | 2[^][[4]]F-1[^][[4]]F[^][[1]] | 2.82 | | | |
 4629.33 | | 4 | 26 | .21
 4582.84 | | | | |
 4555.90 | | 6 | 37 | .29
 4534.17 | | | 17 | .14
 4520.24 | | 6 | 32 | .26
 4515.33 | | 6 | 23 | .19
 4491.41 | | 4 | 23 | .19
 4489.21 | | 4 | 23 | .19
 4472.93 | | | 17 | .14

4620.52 | 2[^][[4]]F-1[^][[4]]D[^][[1]] | 2.82 | | | |
 4583.84 | | 8 | 33 | .26
 4576.31 | | 4 | 20 | .17
 4549.48 | | 4 | 40 | .31
 4541.52 | | | 15 | .13
 4522.64 | | 6 | 32 | .26
 4508.29 | | | 8 | 24 | .20



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[[preprinted]] 43 [[/preprinted]]
 Ionized Iron | E.P. | Int. | delta m | dl
 4369.41 | 2^[[4]]P-1^[[4]]P^[[1]] | 2.68 | | |
 4296.56 | | 6 | | |
 4258.16 | | | .12 | .11 | [[image graph]]
 4178.87 | | 6 | 53 | .39

4416.81 | 2^[[4]]P-1^[[4]]D^[[1]] | 2.63 | 4 | 36 | .28 | Ti+
 4385.39 | | 6 | 38 | .30 | Fe
 4351.77 | | 4 | 33 | .26
 4233.16 | | 8 | 49 | .36
 4173.48 | | 6 | 42 | .32
 4128.74 | | | 39 | .30 | Si+

4666.75 | 2^[[4]]F-1^[[4]]F^[[1]] | 2.82 | | | |
 4629.33 | | 4 | 26 | .21
 4582.84 | | | | |
 4555.90 | | 6 | 37 | .29
 4534.17 | | | 17 | .14
 4520.24 | | 6 | 32 | .26
 4515.33 | | 6 | 23 | .19
 4591.41 | | 4 | 23 | .19
 4489.21 | | 4 | 23 | .19
 4472.93 | | | 17 | .14

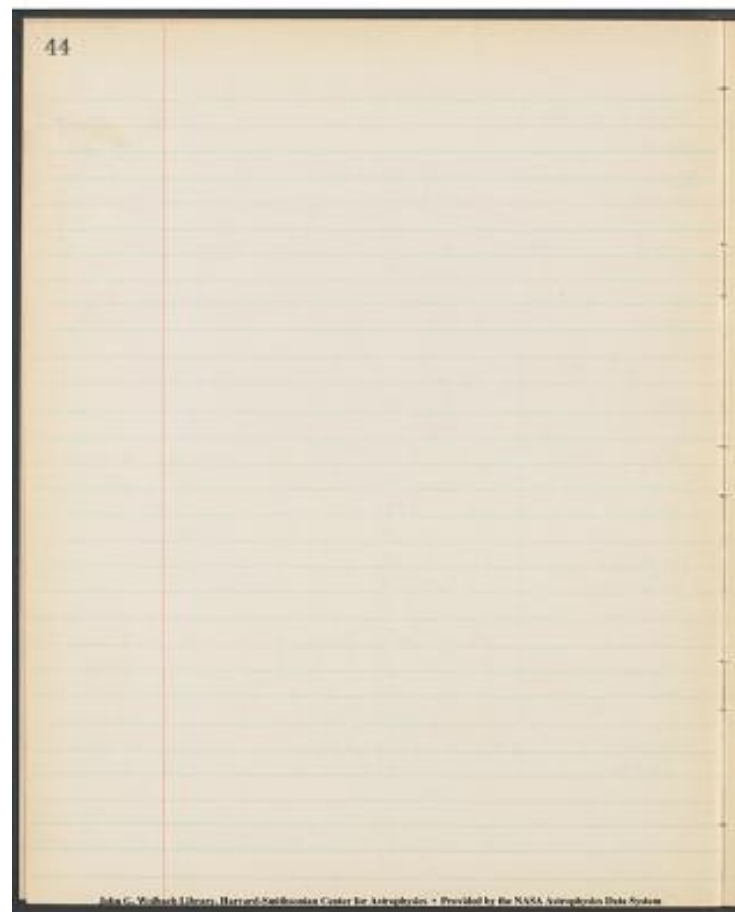
4620.52 | 2^[[4]]F-1^[[4]]D^[[1]] | 2.02 | | | |
 4583.94 | | 8 | 33 | .26
 4576.31 | | 4 | 20 | .17
 4549.48 | | 4 | 40 | .31
 4541.52 | | | 15 | .13
 4522.64 | | 6 | 32 | .26
 4508.29 | | 8 | 24 | .20

43

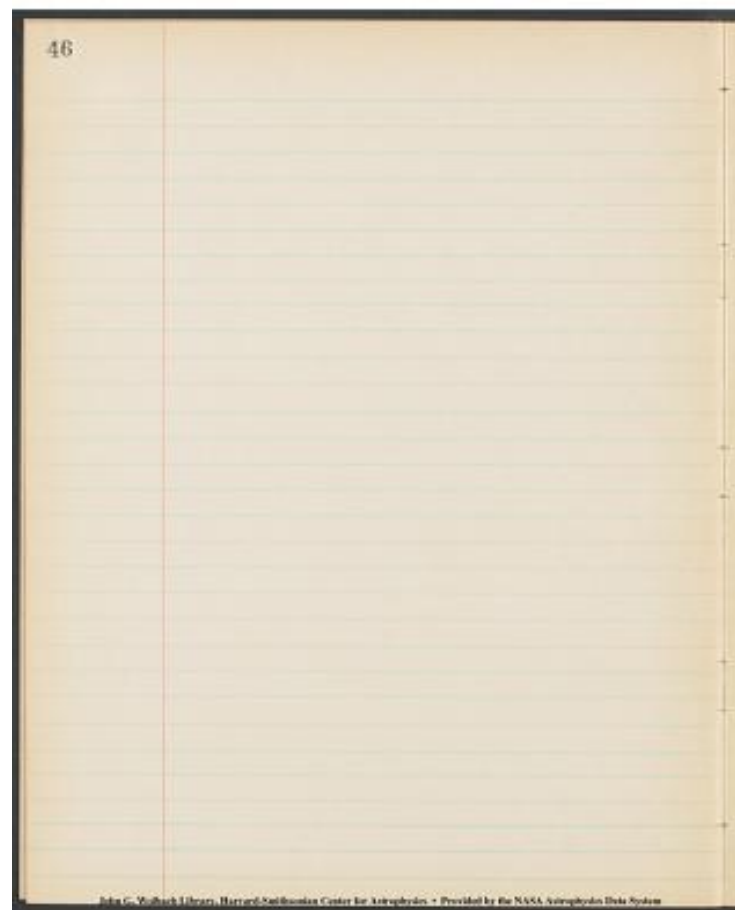
Wavelength	Ion	Wavelength	Ion	Wavelength	Ion
4369.41	Fe II	4385.39	Fe II	4416.81	Ti II
4385.39	Fe II	4416.81	Ti II	4472.93	Si II
4416.81	Ti II	4472.93	Si II	4508.29	Fe II
4472.93	Si II	4508.29	Fe II	4522.64	Fe II
4508.29	Fe II	4522.64	Fe II	4534.17	Fe II
4522.64	Fe II	4534.17	Fe II	4541.52	Fe II
4534.17	Fe II	4541.52	Fe II	4549.48	Fe II
4541.52	Fe II	4549.48	Fe II	4555.90	Fe II
4549.48	Fe II	4555.90	Fe II	4576.31	Fe II
4555.90	Fe II	4576.31	Fe II	4582.84	Fe II
4576.31	Fe II	4582.84	Fe II	4583.94	Fe II
4582.84	Fe II	4583.94	Fe II	4591.41	Fe II
4583.94	Fe II	4591.41	Fe II	4620.52	Ti II
4591.41	Fe II	4620.52	Ti II	4629.33	Fe II
4620.52	Ti II	4629.33	Fe II	4666.75	Fe II
4629.33	Fe II	4666.75	Fe II		

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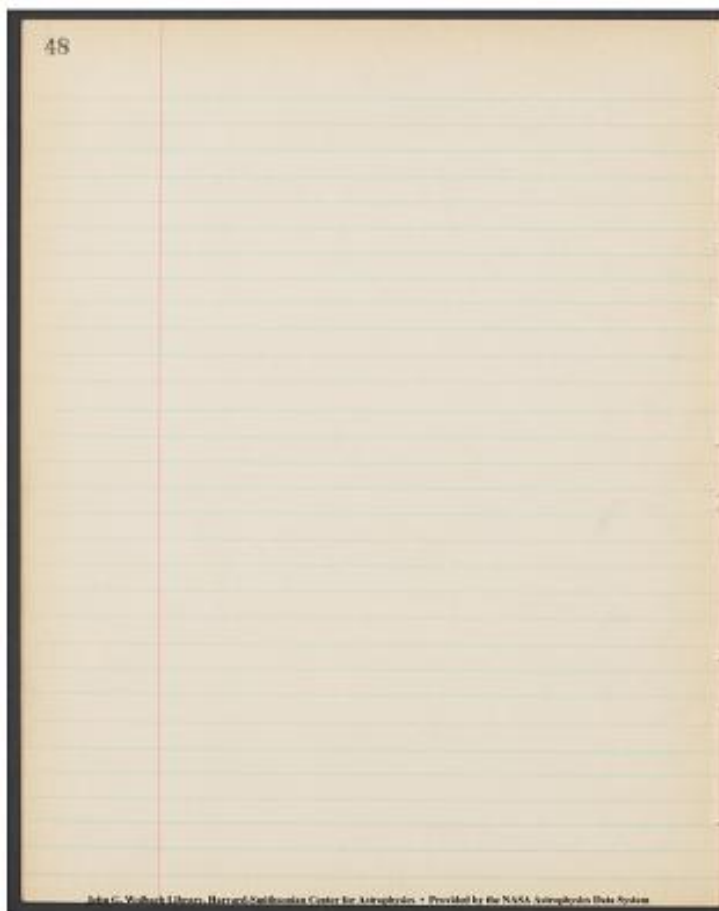
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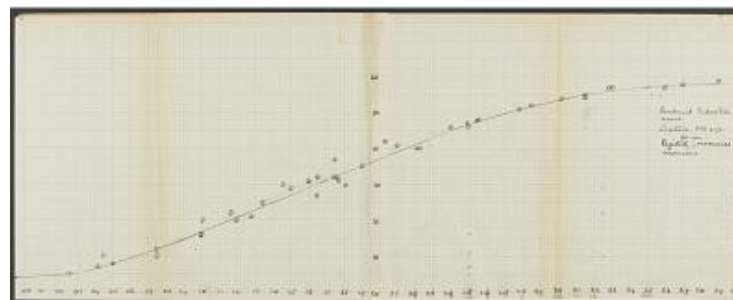
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[[image - line graph drawn through data points]]

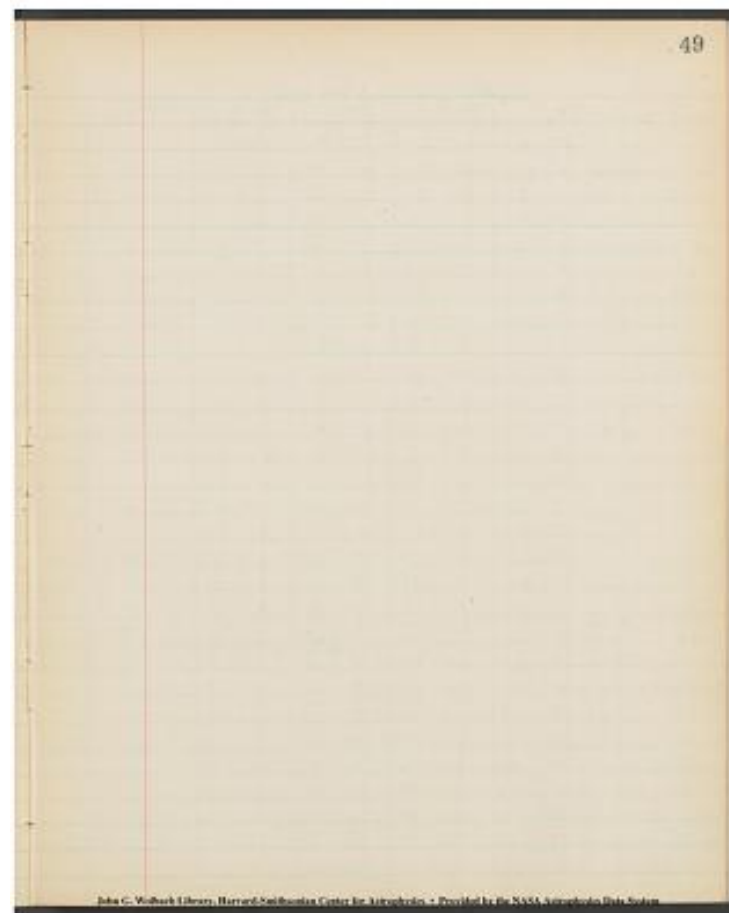
Combined Reduction curve

Capella MC 21721

Rejected [^][[for use]]; measures erroneous



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[[preprinted]] 50 [[/preprinted]]

Capella (Aurigae) MC 21721

[[12 column table]]

No. | x | Ap. 1a n | Ap. 1a m+n | Ap. 1b n | Ap. 1b m+n | Ap. 2 n | Ap. 2 m+n | wrong scale - Ap. 3 n | Ap. 3 m+n | Ap. 4 n | Ap. 4 m+n

1	|	3	7	5	8	-	-	-	-	-	-
2	|	4	8	6	9	-	-	-	-	-	-
3	|	7	9	7	11	-	-	-	-	-	-
4	|	4	8	8	12	-	-	-	-	-	-
5	|	7	10	8	13	-	-	-	-	-	-
6	|	4	10	5	13	-	-	-	-	-	-
7	|	6	12	7	13	3	6	-	-	-	-
8	|	5	12	7	14	2	7	-	-	-	-
9	|	7	14	8	15	4	7	-	-	-	-
10	|	10	15	11	16	5	8	-	-	-	-
11	|	11	16	-	-	-	-	-	-	-	-
12	|	15	17	16	19	-	-	-	-	-	-
13	|	13	19	13	21	5	10	1	2	-	-
14	|	12	20	13	22	6	11	1	2	-	-
15	|	13	20	13	23	7	12	0	2	-	-
16	|	20	22	21	25	10	13	1	2	-	-
17	|	17	25	18	26	8	14	1	2	-	-
18	|	17	26	18	28	7	15	0	2	-	-
19	|	17	27	17	29	8	16	0	2	-	-
a	|	a	-	a	-	a	19	a	29	a	8
20	|	18	30	17	32	8	18	23	23	23	23
4	|	-	-	-	-	-	-	-	-	-	-
a	|	a	-	a	-	a	-	a	-	a	-
21	|	30	32	30	35	18	21	5	5	-	-
22	|	31	34	31	37	19	23	4	6	-	-
a	|	-	-	32	39	20	25	6	8	a	-
23	|	32	37	32	40	20	26	5	9	-	-
24	|	35	40	35	43	22	30	7	12	-	-
25	|	39	43	39	46	27	34	9	14	-	-
26	|	40	44	40	46	29	35	10	14	-	-
27	|	40	46	41	47	29	37	11	16	-	-
a	|	a	-	a	-	a	-	a	32	a	38
28		47	48	47	49	38	39	16	17	-	-
29		48	49	49	51	39	41	18	19	-	-
30		48	57	48	51	38	41	18	21	-	-
a		a	-	a	-	a	-	a	18	a	20

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Reductions

[[19 column table]]

Ap. 1a [n] | Ap. 1a [m+n] | Ap. 1a m | Ap. 2 [n] | Ap. 2 [m+n] | Ap. 2 m |
 Ap. 3 [n] | Ap. 3 [m+n] | Ap. 3 m | Ap. 4 [n] | Ap. 4 [m+n] | Ap. 4 m | Mean
 | Red. | . | dl

.46	.28	.54	.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.0	.54	.54	.40	.58	.18	-	-	-	-	-	-	-	-	-	-	56	18.18	18
.28																		
.46	.58	.12	.46	.70	.24	-	-	-	-	-	-	-	-	-	-	18	6.6	6
0.0	.54	.54	.54	.76	.22	-	-	-	-	-	-	-	-	-	-	38	16.16	16
.46	.64	.18	.54	.82	.28	-	-	-	-	-	-	-	-	-	-	23	5.5	5
0.0	.64	.64	.28	.82	.54	-	-	-	-	-	-	-	-	-	-	59	5.5	5
.40	.76	.36	.46	.82	.36	.39	.40	.01	-	-	-	-	-	-	-	24		
12.12.23	165	20																
.28	.76	.48	.46	.88	.42	.46	-	-	-	-	-	-	-	-	-			
.46	.88	.42	.54	.92	.38	0.0	.46	.46	-	-	-	-	-	-	-	42	0.4,4	
3.3	.32																	
.64	.92	.28	.70	.92	.22	.28	.54	.26	-	-	-	-	-	-	-	25	3.3,1	
2.4	.21																	
.70	.98	.28	-	-	-	-	-	-	-	-	-	-	-	-	-	28	0	0
.88	1.02	.14	.92	1.12	.20	-	-	-	-	-	-	-	-	-	-	17	3.3	3
.82	1.12	.30	.82	1.21	.39	.28	.64	.36	-	-	-	-	-	-	-	35	5.4,1	
65	.28																	
.76	1.17	.41	.82	1.26	.44	.40	.70	.20	-	-	-	-	-	-	-			
.82	1.17	.35	.82	1.31	.49	.46	.76	.30	-	-	-	-	-	-	-			
1.17	1.26	.09	1.21	1.40	.19	.64	.82	.18	-	-	-	-	-	-	-			
1.02	1.40	.38	1.08	1.46	.38	.54	.88	.34	-	-	-	-	-	-	-			
1.02	1.46	[[strike through]]	50	[[strike through]]	[[strike through]]	.44	1.08	1.56	.48	-	-	-	-	-	-			
.46	.92	.46	-	-	-	-	-	-	-	-	-	-	-	-	-			
[[strike through]]	a)-	[[strike through]]	1.02	[[strike through]]	a)-	[[strike through]]	1.50	[[strike through]]	66	[[strike through]]	.48	1.02	1.80	-	-			
.58	.54	.98	.44	-	-	-	-	-	-	-	-	-	-	-	-			
a)-	a)-	-	a) 1.12	a) 1.60	.48	a) .54	.98	.44	-	-	-	-	-	-	-	46		
2.2	2	.35																
1. [[strike through]]	66	[[strike through]]	08	1.76	.58	1.02	1.75	.73	-	-	-	-	-	-	-			
.54	1.08	.54	0.0	-	-	-	-	-	-	-	-	-	-	-	-			
a)-	a)-	-	a)-	a)-	-	a) .76	a) 1.17	.41	-	-	-	-	-	-	-			
1. [[strike through]]	70	[[strike through]]	66	1.75	.09	1.66	1.90	.24	-	-	-	-	-	-	-			
1.08	1.21	.13	.28	.28	.0	-	-	.11	2.13,2	13.3	.10	-	-	-	-			
1.70	1.85	.15	1.70	2.00	.30	1.12	1.31	.19	0.0	.40	.40	-	-	-	-			
-	26	11,4,7,14	9.8	.21														
a)-	-	-	a) 1.75	2.10	.35	a) 1.17	1.41	.24	a) .40	.54	.14	-	-	-	-			
24	11,0,10	8.5	.20															
1.75	2.00	.25	1.75	2.14	.39	1.17	1.46	.29	.28	.58	.30	-	-	-	-			
31	6.8,2,1	5.1	.25															
1.90	2.14	.24	1.90	2.29	.39	1.26	1.66	.40	.46	.76	.30	-	-	-	-			
33	9,6,7,3	6.6	.26															
2.10	2.29	.19	2.10	2.46	.36	1.50	1.85	.35	.58	.88	.30	-	-	-	-			
30	11,6,5,0	6.7	.24															
2.14	2.35	.21	2.14	2.46	.32	1.60	1.90	.30	.64	.88	.24	-	-	-	-			
27	6,5,3,3	4.5	.22															
2.14	2.46	.32	2.20	2.52	.32	1.60	2.00	.40	.70	.92	.22	-	-	-	-			
31	1,0,9,9	3	.25															
a)-	a)-	-	a)-	a)-	-	a) 1.75	2.05	.30	-	-	-	-	-	-	-	30	0	0
2.52	2.58	.06	2.52	2.65	.13	2.05	2.10	.05	.92	1.02	.10	-	-	-	-			
-	8	2,5,3,2	6.5	.07														
2.58	2.65	.07	2.65	2.78	.13	2.10	2.20	.10	1.08	1.12	.04	-	-	-	-			

51

Reductions

Op. 1a	Op. 1b	Op. 2	Op. 3	Op. 4	Mean	Res.	dl
Obs. (mm) Alt.	Obs. (mm) Alt.	Obs. (mm) Alt.	Obs. (mm) Alt.	Obs. (mm) Alt.			
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

John C. Vothak & Others, Harvard-Smithsonian Center for Astrophysics, 1965. Digitized by the NASA Astrophysics Data System

| - | 8 | 1,5,2,4 | 3.3 | .07
2.58 | 2.78 | .20 | 2.58 | 2.78 | .2 | 2.05 | 2.20 | 15 | 1.08 | 1.21 | 13 | - | - |
- | 17 | 3,32,4 | 3 | .15
a)- | a)- | - | - | a)- | - | - | - | - | 1.08 | 1.17 | 09 | | | | 9 | 0 | 0 | .08

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^[[wrong scale]] ^[[arrow to "Ap. 3" column]]

No	Ap. 1 a	Ap. 1 b	Ap 2	Ap. 3	Ap. 4
	n m+n	n m+n	n m+n	n m+n	n m+n
61	- -	- -	55 56	45 48	31 36
62	58 | 61	57 | 59	54 | 56	42 | 48	28 | 36
63	- | -	58 | 59	56 | 56	46 | 49	32 | 36
64	- | -	58 | 59	55 | 56	45 | 48	32 | 37
65	58 | 61	57 | 59	53 | 56	42 | 48	27 | 37
66	- | -	58 | 59	56 | 56	47 | 48	34 | 37
67	- | -	59 | 59	56 | 56	47 | 48	35 | 36
68	- | -	58 | 59	- | -	- | -	35 | 36
69	- | -	- | -	56 | 57	45 | 48	32 | 36
70	58 | 60	57 | 60	53 | 58	42 | 48	26 | 36
71	- | -	- | -	56 | 57	46 | 48	33 | 36
72	- | -	- | -	56 | 58	46 | 48	32 | 35
73	- | -	- | -	56 | 58	46 | 48	33 | 35
74	- | -	- | -	56 | 58	46 | 48	32 | 35
75	58 | 60	58 | 60	55 | 57	45 | 48	30 | 35
76	- | -	- | -	- | -	46 | 48	33 | 35
a)	- | -	- | -	a) 57 | 57	a) 48 | 48	a) - | -
77	59 | 61	57 | 60	55 | 59	43 | 47	30 | 35
78	- | -	- | -	56 | 58	46 | 47	33 | 36
79	- | -	- | -	56 | 58	45 | 47	31 | 36
80	- | -	- | -	55 | 58	45 | 47	30 | 35
81	- | -	- | -	- | -	46 | 47	32 | 35
82	- | -	- | -	- | -	47 | 47	34 | 36
83	- | -	- | -	- | -	46 | 47	35 | 36
84	- | -	- | -	- | -	46 | 47	34 | 36
85	58 | 61	56 | 60	53 | 58	42 | 47	28 | 36
86	59 | 61	57 | 59	55 | 59	44 | 47	30 | 36
87	- -	- -	56 59	45 47	32 37
88	- -	- -	55 58	45 47	31 37
89	- -	- -	- -	46 47	33 37
90	59 61	57 60	54 58	43 47	29 37

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[[preprinted]] 56 [[/preprinted]]
 No. | lambda | Ap. 1a n | Ap. 1a m+n | Ap. 1b n | Ap. 1b m+ n | Ap.2 n |
 Ap. 2 m+n | Ap.3 n | Ap. 3 m+n | Ap.4 n | Ap. 42 m+n

91	|	-	|	-	|	-	|	-	|	55	|	59	|	44	|	47	|	30	|	37
92	|	-	|	-	|	56	|	59	|	55	|	59	|	45	|	47	|	30	|	37
93	|	-	|	-	|	-	|	-	|	-	|	-	|	-	|	34	|	37		
94	|	-	|	-	|	58	|	59	|	56	|	59	|	47	|	49	|	33	|	36
95	|	59	|	61	|	57	|	59	|	56	|	59	|	46	|	49	|	31	|	37
96	|	57	|	61	|	55	|	59	|	53	|	59	|	43	|	50	|	27	|	38
97	|	-	|	-	|	58	|	59	|	56	|	59	|	47	|	50	|	33	|	38
98	|	-	|	-	|	58	|	59	|	57	|	59	|	47	|	50	|	33	|	38
99	|	-	|	-	|	-	|	-	|	-	|	-	|	48	|	50	|	35	|	38
100	|	-	|	-	|	-	|	-	|	-	|	-	|	-	|	-	|	37	|	38
101	|	60	|	61	|	57	|	59	|	56	|	59	|	47	|	50	|	34	|	38
102	|	-	|	-	|	58	|	59	|	57	|	59	|	48	|	50	|	36	|	39
103	|	59	|	61	|	57	|	59	|	56	|	59	|	47	|	50	|	34	|	39
104	|	59	|	61	|	57	|	59	|	55	|	59	|	46	|	52	|	31	|	40
105	|	-	|	-	|	-	|	-	|	57	|	59	|	48	|	52	|	37	|	40
106	|	-	|	-	|	58	|	59	|	58	|	59	|	48	|	52	|	36	|	40
107	|	-	|	-	|	58	|	59	|	57	|	59	|	48	|	52	|	35	|	41
108	|	59	|	61	|	58	|	59	|	56	|	59	|	47	|	53	|	32	|	41
109	|	-	|	-	|	-	|	-	|	-	|	-	|	48	|	53	|	35	|	41
110	|	58	|	61	|	56	|	59	|	53	|	59	|	42	|	53	|	27	|	41
111	|	-	|	-	|	-	|	-	|	-	|	-	|	44	|	53	|	29	|	41
112	|	58	|	61	|	56	|	59	|	53	|	59	|	43	|	53	|	28	|	41
a	|	a	|	a	|	a	|	a	|	a	|	a	|	a	|	a	|	49	|	a
113	|	59	|	61	|	58	|	59	|	55	|	59	|	47	|	53	|	33	|	42
114	|	-	|	-	|	59	|	59	|	59	|	59	|	51	|	53	|	39	|	42
115	|	-	|	-	|	-	|	-	|	-	|	-	|	-	|	38	|	42		
116	|	-	|	-	|	-	|	-	|	-	|	-	|	-	|	41	|	42		
117	|	59	|	61	|	58	|	59	|	57	|	59	|	49	|	53	|	37	|	42
118	|	-	|	-	|	59	|	59	|	58	|	59	|	50	|	53	|	40	|	42
119	|	-	|	-	|	59	|	59	|	58	|	59	|	50	|	53	|	40	|	42
120	|	-	|	-	|	59	|	59	|	59	|	59	|	51	|	53	|	39	|	42

56

No.	λ	Ap. 1a	Ap. 1b	Ap. 2	Ap. 3	Ap. 4	Ap. 5	Ap. 6	Ap. 7	Ap. 8	Ap. 9	Ap. 10	Ap. 11	Ap. 12	Ap. 13	Ap. 14	Ap. 15	Ap. 16	Ap. 17	Ap. 18	Ap. 19	Ap. 20
91	55	59	44	47	30	37																
92	56	59	55	59	45	47	30	37														
93																						
94	58	59	56	59	47	49	33	36														
95	59	61	57	59	56	59	46	49	31	37												
96	57	61	55	59	53	59	43	50	27	38												
97																						
98																						
99																						
100																						
101	60	61	57	59	56	59	47	50	34	38												
102																						
103	59	61	57	59	56	59	47	50	34	39												
104	59	61	57	59	55	59	46	52	31	40												
105																						
106																						
107																						
108	59	61	58	59	56	59	47	53	32	41												
109																						
110	58	61	56	59	53	59	42	53	27	41												
111																						
112	58	61	56	59	53	59	43	53	28	41												
a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
113	59	61	58	59	55	59	47	53	33	42												
114																						
115																						
116																						
117	59	61	58	59	57	59	49	53	37	42												
118																						
119																						
120																						

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Ap. 1a n | Ap. 1a m+n | Ap. 1a delta m | Ap. 1b n | Ap. 1b m+n | Ap. 1b
delta m | Ap. 2 n | Ap. 2 m+n | Ap. 2 delta m | Ap. 3 n | Ap. 3 m+n | Ap. 3
delta m | Ap. 4 n | Ap. 4 m+n | Ap. 4 delta m

-	-	-	-	-	-	3.14	|	|	2.35	2.52	17	|	1.65	2.00	35	
-	-	-	3.30	|	|	3.14	|	|	2.39	2.52	13	|	1.65	2.00	35	
-	-	-	-	-	-	-	-	-	1.85	2.00	15	|	|	|	|	
-	-	-	3.80	|	|	3.30	|	|	2.52	2.65	13	|	1.81	1/94	13	
3.50	|	|	3.46	|	|	3.30	|	|	2.46	2.65	19	|	1.71	2.00	21	
3.50	-	|	3.14	|	|	2.96	|	|	2.29	2.71	42	|	1.51	2.04	53	
-	-	-	3.80	|	|	3.30	|	|	2.52	2.71	19	|	[[strikethrough]]	1.51	[[/strikethrough]]	
[[/strikethrough]]	1.80	2.04	24	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	3.80	|	|	3.46	|	|	2.52	2.11	19	|	[[strikethrough]]	1.89	[[/strikethrough]]	
[[/strikethrough]]	1.80	2.04	24	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	-	-	-	-	-	-	2.58	2.71	13	|	[[strikethrough]]	2.00	[[/strikethrough]]	
[[/strikethrough]]	1.89	2.04	15	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	-	-	-	-	-	-	[[strikethrough]]	1.85	[[/strikethrough]]	|	[[strikethrough]]	2.00	[[/strikethrough]]	
2.00	2.04	14	|	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	3.46	|	|	3.30	|	|	2.52	2.71	19	|	1.	[[strikethrough]]	94	
[[/strikethrough]]	85	2.09	24	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	3.80	|	|	3.46	|	|	2.58	2.71	13	|	[[strikethrough]]	1.85	[[/strikethrough]]	
[[/strikethrough]]	1.94	2.09	15	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	3.46	|	|	3.30	|	|	2.52	2.71	19	|	1.	[[strikethrough]]	1.71	
[[/strikethrough]]	85	2.15	30	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	3.46	|	|	3.14	|	|	2.46	2.88	42	|	[[strikethrough]]	1.85	[[/strikethrough]]	
[[/strikethrough]]	1.70	2.15	45	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	-	-	-	3.46	|	|	2.58	2.88	30	|	[[strikethrough]]	1.94	[[/strikethrough]]	
[[/strikethrough]]	2.00	2.15	15	|	|	|	|	|	|	|	|	|	|	|	|	
-	-	-	3.80	|	|	3.80	|	|	2.58	2.88	30	|	1.94	2.15	21	
-	-	-	3.80	|	|	3.46	3.46	|	|	2.58	2.88	30	|	1.89	2.20	31
-	-	-	3.80	|	|	3.30	|	|	2.52	2.96	44	|	1.75	2.20	45	
-	-	-	-	-	-	-	-	-	2.58	2.96	38	|	1.81	2.20	39	
3.80	-	|	3.30	|	|	2.96	|	|	2.25	2.96	71	|	1.51	2.20	69	
-	-	-	-	-	-	-	-	-	2.58	2.96	38	|	1.81	2.20	39	
3.80	|	|	3.30	|	|	2.96	|	|	2.25	2.96	71	|	1.51	2.20	69	
-	-	-	-	-	-	-	-	-	2.35	2.96	61	|	1.61	2.20	59	
3.80	|	|	3.30	|	|	2.96	|	|	2.29	2.96	67	|	1.55	2.20	65	
a)-	a)-	-	-	-	-	-	-	-	a) 2.65	2.96	31	|	-	-	-	
|	|	|	3.80	|	|	3.14	|	|	2.52	2.96	44	|	1.81	2.25	44	
-	-	-	-	-	-	-	-	-	2.78	2.96	18	|	2.10	2.25	15	
3.80	|	|	3.30	|	|	3.06	|	|	2.39	2.96	57	|	1.65	2.25	60	
-	-	-	-	-	-	-	-	-	2.04	2.25	21	|	|	|	|	
-	-	-	-	-	-	-	-	-	2.19	2.25	6					
			3.80			3.46			2.65	2.96	31		2.00	2.25	25	
-	-	-	-	-	-	3.80			2.71	2.96	25		2.15	2.25	10	
-	-	-	-	-	-	-	-	-	2.71	2.96	18		2.09	2.25	16	

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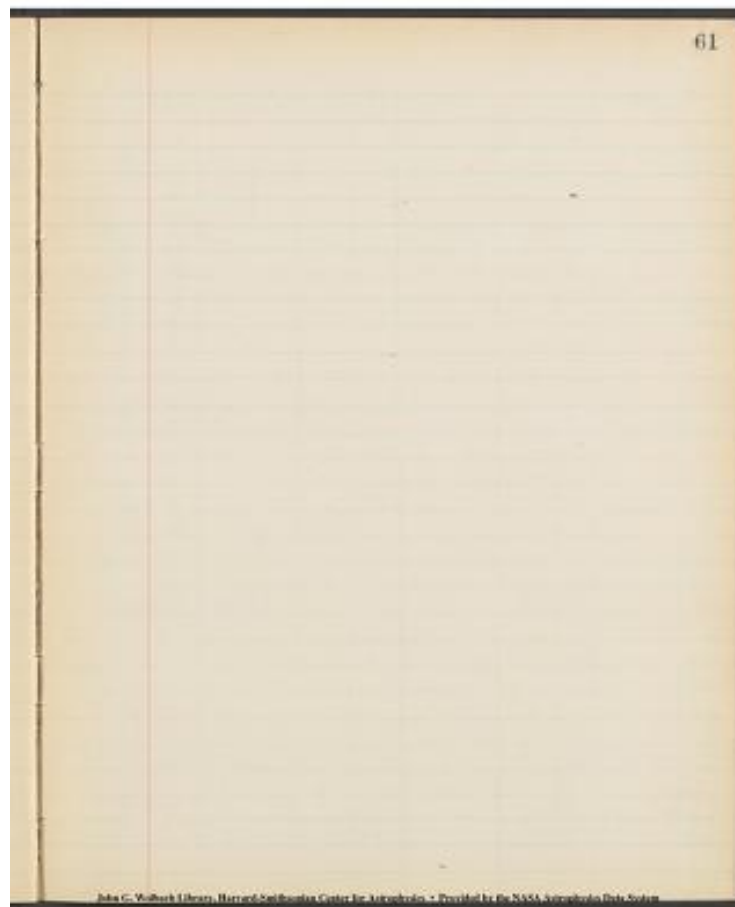
[[preprinted]] 60 [[/preprinted]]

No. | Ap. 1a n | Ap. 1a m+n | Ap. 1b n | Ap. 1b m+n | Ap. 2 n | Ap. 2 m+n
| Ap. 3 n wrong scale | Ap. 3 m+n | Ap. 4 n | Ap. 4 m+n

152	-	-	-	-	-	-	-	46	48
153	-	-	-	-	-	-	-	47	48
154	-	-	-	-	-	-	-	46	48
155	-	-	-	-	-	-	-	46	48
156	-	-	-	-	-	-	-	46	48
157	-	-	-	-	-	-	-	47	48
158	-	-	-	-	-	-	-	47	48
159	-	-	-	-	-	-	-	47	48
160	-	-	-	-	-	52	54	45	48
161	-	-	-	-	-	-	-	48	49
162	-	-	-	-	-	52	54	45	48
163	-	-	-	-	-	-	-	46	48
164	-	-	-	-	-	-	-	46	48
165	-	-	-	-	-	-	-	46	48
166	-	-	-	-	-	-	-	45	48
167	-	-	-	-	-	-	-	45	48
168	-	-	-	-	-	-	-	46	48
169	-	-	-	-	-	-	-	44	47
170	-	-	-	-	-	-	-	46	47
171	-	-	-	-	-	-	-	45	47
172	-	-	-	-	-	52	53	43	46
173	-	-	-	-	-	-	-	45	45
174	-	-	-	-	-	50	52	44	46
175	-	-	-	-	-	-	-	43	45
176	-	-	-	-	-	-	-	44	45
177	-	-	-	-	-	-	-	43	44
178	-	-	-	-	-	-	-	40	41
179	-	-	-	-	-	-	-	40	41
180	-	-	-	-	-	48	50	35	41
181	-	-	-	-	-	44	48	33	41

60										
152	-	-	-	-	-	-	-	46	48	
153	-	-	-	-	-	-	-	47	48	
154	-	-	-	-	-	-	-	46	48	
155	-	-	-	-	-	-	-	46	48	
156	-	-	-	-	-	-	-	46	48	
157	-	-	-	-	-	-	-	47	48	
158	-	-	-	-	-	-	-	47	48	
159	-	-	-	-	-	-	-	47	48	
160	-	-	-	-	-	52	54	45	48	
161	-	-	-	-	-	-	-	48	49	
162	-	-	-	-	-	52	54	45	48	
163	-	-	-	-	-	-	-	46	48	
164	-	-	-	-	-	-	-	46	48	
165	-	-	-	-	-	-	-	46	48	
166	-	-	-	-	-	-	-	45	48	
167	-	-	-	-	-	-	-	45	48	
168	-	-	-	-	-	-	-	46	48	
169	-	-	-	-	-	-	-	44	47	
170	-	-	-	-	-	-	-	46	47	
171	-	-	-	-	-	-	-	45	47	
172	-	-	-	-	-	52	53	43	46	
173	-	-	-	-	-	-	-	45	45	
174	-	-	-	-	-	50	52	44	46	
175	-	-	-	-	-	-	-	43	45	
176	-	-	-	-	-	-	-	44	45	
177	-	-	-	-	-	-	-	43	44	
178	-	-	-	-	-	-	-	40	41	
179	-	-	-	-	-	-	-	40	41	
180	-	-	-	-	-	48	50	35	41	
181	-	-	-	-	-	44	48	33	41	

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Capella (Aurigae) MC 21721

No.	lambda	1a	1b	2	3	4	n	m+n	n	m+n	n	m+n	n	m+n	n	m+n
1.	3	7	5	8	-	-	-	-	-	-	-	-	-	-	-	-
2.	4	8	5	9	-	-	-	-	-	-	-	-	-	-	-	-
3.	7	9	7	11	-	-	-	-	-	-	-	-	-	-	-	-
4.	4	8	8	12	-	-	-	-	-	-	-	-	-	-	-	-
5.	7	10	8	13	-	-	-	-	-	-	-	-	-	-	-	-
6.	4	10	5	12	-	-	-	-	-	-	-	-	-	-	-	-
7.	6	12	7	13	3	6	-	-	-	-	-	-	-	-	-	-
8.	5	12	6	13	1	6	-	-	-	-	-	-	-	-	-	-
9.	7	14	8	15	4	7	-	-	-	-	-	-	-	-	-	-
10.	10	15	11	16	5	8	-	-	-	-	-	-	-	-	-	-
11.	11	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.	15	17	16	19	-	-	-	-	-	-	-	-	-	-	-	-
13.	13	19	13	21	6	10	1	3	-	-	-	-	-	-	-	-
14.	12	20	13	22	6	10	0	2	-	-	-	-	-	-	-	-
15.	13	20	13	23	6	11	0	2	-	-	-	-	-	-	-	-
16.	20	22	20	24	10	13	2	3	-	-	-	-	-	-	-	-
17.	17	25	18	26	8	14	1	3	-	-	-	-	-	-	-	-
18.	17	26	18	27	8	15	0	2	-	-	-	-	-	-	-	-
19.	17	27	17	29	7	15	0	2	-	-	-	-	-	-	-	-
20.	18	30	17	31	8	18	1	3	-	-	-	-	-	-	-	-
20a.	-	-	-	-	12	20	2	5	-	-	-	-	-	-	-	-
21.	30	32	31	35	18	21	5	6	-	-	-	-	-	-	-	-
22.	31	34	31	37	19	23	5	7	-	-	-	-	-	-	-	-
23.	32	37	32	40	20	26	5	10	-	-	-	-	-	-	-	-
24.	35	40	35	43	23	31	8	14	-	-	-	-	-	-	-	-
25.	39	43	38	45	27	34	10	17	-	-	-	-	-	-	-	-
26.	40	44	40	46	29	35	12	18	-	-	-	-	-	-	-	-

64		Capella (Aurigae) MC 21721													
No.	λ	1a		1b		2		3		4		5		6	
		m	m+n	m	m+n	m	m+n	m	m+n	m	m+n	m	m+n	m	m+n
1		3	7	5	8	-	-	-	-	-	-	-	-	-	-
2		4	8	5	9	-	-	-	-	-	-	-	-	-	-
3		7	9	7	11	-	-	-	-	-	-	-	-	-	-
4		4	8	8	12	-	-	-	-	-	-	-	-	-	-
5		7	10	8	13	-	-	-	-	-	-	-	-	-	-
6		4	10	5	12	-	-	-	-	-	-	-	-	-	-
7		6	12	7	13	3	6	-	-	-	-	-	-	-	-
8		5	12	6	13	1	6	-	-	-	-	-	-	-	-
9		7	14	8	15	4	7	-	-	-	-	-	-	-	-
10		10	15	11	16	5	8	-	-	-	-	-	-	-	-
11		11	16	-	-	-	-	-	-	-	-	-	-	-	-
12		15	17	16	19	-	-	-	-	-	-	-	-	-	-
13		13	19	13	21	6	10	1	3	-	-	-	-	-	-
14		12	20	13	22	6	10	0	2	-	-	-	-	-	-
15		13	20	13	23	6	11	0	2	-	-	-	-	-	-
16		20	22	20	24	10	13	2	3	-	-	-	-	-	-
17		17	25	18	26	8	14	1	3	-	-	-	-	-	-
18		17	26	18	27	8	15	0	2	-	-	-	-	-	-
19		17	27	17	29	7	15	0	2	-	-	-	-	-	-
20		18	30	17	31	8	18	1	3	-	-	-	-	-	-
20a		-	-	-	-	12	20	2	5	-	-	-	-	-	-
21		30	32	31	35	18	21	5	6	-	-	-	-	-	-
22		31	34	31	37	19	23	5	7	-	-	-	-	-	-
23		32	37	32	40	20	26	5	10	-	-	-	-	-	-
24		35	40	35	43	23	31	8	14	-	-	-	-	-	-
25		39	43	38	45	27	34	10	17	-	-	-	-	-	-
26		40	44	40	46	29	35	12	18	-	-	-	-	-	-
27		-	-	-	-	-	-	-	-	-	-	-	-	-	-
28		-	-	-	-	-	-	-	-	-	-	-	-	-	-
29		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30		-	-	-	-	-	-	-	-	-	-	-	-	-	-
31		30	32	31	35	18	21	5	6	-	-	-	-	-	-
32		31	34	31	37	19	23	5	7	-	-	-	-	-	-
33		-	-	31	38	20	25	4	9	-	-	-	-	-	-
34		32	37	32	40	20	26	5	10	-	-	-	-	-	-
35		35	40	35	43	23	31	8	14	-	-	-	-	-	-
36		39	43	38	45	27	34	10	17	-	-	-	-	-	-
37		40	44	40	46	29	35	12	18	-	-	-	-	-	-

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[[preprinted]] 65 [[/preprinted]]

1a n | 1a m+n | 1a | delta m | 1b n | 1b m+n | 1b delta m | 2 n | 2 m+n | 2
delta m | 3 n | 3 m+n | 3 delta m | 4 n | 4 m+n | 4 delta m | Mean | Res. |
mu | dl

1.42 | 1.78 | 36 | 1.60 | 1.86 | 26 | - | - | - | - | - | - | - | - | 31 | 5,5 | | 25

1.51 | 1.86 | 35 | .60 | 1.92 | 32 | - | - | - | - | - | - | - | - | 34 | 1,2 | | 27

1.78 | 1.92 | 14 | 1.78 | 2.04 | 26 | - | - | - | - | - | - | - | - | 20 | 6,6 | | 17

1.51 | 1.86 | 35 | 1.86 | 2.10 | 24 | - | - | - | - | - | - | - | - | 30 | 5,6 | | 24

1.78 | 1.99 | 21 | 1.86 | 2.16 | 30 | - | - | - | - | - | - | - | - | 26 | 5,4 | | 21

1.51 | 1.99 | 48 | 1.60 | 2.10 | 50 | - | - | - | - | - | - | - | - | 49 | 1,1 | | 36

1.70 | 2.10 | 40 | 1.78 | 2.10 | 32 | 1.42 | 1.70 | 28 | - | - | - | - | - | 33 |
7,1,5 | | 26

1.60 | 2.10 | 50 | 1.70 | 2.10 | 40 | 1.18 | 1.70 | 52 | - | - | - | - | - | 47 |
3,7,5 | | 35

1.78 | 2.20 | 42 | 1.86 | 2.26 | 40 | 1.51 | 1.78 | 27 | - | - | - | - | - | 36 |
6,4,9 | | 28

1.99 | 2.26 | 27 | 2.04 | 2.32 | 28 | 1.60 | 1.86 | 26 | - | - | - | - | - | 27 |
0,1,1 | | 22

2.04 | 2.32 | 28 | - | - | - | - | - | - | - | - | - | - | 28 | 0 | | 23

2.26 | 2.38 | 12 | 2.32 | 2.48 | 16 | - | - | - | - | - | - | - | - | 14 | 2,2 | | 12

2.16 | 2.48 | 32 | 2.16 | 2.60 | 44 | 1.70 | 1.99 | 29 | 1.18 | 1.47 | 24 | - | - |
- | 32 | 0,12,3,8 | | 26

2.10 | 2.54 | 44 | 2.16 | 2.64 | 48 | 1.70 | 1.99 | 29 | 0 | 1.31 | 1.31 | - | - | - |
| 63 | 19,15,34,68 | | 44

2.16 | 2.54 | 38 | 2.16 | 2.70 | 54 | 1.70 | 2.04 | 34 | 0 | 1.31 | 1.31 | - | - | - |
| 64 | 26,10,30,67 | | 45

2.54 | 2.68 | 14 | 2.54 | 2.76 | 22 | 1.99 | 2.16 | 17 | 1.31 | 1.42 | 11 | - | - |
- | 16 | 2,6,1,2 | | 14

2.38 | 2.80 | 42 | 2.42 | 2.86 | 44 | 1.86 | 2.20 | 34 | 1.18 | 1.42 | 24 | - | - |
- | 36 | 6,8,2,12 | | 28

2.38 | 2.86 | 48 | 2.42 | 2.91 | 49 | 1.86 | 2.26 | 40 | 0 | 1.31 | - | - | - | 67 |
19,18,27,64 | | 46

2.38 | 2.91 | 53 | 2.38 | 3.02 | 64 | 1.78 | 2.26 | 48 | 0 | 1.31 | 1.31 | - | - | - |

| 74 | 21,10,26,57 | | 49

2.43 | 3.08 | 65 | 2.38 | 3.14 | 76 | 1.86 | 2.43 | 57 | 1.18 | 1.42 | 24 | - | - |
- | 56 | 9,20,1,32 | | 40

- | - | - | - | - | - | 2.10 | 2.54 | 44 | 1.31 | 1.60 | 29 | - | - | - | 36 | 8,7 | |
(28)

3.08 | 3.19 | 11 | 3.14 | 3.37 | 23 | 2.43 | 2.60 | 17 | 1.60 | 1.70 | 10 | - | - |
- | 15 | 4,8,2,5 | | 13

3.14 | 3.31 | 17 | 3.14 | 3.48 | 34 | 2.48 | 2.70 | 22 | 1.60 | 1.78 | 18 | - | - |
- | 23 | 6,11,1,5 | | 19

- | - | - | 3.14 | 3.54 | 40 | 2. ~~48~~ ~~54~~ | 2.80
| 26 | 1.70 | 1.92 | 22 | - | - | - | 29 | 11,3,7 | | 23

3.19 | 3.48 | 29 | 3.19 | 3.66 | 47 | 2.54 | 2.86 | 32 | 1.60 | 1.99 | 39 | - | - |
- | 36 | 7,11,4,3 | | 28

3.37 | 3.66 | 29 | 3.37 | 3.82 | 45 | 2.70 | 3.14 | 44 | 1.86 | 2.20 | 34 | - | - |
- | 38 | 9,7,6,4 | | 30

3.60 | 3.81 | 21 | 3.54 | 3.94 | 40 | 2.90 | 3.31 | 41 | 1.99 | 2.38 | 39 | - | - |
- | 35 | 14,5,6,4 | | 28

3.66 | 3.88 | 22 | 3.66 | 4.00 | 34 | 3.02 | 3.36 | 34 | 2.10 | 2.43 | 33 | - | - |
- | 31 | 9,4,3,2 | | 25

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No.	lambda	1a n	1a m+n	1b n	1b m+n	2 n	2 m+n	3 n	3 m+n
4 n	4 m+n								
27	41	45	41	47	28	36	13	19	-
28	47	49	47	49	38	40	21	23	-
29	48	50	48	50	39	41	22	24	-
30	49	52	48	51	38	42	22	26	-
31	51	53	50	52	42	43	26	28	-
32	49	53	48	52	39	44	23	30	-
33	29	55	28	54	15	46	5	33	0
34	48	56	48	55	38	47	22	35	9
35	51	56	51	55	42	48	26	36	11
36	53	56	53	56	45	49	31	36	16
37	54	57	53	56	46	49	32	37	17
38	54	57	54	57	47	50	33	38	18
39	49	58	48	58	38	51	23	39	9
40	36	58	35	58	24	51	9	41	1
41	52	59	-	-	29	41	14	26	
42	57	59	55	58	50	52	38	42	23
43	-	-	57	58	52	53	40	42	26
44	-	-	57	58	52	53	41	43	26
45	57	59	57	59	52	54	41	44	26
46	-	-	58	59	54	55	43	44	29
47	58	60	57	59	52	55	41	44	25
[[/strikethrough]] 6									
[[/strikethrough]] 1									
48	-	-	-	-	-	-	-	31	32
49	-	-	-	-	-	44	45	31	32
50	-	-	-	-	-	-	-	31	32
51	-	-	-	55	56	45	46	31	32
52	-	-	58	59	55	56	44	46	30
53	-	-	58	59	55	56	45	47	30
54	58	61	58	59	53	56	42	47	25
55	-	-	-	-	-	43	47	27	32

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Capella MC 21721

No. Lambda | 1a | 1b | 2 | 3 | 4 |
| n | m+n | n | m+n | n | m+n | n | m+n | n | m+n |
56 | - | - | - | - | - | 46 | 48 | 32 | 34 | 50
57 | 59 | 61 | 57 | 59 | 53 | 56 | 42 | 48 | 27 | 35 | 57
58 | - | - | - | - | - | 47 | 48 | 34 | 35 | 58
59 | - | - | - | - | - | 45 | 48 | 31 | 35 | 59
60 | - | - | 58 | 59 | 54 | 56 | 44 | 48 | 30 | 35 | 60
61 | - | - | - | - | 55 | 56 | 44 | 48 | 31 | 36 | 61
62 | 59 | 61 | 57 | 59 | 54 | 57 | 43 | 48 | 28 | 36 | 62
63 | - | - | 59 | 60 | 56 | 5 ~~8~~ ~~7~~ | 46 | 48
| 32 | 36 | 63
64 | - | - | 58 | 60 | 55 | 57 | 45 | 48 | 32 | 36 | 64
65 | 58 | 61 | 57 | 60 | 53 | 57 | 42 | 48 | 27 | 36 | 65
66 | - | - | 59 | 60 | 56 | 57 | 47 | 49 | 33 | 36 | 66
67 | - | - | 59 | 60 | - | - | 47 | 49 | 35 | 36 | 67
68 | - | - | 59 | 60 | - | - | 35 | 36 | 68
69 | - | - | - | - | 56 | 58 | 46 | 49 | 32 | 36 | 69
70 | 58 | 61 | 57 | 60 | 53 | 58 | 42 | 49 | 26 | 36 | 70
71 | - | - | - | - | - | 46 | 49 | 33 | 36 | 71
72 | - | - | - | - | - | 46 | 49 | 32 | 36 | 72
73 | - | - | - | - | - | 47 | 49 | 33 | 36 | 73
74 | - | - | - | - | - | 46 | 49 | 32 | 36 | 74
75 | 59 | 61 | 57 | 60 | 55 | 58 | 45 | 49 | 31 | 36 | 75
76 | - | - | - | - | - | 33 | 36 | 76
77 | 59 | 61 | 57 | 60 | 54 | 58 | 44 | 48 | 30 | 36 | 77
78 | - | - | - | - | - | 46 | 48 | 33 | 36 | 78
79 | - | - | - | - | - | 45 | 48 | 32 | 36 | 79
80 | - | - | - | - | 55 | 58 | 45 | 48 | 31 | 36 | 80
81 | - | - | - | - | - | 46 | 48 | 32 | 36 | 81
82 | - | - | - | - | - | 46 | 47 | 34 | 36 | 82
83 | - | - | - | - | - | 47 | 48 | 35 | 36 | 83
84 | - | - | - | - | - | 46 | 48 | 34 | 36 | 84

68

Capella MC 21721

No.	λ	1a	1b	2	3	4	5	6	7	8
56	-	-	-	-	-	46	48	32	34	50
57	59	61	57	59	53	56	42	48	27	35
58	-	-	-	-	-	47	48	34	35	58
59	-	-	-	-	-	45	48	31	35	59
60	-	-	58	59	54	56	44	48	30	35
61	-	-	-	-	55	56	44	48	31	36
62	59	61	57	59	54	57	43	48	28	36
63	-	-	59	60	56	58 7	46	48	32	36
64	-	-	58	60	55	57	45	48	32	36
65	58	61	57	60	53	57	42	48	27	36
66	-	-	59	60	56	57	47	49	33	36
67	-	-	59	60	-	-	47	49	35	36
68	-	-	59	60	-	-	-	35	36	68
69	-	-	-	-	56	58	46	49	32	36
70	58	61	57	60	53	58	42	49	26	36
71	-	-	-	-	-	46	49	33	36	71
72	-	-	-	-	-	46	49	32	36	72
73	-	-	-	-	-	47	49	33	36	73
74	-	-	-	-	-	46	49	32	36	74
75	59	61	57	60	55	58	45	49	31	36
76	-	-	-	-	-	-	-	33	36	76
77	59	61	57	60	54	58	44	48	30	36
78	-	-	-	-	-	46	48	33	36	78
79	-	-	-	-	-	45	48	32	36	79
80	-	-	-	-	55	58	45	48	31	36
81	-	-	-	-	-	46	48	32	36	81
82	-	-	-	-	-	46	47	34	36	82
83	-	-	-	-	-	47	48	35	36	83
84	-	-	-	-	-	46	48	34	36	84

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Omitted from Mean

1a [n] | 1a [m+n] | 1a delta m | 1b[n] | 1b [m+n] | 1b delta m | 2 [n] | 2
[m+n] | 2 delta m | 3 [n] | 3 [m+n] | 3 delta m | 4 [n] | 4 [m+n] | 4 delta m |
Mean | Res | mu | dl

- | - | - | - | - | - | - | - | 4.00 | 4.10 | 10 | 3.20 | 3.32 | 12 | 11 | 1,1 | | |

5. ~~[[/strikethrough]]~~ 52 ~~[[/strikethrough]]~~ 44 | | | 4.84 | 5.44 | 60 | 4.42 |
4.68 | 26 | 3.78 | 4.10 | 32 | 2.92 | 3.36 | 44 | 34 | | |

- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 3.32 | 3.36 | 4 | 5 | 1,1 | | |

- | - | - | - | - | - | - | - | 3.94 | 4.10 | 16 | 3.14 | 3.36 | 22 | 19 | 3,3 | | |

- | - | - | 5.08 | 5.44 | 36 | 4.50 | 4.68 | 18 | 3.88 | 4.10 | 22 | 3.08 | 3.36 |
28 | 2 ~~[[/strikethrough]]~~ 6 ~~[[/strikethrough]]~~ 3 | 10,8,4,2 | | |

- | - | - | - | - | - | 4.58 | 4.68 | 10 | 3.88 | 4.10 | 22 | 3.14 | 3.42 | 28 | 20 |
10,2,8 | | |

5.44 | | | 4.84 | 5.44 | 60 | 4.50 | 4.84 | 34 | 3.82 | 4.10 | 28 | 2.96 | 3.42
| 46 | 36 | | |

~~[[/strikethrough]]~~ 5.44 ~~[[/strikethrough]]~~ - | - | 5.44 | 5.90 | 46 | 4.68 | 4.84
| 16 | 4.00 | 4.10 | 10 | 3.20 | 3.42 | 22 | ~~[[/strikethrough]]~~ 22
~~[[/strikethrough]]~~ 16 | 23,7,13,1 | | |

- | - | - | 5.08 | 5.90 | 82 | 4.58 | 4.84 | 30 | 3.94 | 4.10 | 16 | 3.20 | 3.42 |
22 | ~~[[/strikethrough]]~~ 37 ~~[[/strikethrough]]~~ 23 | 45,7,21,15 | | |

~~[[/strikethrough]]~~ - ~~[[/strikethrough]]~~ 5.08 | | | 4.84 | 5.90 | 6 | 4.42 | 4.84
| 42 | 3.78 | 4.10 | 32 | 2.92 | 3.42 | 50 | 41 | | |

~~[[/strikethrough]]~~ 5.08 ~~[[/strikethrough]]~~ - | - | 5.44 | 5.90 | 46 | 4.68 | 4.84
| 16 | 4.04 | 4.16 | 12 | 3.26 | 3.42 | 16 | ~~[[/strikethrough]]~~ 22
~~[[/strikethrough]]~~ 14 | 24,6,10,6 | | |

- | - | - | 5.44 | 5.90 | 46 | - | - | 4.04 | 4.16 | 12 | 3.36 | 3.42 | 6 |
~~[[/strikethrough]]~~ 21 ~~[[/strikethrough]]~~ 09 | 25,9,15 | | |

- | - | - | 5.44 | 5.90 | 46 | - | - | - | - | - | 3.36 | 3.42 | 6 | 06 | 20,20 | | |

- | - | - | - | - | - | 4.68 | 5.08 | 40 | 4.00 | 4.16 | 16 | 3.20 | 3.42 | 22 | 26 |
14,10,4 | | |

5.08 | | | 4.84 | 5.90 | 6 | 4.42 | 5.08 | 66 | 3.78 | 4.16 | 38 | 2.86 | 3.42 |
56 | 51 | | |

- | - | - | - | - | - | - | - | 4.00 | 4.16 | 16 | 3.26 | 3.42 | 16 | 16 | 0,0 | | |

- | - | - | - | - | - | - | - | 4.00 | 4.16 | 16 | 3.20 | 3.42 | 22 | 19 | 3,3 | | |

- | - | - | - | - | - | - | - | 4.04 | 4.16 | 12 | 3.26 | 3.42 | 16 | 14 | 2,2 | | |

- | - | - | - | - | - | - | - | 4.00 | 4.16 | 16 | 3.20 | 3.42 | 22 | 19 | 3,3 | | |

5.44 | | | 4.84 | 5.90 | 6 | 4.58 | 5.08 | 50 | 3.94 | 4.16 | 22 | 3.14 | 3.42 |
28 | 33 | | |

- | - | - | - | - | - | - | - | - | - | - | 3.26 | 3.42 | 16 | 16 | 0 | | |

5.44 | | | 4.84 | 5.90 | 6 | 4.50 | 5.08 | 58 | 3.88 | 4.10 | 22 | 3.08 | 3.42 |
34 | 38 | | |

- | - | - | - | - | - | - | - | ~~55~~ - | 4.00 | 4.10 |
10 | 3.26 | 3.42 | 16 | 13 | ~~6~~ 3,3 | | |

- | - | - | - | - | - | - | - | 3.94 | 4.10 | 16 | 3.20 | 3.42 | 22 | 19 | 3,3 | | |

- | - | - | - | - | - | 4.58 | 5.08 | 50 | 3.94 | 4.10 | 16 | 3.14 | 3.42 | 28 | 31 |
19,15,3 | | |

- | - | - | - | - | - | - | - | 4.00 | 4.10 | 10 | 3.20 | 3.42 | 22 | 16 | 6,6 | | |

- | - | - | - | - | - | - | - | 4.00 | 4.04 | 4 | 3.32 | 3.42 | 10 | 7 | 3,3 | | |

- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 3.36 | 3.42 | 6 | 6 | 0 | | |

- | - | - | - | - | - | - | - | 4.00 | 4.10 | 10 | 3.32 | 3.42 | 10 | 10 | 0 | | |

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1a [n]	1a [m+n]	1a delta m	1b[n]	1b [m+n]	1b delta m	2 [n]	2
[m+n]	2 delta m	3 [n]	3 [m+n]	3 delta m	4 [n]	4 [m+n]	4 delta m
Mean	Res	mu	dl				

5.40 | | 4.84 | 5.02 | 98 | 4.51 | 5.40 | 89 | 3.78 | 4.02 | 24 | 2.96 | 3.42
| 46 | ~~38~~ | 35 | | |

5.40 | | 4.04 | 5.82 | 98 | 4.59 | 5.40 | 81 | 3.89 | 4.02 | 13 | 3.08 | 3.42
| 34 | 24 | | |

- | - | - | - | - | 4.68 | 5.40 | 72 | 3.94 | 4.10 | 16 | 3.14 | 3.42 | 28 |
~~38~~ ~~22~~ | 34,22,10 | |

- | - | - | - | - | - | 4.59 | 5.40 | 81 | 3.94 | 4.10 | 16 | 3.14 | 3.48 | 34 |
[[~~strikethrough~~]] 43 [[/~~strikethrough~~]] 25 | 38,27,9 | | |

-	-	-	-	-	-	-	-	-	-	4.00	4.10	10	3.26	3.48	22	16	6.6		
---	---	---	---	---	---	---	---	---	---	------	------	----	------	------	----	----	-----	--	--

5.40 | | 4.84 | 5.82 | 98 | 4.59 | 5.40 | 81 | 3.89 | 4.10 | 21 | 3.02 | 3.48
| 46 | 34 | | |

- | - | - | - | - | - | 4.59 | 5.40 | 81 | 3.89 | 4.10 | 21 | 3.08 | 3.48 | 40 |
[[~~strikethrough~~]] 47 [[/~~strikethrough~~]] 30 | 34,26,7 | | |

- | - | - | 4.84 | 5.40 | 56 | 4.59 | 5.40 | 81 | 3.89 | 4.10 | 21 | 3.08 | 3.48 |
40 | ~~49~~ | 30 | 7,32,28,9 | |

-|-|-|-|-|-|-|-|-|-|-|3.31|3.48|17|170||

- | - | - | 5.10 | 5.40 | 30 | 4.84 | 5.40 | 56 | 4.02 | 4.10 | 8 | 3.31 | 3.48 | 17
| ~~20~~ | ~~12~~ | 10,36,12,3 | | |

5.40 | | 4.84 | 5.40 | 56 | 4.68 | 5.40 | 56 | 3.94 | 4.10 | 16 | 3.20 | 3.48
| 28 | ~~39~~ | 22 | 17, 17, 23, 11 | |

4.84 | | 4.59 | 5.40 | 81 | 4.42 | 5.40 | 98 | 3.78 | 4.16 | 38 | 2.91 | 3.
[[~~strikethrough~~]] 48 [[~~strikethrough~~]] 54 | 63 | 50 | | |

- | - | - | 5.10 | 5.40 | 30 | 4.68 | 5.40 | 72 | 4.02 | 4.22 | 20 | 3.31 | 3.
~~48~~ ~~54~~ | 23 | ~~36~~
~~21~~ | 6,36,6,23 | | |

- | - | - | 5.10 | 5.40 | 30 | 4.68 | 5.40 | 72 | 4.02 | 4.22 | 20 | 3.31 | 3.
~~48~~ ~~54~~ | 23 | ~~36~~
~~21~~ | 6,36,16,13

- | - | - | - | - | 4.84 | 5.40 | 72 | 4.10 | 4.22 | 12 | 3.37 | 3.
~~48~~ ~~54~~ 17 | 15 | | |

- | - | - - | - | - - | - | - - | - | - 3.48 | 3.54 | 6 | 06 | 0 | | |

Orbit from mean										71
1	2	3	4	5	6	7	8	9	10	11
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

5.82 | | | 5.10 | 5.40 | 36 | 4.68 | 5.40 | 72 | 4.02 | 4.22 | 20 | 3.31 | 3.60
| 29 | 24 | | |

- | - | - | 5.10 | 5.40 | 30 | 4.84 | 5.40 | 56 | 4.10 | 4.22 | 12 | 3.37 | 3.60 |
23 | ~~30~~ | 18 | 0,26,18,7 | | |

~~48~~ | 5.40 | | | 4.84 | 5.40 | 56 | 4.68 |
5.40 | 72 | 4.02 | 4.22 | 20 | 3.31 | 3.60 | 29 | 24 | | |

5.40 | | | 4.84 | 5.40 | 56 | 4.59 | 5.40 | 81 | 4.00 | 4.34 | 34 | 3.20 | 3.65
| 45 | 40 | | |

- | - | - | - | - | 4.84 | 5.40 | 56 | 4.22 | 4.24 | 12 | 3.42 | 3.65 | 23 |
~~30~~ | 17 | 26,18,7 | | |

- | - | - | 5.10 | 5.40 | 30 | 4.84 | 5.40 | 56 | 4.16 | 4.34 | 18 | 3.42 | 3.65 |
23 | ~~32~~ | 20 | 2,24,14,9 | | |

- | - | - | 5.10 | 5.40 | 30 | 4.84 | 5.40 | 56 | 4.16 | 4.34 | 18 | 3.37 | 3.65 |
28 | ~~33~~ | 23 | 3,23,15,5 | | |

5.40 | | | 5.10 | 5.40 | 30 | 4.68 | 5.40 | 72 | 4.02 | 4.42 | 40 | 3.20 | 3.65
| 45 | 42 | | |

- | - | - | - | - | - | - | - | 4.10 | 4.42 | 32 | 3.37 | 3.72 | 35 | 33 | 1,2 | | |

5.10 | | | 4.68 | 5.46 | 72 | 4.42 | 5.40 | 98 | 3.82 | 4.42 | 60 | 2.91 | 3.72
| 81 | 70 | | |

- | - | - | - | - | - | - | - | 3.89 | 4.42 | 53 | 3.08 | 3.72 | 64 | 58 | 5,6 | | |

5.10 | | | 4.68 | 5.40 | 72 | 4.42 | 5.40 | 98 | 3.89 | 4.42 | 53 | 2.96 | 3.72
| 76 | 65 | | |

| | | | | | | | a) 4.16 | 4.42 | 26 | | | | | |

5.43 | | | 4.84 | 5.40 | 72 | 4.59 | 5.40 | 81 | 4.00 | 4.42 | 42 | 3.20 | 3.77
| 57 | 55 | | |

Project PHaEDRA - Cecilia H. Payne #11
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[[preprinted]] 72 [[/preprinted]]

No. | λ | 1a n | 1a m+n | 1b n | 1b m+n | 2 n | 2 m+n | 3 n | 3 m+n |
4 n | 4 m+n

114 | - | - | 59 | 59 | 58 | 59 | 51 | 53 | 40 | 42

115 | 58 | 61 | 57 | 59 | 54 | 59 | 45 | 53 | 31 | 42

116 | - | - | - | - | - | - | - | 39 | 42

117 | - | - | - | - | - | - | - | 40 | 42

118 | 59 | 61 | 58 | 59 | 57 | 59 | 49 | 53 | 37 | ~~5~~
~~42~~

119 | - | - | 59 | 59 | 58 | 59 | 51 | 53 | 40 | 42

120 | - | - | 59 | 59 | 58 | 59 | 51 | 53 | 40 | 42

121 | 60 | 61 | 58 | 59 | 57 | 59 | 50 | 53 | 37 | 42

122 | 58 | 61 | 57 | 59 | 55 | 59 | 47 | 54 | 33 | 43

123 | - | - | - | - | 58 | 59 | 50 | 54 | 38 | 43

124 | - | - | - | - | 58 | 59 | 51 | 53 | 39 | 43

125 | - | - | - | - | 57 | 59 | 51 | 53 | 39 | 43

126 | - | - | - | - | 57 | 59 | 50 | 54 | 38 | 43

127 | - | - | - | - | 58 | 59 | 51 | 54 | 42 | 44

128 | - | - | - | - | 57 | 59 | 50 | 54 | 39 | 44

129 | - | - | - | - | 58 | 59 | 52 | 54 | 41 | 44

130 | - | - | - | - | - | 52 | 54 | 42 | 44

131 | - | - | - | - | - | 51 | 54 | 42 | 45

132 | - | - | - | - | 58 | 59 | 50 | 54 | 41 | 45

133 | - | - | - | - | 58 | 59 | 51 | 54 | 42 | 45

134 | - | - | - | - | - | 53 | 54 | 43 | 44

135 | - | - | - | - | - | 51 | 54 | 43 | 45

136 | - | - | - | - | 57 | 59 | 51 | 54 | 43 | 44

137 | - | - | - | - | - | 51 | 55 | 42 | 46

72

No.	1a	1b	2	3	4
114	59	59	58	59	51
115	58	61	57	59	54
116	-	-	-	-	-
117	-	-	-	-	-
118	59	61	58	59	57
119	-	-	-	-	-
120	-	-	-	-	-
121	60	61	58	59	57
122	58	61	57	59	55
123	-	-	-	-	-
124	-	-	-	-	-
125	-	-	-	-	-
126	-	-	-	-	-
127	-	-	-	-	-
128	-	-	-	-	-
129	-	-	-	-	-
130	-	-	-	-	-
131	-	-	-	-	-
132	-	-	-	-	-
133	-	-	-	-	-
134	-	-	-	-	-
135	-	-	-	-	-
136	-	-	-	-	-
137	-	-	-	-	-

John C. Wetherill Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

138 | | - | - | - | - | 58 | 59 | 53 | 55 | 44 | 46

139 | | - | - | - | - | - | - | - | - | 45 | 46

140 | | - | - | - | - | 59 | 59 | 52 | 55 | 43 | 45

141 | | - | - | - | - | - | - | 53 | 55 | 44 | 46

142 | | - | - | - | - | - | - | 53 | 55 | 45 | 46

Project PHaEDRA - Cecilia H. Payne #11
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-	-	-	-	-	-	5.10	5.40	30	4.34	4.50	16	3.71	3.89	18
---	---	---	---	---	---	------	------	----	------	------	----	------	------	----

Smithsonian Institution Transcription Center, Harvard-Smithsonian Center for Astrophysics

~~21~~ ~~17~~ | 9,5,3 | | |
 - | - | - | - | - | - | - | - | 4.34 | 4.50 | 16 | 3.77 | 3.89 | 12 | 14 | 2,2 | | |
 - | - | - | - | - | - | - | - | 4.28 | 4.50 | 22 | 3.77 | 3.94 | 17 | 19 | 3,2 | | |
 - | - | - | - | - | - | 5.10 | 5.40 | 30 | 4.21 | 4.50 | 29 | 3.71 | 3.94 | 23 | 27 |
 3,2,4 | | |

 - | - | - | - | - | - | 5.10 | 5.40 | 30 | 4.28 | 4.50 | 22 | 3.77 | 3.94 | 17 |
~~23~~ ~~20~~ | 7,1,6 | | |
 - | - | - | - | - | - | - | - | 4.42 | 4.50 | 8 | 3.82 | 3.89 | 7 | 08 | 0,1 | | |
 - | - | - | - | - | - | - | - | 4.78 | 4.50 | 22 | 3.82 | 3.94 | 12 | 17 | 5,5 | | |
 - | - | - | - | - | - | 4.84 | 5.40 | 56 | 4.78 | 4.50 | 22 | 3.71 | 3.94 | 23 |
~~33~~ ~~22~~ | 23,11,10 | | |
 - | - | - | - | - | - | - | - | 4.28 | 4.58 | 30 | 3.77 | 4.00 | 23 | 26 | 4,3 | | |
 - | - | - | - | - | - | 5.10 | 5.40 | 30 | 4.42 | 4.58 | 16 | 3.89 | 4.00 | 11 |
~~19~~ ~~14~~ | 11,3,8 | | |
 - | - | - | - | - | - | - | - | - | 3.94 | 4.00 | 6 | 06 | 0 | | |
 - | - | - | - | - | - | 5.40 | 5.40 | 0 | 4.34 | 4.58 | 24 | 3.82 | 3.94 | 12 | 18 |
 12,6,6 | | |
 - | - | - | - | - | - | - | - | 4.42 | 4.58 | 16 | 3.89 | 4.00 | 11 | 13 | 3,2 | | |
 - | - | - | - | - | - | - | - | 4.42 | 4.58 | 16 | 3.94 | 4.00 | 6 | 11 | 5,5 | | |
 - | - | - | - | - | - | | | | | | | |

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 Transcribed and Reviewed by Digital Volunteers
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[[preprinted]] 75 [[/preprinted]]

1a [n] | 1a [m+n] | 1a delta m | 1b [n] | 1b [m+n] | 1b delta m | 2 [n] | 2
[m+n] | 2 delta m | 3 [n] | 3 [m+n] | 3 delta m | 4 [n] | 4 [m+n] | 4 delta m |
Mean | Res. | mu | d'

- | - | - | - | - | - | - | - | 4.50 | 4.58 | 8 | 4.00 | 4.00 | 0 | 04 | 4,4 | | |
- | - | - | - | - | - | - | - | 4.58 | 4.58 | 0 | 4.00 | 4.00 | 0 | 00 | 0 | | |
- | - | - | - | - | - | - | - | 4.50 | 4.58 | 8 | 3.94 | 4.13 | 6 | 07 | 1,1 | | |
- | - | - | - | - | - | - | - | 4.00 | 4.00 | 0 | 00 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.42 | 4.58 | 16 | 3.89 | 4.04 | 15 | 16 | 0,1 | | |
- | - | - | - | - | - | - | - | 4.42 | 4.58 | 16 | 4.00 | 4.04 | 4 | 10 | 6,6 | | |
- | - | - | - | - | - | - | - | 4.50 | 4.58 | 8 | 4.04 | 4.10 | 6 | 7 | 1,1 | | |
- | - | - | - | - | - | - | - | 4.50 | 4.58 | 8 | 4.04 | 4.10 | 6 | 7 | 1,1 | | |
- | - | - | - | - | - | - | - | 4.00 | 4.10 | 10 | 10 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 3.94 | 4.10 | 16 | 16 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 6 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 3.94 | 4.10 | 16 | 16 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 6 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.00 | 4.10 | 10 | 10 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 6 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 6 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 6 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.34 | 4.50 | 16 | 4.00 | 4.10 | 10 | 13 | 3,3 | | |
- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 6 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.34 | 4.50 | 16 | 3.94 | 4.10 | 16 | 16 | 0 | | |
- | - | - | - | - | - | - | - | 4.00 | 4.10 | 10 | 10 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 4.04 | 4.10 | 6 | 6 | 0 | 0 | | |
- | - | - | - | - | - | - | - | 3.94 | 4.10 | 16 | 16 | 0 | 0 | | |

-|-|-|-|-|-|-|-|-|-|3.94|4.04|10|10|0| | |
-|-|-|-|-|-|-|-|-|-|3.94|4.04|10|10|0| | |
-|-|-|-|-|-|-|-|-|-|4.00|4.04|4|4|0| | |
-|-|-|-|-|-|-|-|-|-|3.94|4.04|10|10|0| | |
-|-|-|-|-|-|-|-|-|-|4.00|4.04|4|4|0| | |
-|-|-|-|-|-|-|-|-|-|3.94|4.04|10|10|0| | |
-|-|-|-|-|-|-|-|-|-|4.34|4.42|8|3.83|4.00|17|12|4,5| | |

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No. | lambda | 1a n | 1a m+ n | 1b n | 1b m+ n | 2 n | 2 m+ n | 3 n | 3 m+ n | 4 n | 4 m+ n

[illegible][illegible]

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[[preprinted]] 77 [[/preprinted]]

1a [n] | 1a [m+n] | 1a delta m | 1b [n] | 1b [m+n] | 1b delta m | 2 [n] | 2
[m+n] | 2 delta m | 3 [n] | 3 [m+n] | 3 delta m | 4 [n] | 4 [m+n] | 4 delta m |
Mean | Res. | mu | dl

- | - | - | - | - | - | - | - | - | - | 3.94 | 4.00 | 6 | 6 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 4.28 | 4.92 | 14 | 3.84 | 4.00 | 11 | 12 | 2,1 | | |
- | - | - | - | - | - | - | - | - | - | 3.89 | 4.00 | 11 | 11 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.82 | 4.00 | 18 | 18 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.82 | 3.89 | 7 | 7 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.72 | 3.77 | 5 | 5 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.66 | 3.77 | 11 | 11 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 4.16 | 4.22 | 6 | 3.57 | 3.72 | 35 | 20 | 14,15 | | |
- | - | - | - | - | - | - | - | - | - | 3.89 | 4.16 | 27 | 3.26 | 3.72 | 46 | 36 | 9,10 | | |
- | - | - | - | - | - | - | - | - | - | 3.42 | 3.65 | 23 | 23 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.37 | 3.60 | 23 | 23 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.42 | 3.54 | 12 | 12 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.37 | 3.48 | 11 | 11 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.20 | 3.42 | 22 | 22 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.08 | 3.37 | 29 | 29 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.14 | 3.25 | 11 | 11 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.08 | 3.20 | 12 | 12 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.14 | 3.14 | 0 | 0 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 3.03 | 3.14 | 11 | 11 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 2.91 | 3.03 | 12 | 12 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 2.86 | 2.91 | 5 | 5 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 2.74 | 2.80 | 6 | 6 | 0 | | |
- | - | - | - | - | - | - | - | - | - | 2.70 | 2.70 | 0 | 0 | 0 | | |

-|-|-|-|-|-|-|-|-|-|2.64|2.70|6|6|0| | |
 -|-|-|-|-|-|-|-|-|-|2.48|2.60|12|12|0| | |
 -|-|-|-|-|-|-|-|-|-|2.38|2.53|15|15|0| | |
 -|-|-|-|-|-|-|-|-|-|2.25|2.38|13|13|0| | |
 -|-|-|-|-|-|-|-|-|-|2.25|2.38|13|13|0| | |
 -|-|-|-|-|-|-|-|-|-|2.20|2.25|5|5|0| | |
 -|-|-|-|-|-|-|-|-|-|2.25|2.25|0|0|0| | |

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[[preprinted]] 79 [[/preprinted]]

1a [n] | 1a [m+n] | 1a [delta m] | 1b [n] | 1b [m+n] | 1b [delta m] | 2 [n] | 2
[m+n] | 2 [delta m] | 3 [n] | 3 [m+n] | 3 [delta m] | 4 [n] | 4 [m+n] | 4 [delta
m] | Mean | Res. | mu | dl

-	-	-	-	-	-	-	-	-	-	-	2.10	2.20	10	10	0				
-	-	-	-	-	-	-	-	-	-	-	2.04	2.20	16	16	0				
-	-	-	-	-	-	-	-	-	-	-	2.04	2.20	16	16	0				
-	-	-	-	-	-	-	-	-	-	-	1.92	2.20	28	28	0				
-	-	-	-	-	-	-	-	-	-	-	1.88	1.98	10	10	0				
-	-	-	-	-	-	-	-	-	-	-	1.70	1.88	18	18	0				
-	-	-	-	-	-	-	-	-	-	-	1.70	1.88	18	18	0				
-	-	-	-	-	-	-	-	-	-	-	1.70	1.70	0	0	0				
-	-	-	-	-	-	-	-	-	-	-	1.60	1.70	10	10	0				
-	-	-	-	-	-	-	-	-	-	-	1.51	1.60	9	9	0				
-	-	-	-	-	-	-	-	-	-	-	1.41	1.60	19	19	0				
-	-	-	-	-	-	-	-	-	-	-	1.30	1.60	30	30	0				
-	-	-	-	-	-	-	-	-	-	-	1.30	1.51	21	21	0				
-	-	-	-	-	-	-	-	-	-	-	1.30	1.51	21	21	0				

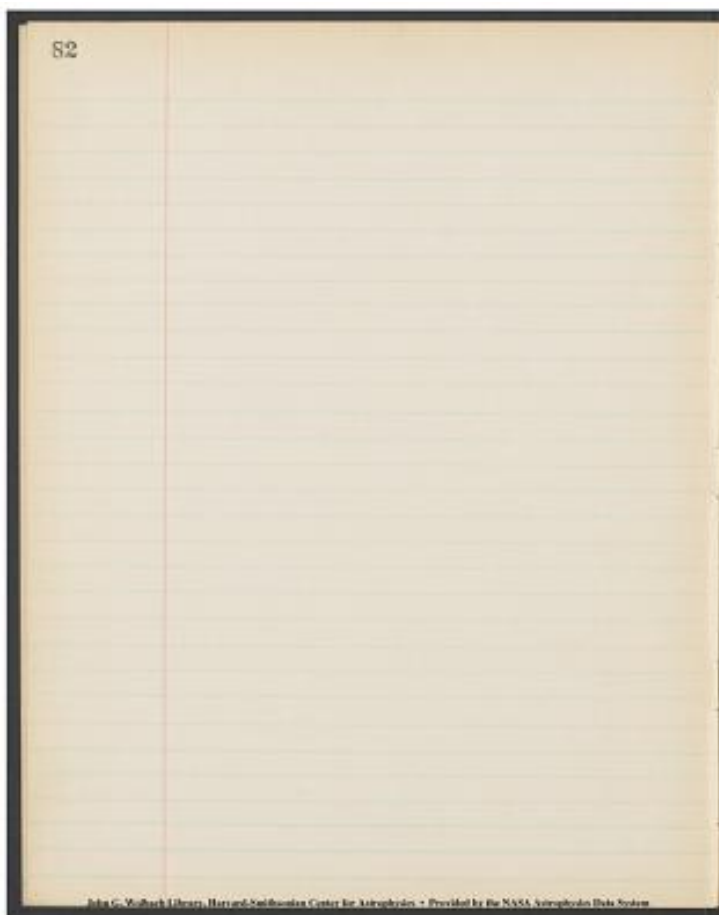
79

1a	1a	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
2.10	2.20	10	10	0															
2.04	2.20	16	16	0															
2.04	2.20	16	16	0															
1.92	2.20	28	28	0															
1.88	1.98	10	10	0															
1.70	1.88	18	18	0															
1.70	1.88	18	18	0															
1.70	1.70	0	0	0															
1.60	1.70	10	10	0															
1.51	1.60	9	9	0															
1.41	1.60	19	19	0															
1.30	1.60	30	30	0															
1.30	1.51	21	21	0															
1.30	1.51	21	21	0															

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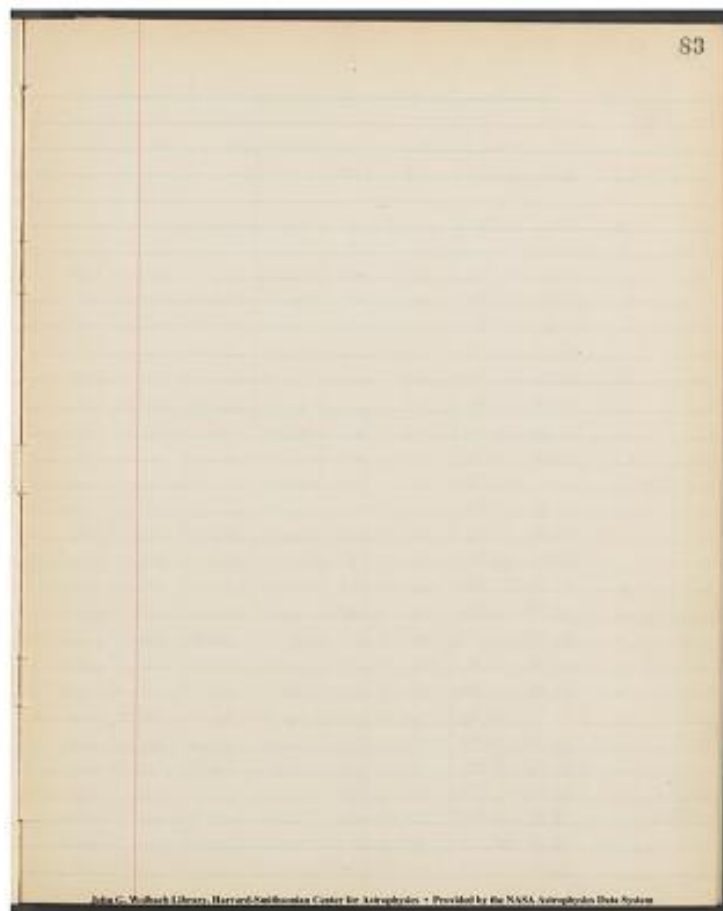
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Reduction Table delta Canis Majoris MC-21722

Defl.	Mag.	Defl.	Mag.	Defl.	Mag.	Defl.	Mag.	Defl.	Mag.
20	19	50	127	80	198	110	274	140	380
21	23	51	129	81	201	111	277	141	386
22	28	52	132	82	203	112	279	142	395
23	32	53	135	83	206	113	282	143	406
24	37	54	137	84	208	114	285	144	419
25	42	55	140	85	210	115	288	145	450
26	46	56	142	86	213	116	291	146	500
27	50	57	144	87	215	117	294	147	>500
28	54	58	146	88	218	118	297		
29	57	59	149	89	220	119	300		
30	61	60	151	90	222	120	303		
31	65	61	153	91	225	121	306		
32	69	62	156	92	228	122	309		
33	72	63	159	93	230	123	313		
34	75	64	161	94	232	124	316		
35	79	65	163	95	235	125	320		
36	83	66	166	96	237	126	323		
37	86	67	168	97	239	127	326		
38	89	68	171	98	242	128	329		
39	93	69	173	99	244	129	332		
40	96	70	175	100	247	130	336		
41	100	71	177	101	250	131	339		
42	103	72	180	102	252	132	343		
43	106	73	182	103	255	133	347		
44	109	74	184	104	258	134	350		
45	112	75	187	105	260	135	355		
46	115	76	189	106	263	136	359		
47	118	77	191	107	266	137	363		
48	121	78	194	108	268	138	369		
49	124	79	196	1-9	271	139	374		

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[[preprinted]] 85 [[/preprinted]]

Ap. 1 [n] | Ap. 1 [m+n] | Ap. 1 delta m | Ap. 2 [n] | Ap. 2 [m+n] | Ap. 2
delta m | Ap. 3 [n] | Ap. 3 [m+n] | Ap. 3 delta m | Ap. 4 [n] | Ap. 4 [m+n] |
Ap. 4 delta m | Mean delta m | Selected Mean to 130 delta m | Selected
Mean to 130 Residuals | Selected Mean to 130 dl

228 | 419 | 191 | 285 | 450 | 165 | 355 | 450 | 95 | 406 | 500 | 94 | 136 | - |
- | |

215 | 282 | 67 | 263 | 332 | 69 | 343 | 380 | 37 | | | - | 59 | 68 | 1,1 | 47

| | - | | - | | - | | - | - | - | - |

210 | 258 | 48 | 255 | 316 | 51 | 336 | 369 | 33 | | | - | 44 | 50 | 2,1 | 37

| | - | | - | | - | | - | - | - | - |

189 | 406 | 217 | 242 | 450 | 208 | 329 | 500 | 171 | 380 | >500 | >120 |
199 | 212 | 5,4 | 86

182 | 232 | 50 | 232 | 288 | 46 | 323 | 359 | 36 | | | - | 44 | 48 | 2,2 | 36

177 | 208 | 31 | 230 | 274 | 44 | 320 | 393 | 23 | | | - | 33 | 38 | 7,6 | 30

168 | 215 | 47 | 222 | 271 | 49 | 313 | 350 | 37 | | | - | 44 | 48 | 1,1 | 36

166 | 203 | 37 | 220 | 258 | 38 | 309 | 343 | 34 | | | - | 36 | 38 | 1,0 | 30

163 | 196 | 33 | 218 | 255 | 37 | 306 | 336 | 30 | | | - | 33 | 35 | 2,2 | 28

161 | 171 | 10 | 215 | 236 | 15 | 306 | 313 | 07 | | | - | 11 | 11 | 1,4,4 | 10

159 | 177 | 18 | 215 | 235 | 20 | 303 | 316 | 13 | | | - | 17 | 17 | 1,3,4 | 14

159 | 161 | 02 | 213 | 215 | 02 | 300 | 306 | 06 | | | - | 03 | 03 | 1,1,3 | 3

153 | 182 | 29 | 208 | 237 | 29 | 297 | 326 | 29 | | | - | 29 | 29 | 0,0,0 | 23

149 | 201 | 52 | 206 | 260 | 54 | 294 | 339 | 45 | 359 | 419 | 60 | 53 | 50 |
2,4,5 | 37

146 | 161 | 15 | 201 | 218 | 17 | 291 | 313 | 21 | 359 | 386 | 27 | 20 | 18 |
3,1,3 | 15

144 | 168 | 24 | 198 | 225 | 27 | 288 | 320 | 32 | 359 | 406 | 47 | 32 | 28 |
4,1,4 | 23

140 | 175 | 35 | 194 | 232 | 38 | 285 | 320 | 35 | 359 | 395 | 36 | 36 | 36 |
1,2,1 | 28

137 | 173 | 36 | 189 | 230 | 41 | 282 | 320 | 38 | 359 | 386 | 27 | 37 | 38 |

85

Ap. 1	Ap. 2	Ap. 3	Ap. 4	Mean	Selected Mean to 130	Selected Mean to 130 Residuals	dl
215	191	165	136	136	-	-	
228	419	191	285	450	165	355	450
215	282	67	263	332	69	343	380
210	258	48	255	316	51	336	369
189	406	217	242	450	208	329	500
199	212	5,4	86				
182	232	50	232	288	46	323	359
177	208	31	230	274	44	320	393
168	215	47	222	271	49	313	350
166	203	37	220	258	38	309	343
163	196	33	218	255	37	306	336
161	171	10	215	236	15	306	313
159	177	18	215	235	20	303	316
159	161	02	213	215	02	300	306
153	182	29	208	237	29	297	326
149	201	52	206	260	54	294	339
146	161	15	201	218	17	291	313
144	168	24	198	225	27	288	320
140	175	35	194	232	38	285	320
137	173	36	189	230	41	282	320
130	163	13	173	215	26	287	303
132	171	59	173	220	36	277	316
123	161	72	169	216	76	274	319
120	161	34	173	215	36	271	316
111	166	78	175	212	77	268	320
110	169	41	174	215	40	266	316
106	171	35	175	208	49	265	313
107	161	65	173	205	65	263	313
108	170	65	173	208	67	260	316

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2,3,0 | 30

135 | 153 | 18 | 189 | 215 | 26 | 277 | 303 | 26 | 359 | 386 | 27 | 24 | 23 |
5,3,3 | 19

132 | 171 | 39 | 187 | 225 | 38 | 277 | 316 | 39 | 359 | 406 | 47 | 41 | 39 |
0,1,0 | 30

129 | 201 | 72 | 184 | 260 | 76 | 274 | 339 | 65 | 355 | 419 | 64 | 69 | 71 |
1,5,6 | 48

127 | 161 | 34 | 182 | 218 | 36 | 271 | 306 | 35 | 355 | 395 | 40 | 36 | 35 |
1,1,0 | 28

121 | 196 | 75 | 175 | 252 | 77 | 268 | 329 | 61 | 355 | 419 | 64 | 69 | 71 |
4,6,10 | 48

118 | 159 | 41 | 175 | 215 | 40 | 266 | 300 | 34 | 355 | 386 | 31 | 36 | 38 |
3,2,4 | 30

118 | 153 | 35 | 173 | 213 | 40 | 263 | 303 | 40 | 355 | 386 | 31 | 36 | 38 |
3,2,2 | 30

115 | 161 | 46 | 173 | 218 | 45 | 263 | 313 | 50 | 355 | 386 | 31 | 43 | 47 |
1,2,3 | 35

115 | 180 | 65 | 171 | 242 | 61 | 260 | 326 | 66 | 355 | >500 | >145 - | 64 |
1,3,2 | 45

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No. | λ | Aperture 1 n | Aperture 1 m+n | Aperture 2 n | Aperture 2 m+n | Aperture 3 n | Aperture 3 m+n | Aperture 4 n | Aperture 4 m+n

30 | | ~~40~~ | ~~46~~ | ~~50~~
~~66~~ | ~~68~~ | ~~92~~ | ~~105~~ | ~~124~~ | ~~135~~ | ~~143~~
31 | | ~~48~~ | ~~46~~ | ~~50~~
~~51~~ | ~~67~~ | ~~76~~ | ~~105~~ | ~~110~~ | ~~135~~ | ~~138~~
32 | | ~~40~~ | ~~45~~ | ~~51~~
~~63~~ | ~~67~~ | ~~88~~ | ~~104~~ | ~~132~~ | ~~134.5~~ | ~~141~~
33 | | ~~44~~ | ~~45~~ | ~~51~~
~~58~~ | ~~66~~ | ~~83~~ | ~~104~~ | ~~118~~ | ~~134.5~~ | ~~141~~
34 | | ~~43~~ | ~~44~~ | ~~51~~
~~60~~ | ~~66~~ | ~~85~~ | ~~104~~ | ~~120~~ | ~~134.5~~ | ~~142~~
35 | | ~~48~~ | ~~44~~ | ~~52~~
~~59~~ | ~~66~~ | ~~84~~ | ~~103~~ | ~~118~~ | ~~134~~ | ~~142~~
36 | | ~~35~~ | ~~43~~ | ~~52~~
~~77~~ | ~~64~~ | ~~103~~ | ~~102~~ | ~~132~~ | ~~134~~ | ~~144~~
37 | | ~~38~~ | ~~43~~ | ~~52~~
~~71~~ | ~~64~~ | ~~97~~ | ~~102~~ | ~~126~~ | ~~134~~ | ~~144~~
38 | | ~~43~~ | ~~42~~ | ~~52~~
~~61~~ | ~~64~~ | ~~87~~ | ~~101~~ | ~~121~~ | ~~134~~ | ~~142~~
39 | | ~~43~~ | ~~42~~ | ~~52~~
~~61~~ | ~~63~~ | ~~85~~ | ~~101~~ | ~~121~~ | ~~134~~ | ~~142.5~~
40 | | ~~46~~ | ~~42~~ | ~~52~~
~~56~~ | ~~63~~ | ~~78~~ | ~~101~~ | ~~117~~ | ~~134~~ | ~~140~~
41 | | ~~43~~ | ~~41~~ | ~~53~~
~~59~~ | ~~62~~ | ~~86~~ | ~~100~~ | ~~120~~ | ~~133.5~~ | ~~143~~
42 | | ~~41~~ | ~~41~~ | ~~53~~
~~64~~ | ~~62~~ | ~~89~~ | ~~100~~ | ~~123~~ | ~~133~~ | ~~142~~
43 | | ~~46~~ | ~~41~~ | ~~53~~
~~56~~ | ~~61~~ | ~~79~~ | ~~100~~ | ~~115~~ | ~~133~~ | ~~140~~
44 | | ~~44~~ | ~~40~~ | ~~53~~
~~59~~ | ~~61~~ | ~~80~~ | ~~99~~ | ~~119~~ | ~~133~~ | ~~138~~
45 | | ~~40~~ | ~~39~~ | ~~54~~
~~66~~ | ~~60~~ | ~~90~~ | ~~99~~ | ~~124~~ | ~~133~~ | ~~143~~
46 | | ~~43~~ | ~~39~~ | ~~54~~
~~60~~ | ~~60~~ | ~~84~~ | ~~98~~ | ~~120~~ | ~~133~~ | ~~142~~
47 | | ~~48~~ | ~~39~~ | ~~54~~
~~55~~ | ~~60~~ | ~~80~~ | ~~48~~ | ~~116~~ | | |
48 | | ~~39~~ | ~~52~~ | ~~60~~ | ~~75~~ | ~~98~~ | ~~113~~ | | |
49 | | ~~45~~ | ~~38~~ | ~~54~~
~~67~~ | ~~59~~ | ~~81~~ | ~~97~~ | ~~119~~ | ~~133~~ | ~~141~~
50 | | ~~47~~ | ~~38~~ | ~~54~~
~~53~~ | ~~59~~ | ~~77~~ | ~~97~~ | ~~114~~ | ~~133~~ | ~~140~~
51 | | ~~49~~ | ~~38~~ | ~~55~~
~~49~~ | ~~58~~ | ~~75~~ | ~~96~~ | ~~111~~ | ~~132.5~~ | ~~138~~
52 | | ~~45~~ | ~~37~~ | ~~55~~
~~56~~ | ~~57~~ | ~~82~~ | ~~95~~ | ~~117~~ | ~~132~~ | ~~139~~
53 | | ~~50~~ | ~~36~~ | ~~55~~
~~46~~ | ~~56~~ | ~~68~~ | ~~94~~ | ~~106~~ | ~~132~~ | ~~136~~
54 | | ~~44~~ | ~~36~~ | ~~55~~
~~58~~ | ~~56~~ | ~~68~~ | ~~94~~ | ~~117~~ | ~~131~~ | ~~140~~
55 | | ~~47~~ | ~~36~~ | ~~55~~
~~63~~ | ~~55~~ | ~~77~~ | ~~93~~ | ~~114~~ | ~~131~~ | ~~141~~
56 | | ~~40~~ | ~~35~~ | ~~56~~
~~66~~ | ~~55~~ | ~~92~~ | ~~92~~ | ~~129~~ | ~~131~~ | ~~143~~
57 | | ~~48~~ | ~~35~~ | ~~56~~
~~52~~ | ~~54~~ | ~~75~~ | ~~92~~ | ~~113~~ | ~~130~~ | - |
58 | | ~~43~~ | ~~35~~ | ~~56~~
~~61~~ | ~~54~~ | ~~83~~ | ~~91~~ | ~~118~~ | ~~130~~ | ~~140~~

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[[preprinted]] 89 [[/preprinted]]

Ap 1 (n) | Ap 1 (m+n) | Ap 1 D.M. | Ap 2 (n) | Ap 2 (m+n) | Ap 2 D.M. | Ap 3 (n) | Ap 3 (m+n) | Ap 3 D.M. | Ap 4 (n) | Ap 4 (m+n) | Ap 4 D.M. | Mean D.M. | Selected Mean D.M. | Selected Mean Residuals | Selected Mean dl

75 | 103 | 28 | 135 | 161 | 26 | 225 | 252 | 27 | ~~332~~
[[/strikethrough]] | - | 20 | 27 | 1,1,0 | 22
75 | 129 | 54 | 135 | 177 | 42 | 222 | 268 | 46 | 332 | 359 | 27 | 42 | 47 |
7,5,1 | 35
75 | 106 | 31 | 135 | 163 | 28 | 222 | 255 | 33 | 332 | 355 | 23 | 29 | 31 |
0,3,2 | 25
72 | 182 | 110 | 132 | 242 | 110 | 220 | 329 | 109 | 329 | 406 | 77 | 102 |
110 | 0,0,1 | 64
72 | 129 | 57 | 132 | 152 | 50 | 220 | 274 | 54 | 329 | 363 | 34 | 49 | 54 |
3,4,0 | 39
69 | 103 | 34 | 129 | 173 | 44 | 218 | 244 | 26 | 326 | 350 | 24 | 32 | 35 |
1,9,9 | 28
69 | 109 | 40 | 127 | 163 | 36 | 215 | 255 | 40 | 326 | 355 | 29 | 36 | 39 |
1,3,1 | 30
65 | 118 | 53 | 127 | 171 | 44 | 215 | 263 | 48 | 326 | 350 | 24 | 42 | 48 |
5,4,0 | 36
65 | 151 | 86 | 124 | 201 | 77 | 213 | 294 | 81 | 323 | 374 | 51 | 74 | 81 |
5,4,0 | 53
61 | 127 | 66 | 121 | 180 | 59 | 210 | 279 | 69 | 323 | 359 | 36 | 57 | 65 |
1,6,4 | 45
61 | 129 | 68 | 121 | 182 | 61 | 210 | 279 | 69 | 323 | 369 | 46 | 61 | 66 |
2,5,3 | 46
61 | 109 | 48 | 118 | 161 | 43 | 208 | 252 | 44 | 323 | 363 | 40 | 44 | 45 |
3,2,1 | 34
57 | 144 | 87 | 118 | 198 | 80 | 206 | 291 | 85 | 320 | 386 | 66 | 79 | 84 |
3,4,1 | 54
57 | 93 | 36 | 115 | 151 | 36 | 206 | 239 | 33 | 320 | 343 | 23 | 32 | 35 |
1,1,2 | 28
54 | 89 | 35 | 115 | 140 | 31 | 203 | 239 | 33 | 320 | 347 | 27 | 32 | 33 |
2,2,0 | 26
54 | 86 | 32 | 115 | 144 | 29 | 203 | 237 | 34 | 320 | 343 | 23 | 29 | 32 |
0,3,2 | 26
50 | 129 | 79 | 112 | 184 | 72 | 201 | 277 | 76 | 316 | 369 | 53 | 70 | 76 |
3,4,0 | 50
50 | 86 | 36 | 112 | 144 | 32 | 201 | 239 | 38 | 316 | 343 | 27 | 31 | 35 |
1,3,3 | 28
50 | 89 | 39 | 109 | 151 | 52 | 198 | 242 | 44 | 316 | 350 | 34 | 40 | 42 |
3,0,2 | 32
46 | 109 | 63 | 106 | 103 | 57 | 196 | 260 | 64 | 313 | 359 | 46 | 57 | 61 |
2,4,3 | 43
46 | 83 | 37 | 106 | 142 | 36 | 194 | 230 | 36 | 313 | 336 | 23 | 34 | 34 |
3,2,2,11 | 27
42 | 93 | 51 | 103 | 151 | 48 | 194 | 242 | 48 | 303 | 347 | 44 | 48 | 49 |
2,1,1 | 36
42 | 72 | 30 | 103 | 135 | 32 | 191 | 228 | 37 | 309 | 336 | 29 | 32 | 32 |
2,0,5,3 | 26
42 | 65 | 23 | 100 | 127 | 27 | 191 | 213 | 22 | 309 | 329 | 20 | 23 | 23 |
0,4,1,3 | 19
42 | 57 | 15 | 100 | 115 | 15 | 189 | 206 | 17 | 306 | 323 | 17 | 16 | 16 |
1,1,1,1 | 14
37 | 61 | 24 | 100 | 124 | 24 | 189 | 213 | 24 | 306 | 329 | 23 | 24 | 24 |
0,0,0,1 | 20
37 | 72 | 35 | 100 | 137 | 37 | 189 | 225 | 36 | 306 | 336 | 30 | 34 | 34 |
1,3,2,4 | 27
37 | 75 | 38 | 100 | 140 | 40 | 189 | 225 | 36 | 306 | 339 | 33 | 37 | 37 |

89

Ap 1	Ap 2	Ap 3	Ap 4	Mean	Selected Mean	
(M) (M+D) (M+D)	(M) (M+D) (M+D)	(M) (M+D) (M+D)	(M) (M+D) (M+D)	(M) (M+D) (M+D)	(M) (M+D) (M+D)	(M) (M+D) (M+D)
75 103 28	135 161 26	225 252 27	332 359 27	-	20	87 1, 1, 0 22
74 107 34	135 171 42	222 268 46	332 359 27	42	42	47 1, 1, 1 35
73 106 31	135 163 28	222 255 29	332 355 29	31	31	31 0, 2, 2 34
72 182 110	132 242 110	220 329 109	329 406 77	102	102	0, 0, 1 28
72 129 57	132 152 50	220 274 54	329 363 34	49	54	3, 2, 0 34
69 103 34	129 173 44	218 244 26	326 350 24	32	35	1, 1, 1 28
69 109 40	127 163 36	215 255 40	326 355 29	36	39	1, 1, 1 30
65 118 53	127 171 44	215 263 48	326 350 24	42	48	2, 1, 0 36
65 151 86	124 201 77	213 294 81	323 374 51	74	81	5, 1, 0 53
61 127 66	121 180 59	210 279 69	323 359 36	57	65	1, 1, 1 48
61 129 68	121 182 61	210 279 69	323 369 46	61	66	2, 1, 1 46
61 109 48	118 161 43	208 252 44	323 363 40	44	45	3, 2, 1 34
57 144 87	118 198 80	206 291 85	320 386 66	79	84	2, 1, 1 34
57 93 36	115 151 36	206 239 33	320 343 23	32	35	1, 1, 2 28
57 27 38	106 141 31	205 239 32	320 347 27	26	32	2, 2, 0 26
49 96 32	105 141 29	203 237 34	320 343 23	34	34	0, 3, 2 26
50 127 79	103 153 72	203 237 76	320 347 73	70	76	3, 2, 0 40
47 96 36	103 141 32	201 239 31	320 341 27	31	35	1, 2, 3 35
42 93 27	100 139 28	198 237 31	320 341 27	36	39	2, 1, 2 30
48 93 29	100 141 32	198 237 31	320 341 27	40	42	3, 0, 2 31
46 89 63	96 129 57	196 240 80	319 359 46	57	61	2, 1, 3 43
41 23 27	86 123 26	196 236 36	319 336 23	24	34	3, 2, 2 27
53 73 51	105 141 36	196 241 68	319 341 46	49	49	2, 1, 1 36
42 73 20	103 135 32	196 239 37	319 336 29	32	32	2, 0, 1 32
43 65 83	101 141 37	193 237 41	319 336 29	20	23	0, 1, 1 29
42 57 15	100 135 15	193 236 17	319 336 17	16	16	1, 1, 1 30
37 41 24	100 127 24	193 236 24	319 336 24	23	24	0, 0, 0 20
33 32 35	100 127 37	193 236 35	319 336 35	34	34	1, 2, 2 27
33 41 38	100 130 40	193 236 38	319 336 38	37	37	1, 1, 1 29

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No. | λ | Aperture 1 n | Aperture 1 m+n | Aperture 2 n | Aperture 2 m+n | Aperture 3 n | Aperture 3 m+n | Aperture 4 n | Aperture 4 m+n

88	24	33	41	53	76	90	121	129	
89	24	29	40	49	75	85	121	126	
90	23	33	40	53	75	94	121	128	
91	23	32	40	58	75	101	121	133	
92	23	32	40	52	75	88	120.5	127	
93	23	28	40	47	74	84	120	126	
94	22	35	40	55	74	93	120	131	
95	22	30	40	51	74	88	120	127	
96	22	26	39	44	74	90	120	123	
97	21	28	39	47	73	83	119	123	
98	21	26	39	46	73	82.5	119	124	
99	21	26	38	44	73	83	119	123	
100	21	25	38	44	73	80	119	122	
101	21	26	39	45	73	81	119	124	
102	22	31	39	52	74	88	119	127	
103	22	24	39	42	74	77	119	121	
104	23	28	41	47	75	85	120	125	
105	24	29	42	48	76	84	121	127	
106	24	27	43	45	76	84			
107	25	39	45	55	81	95	123	130	
108	27	30	47	50	83	88	125	127	
109	28	32	50	52	86	91	126	128	
110	29	34	51	56	87	94	128	131	
111	20	32	51	53	88	89	128	129	
112	31	37	53	58	90	97	129	132	
113	33	36	55	57	-	-	-	-	
114	36	40	57	64	93	96	131	134	
115	37	59	60	85	99	112	133	144	
116	39	47	62	72	101	110	134	139	

90									
90	24	33	41	53	76	90	121	129	
89	24	29	40	49	75	85	121	126	
90	23	33	40	53	75	94	121	128	
91	23	32	40	58	75	101	121	133	
92	23	32	40	52	75	88	120.5	127	
93	23	28	40	47	74	84	120	126	
94	22	35	40	55	74	93	120	131	
95	22	30	40	51	74	88	120	127	
96	22	26	39	44	74	90	120	123	
97	21	28	39	47	73	83	119	123	
98	21	26	39	46	73	82.5	119	124	
99	21	26	38	44	73	83	119	123	
100	21	25	38	44	73	80	119	122	
101	21	26	39	45	73	81	119	124	
102	22	31	39	52	74	88	119	127	
103	22	24	39	42	74	77	119	121	
104	23	28	41	47	75	85	120	125	
105	24	29	42	48	76	84	121	127	
106	24	27	43	45	76	84			
107	25	39	45	55	81	95	123	130	
108	27	30	47	50	83	88	125	127	
109	28	32	50	52	86	91	126	128	
110	29	34	51	56	87	94	128	131	
111	20	32	51	53	88	89	128	129	
112	31	37	53	58	90	97	129	132	
113	33	36	55	57	-	-	-	-	
114	36	40	57	64	93	96	131	134	
115	37	59	60	85	99	112	133	144	
116	39	47	62	72	101	110	134	139	

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[[10 column table]]

no | Aperture 1 n | Aperture 1 m+n | Aperture 2 n | Aperture 2 m+n |
Aperture 3 n | Aperture 3 m+n | Aperture 4 n | Aperture 4 m+n

117	41	49	64	73	104	112	135	139	
118	42	47	65	72	105	112	136	137	
119	44	46	67	71	107	112	136	139	
120	49	60	74	87	112	123	137	141.5	
121	52	57	76	83	114	120	-	-	
122	57	60	83	87	120	122	-	-	
123	61	62	89	89	122	125	-	-	
124	-	75	93	102	125	131	-	-	
125	-	90	106	106	131	137	-	-	
126									

92									
no	Aperture 1		Aperture 2		Aperture 3		Aperture 4		
	n	m+n	n	m+n	n	m+n	n	m+n	
117	41	49	64	73	104	112	135	139	
118	42	47	65	72	105	112	136	137	
119	44	46	67	71	107	112	136	139	
120	49	60	74	87	112	123	137	141.5	
121	52	57	76	83	114	120	-	-	
122	57	60	83	87	120	122	-	-	
123	61	62	89	89	122	125	-	-	
124	-	75	93	102	125	131	-	-	
125	-	90	106	106	131	137	-	-	
126									

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Means from Bk. 11, p. 87. Beginning line 55

[[8 column table]]
 52 | 86 | 53 | 74 | 28 | 54 | 31 | 110
 51 | 88 | 50 | 69 | 26 | 42 | 28 | 110
 [[underlined]] 53 | 94 | 54 | 72 | 27 | 46 | 33 | 109 [[/underlined]]
 156 | 268 | 157 | 215 | 81 | 142 | 92 | 329
 52 | 89 | 52 | 72 | 27 | 47 | 31 | 110
 47 | 67 | - | 44 | - | 27 | 23 | 77
 [[underlined]] 203 | 335 | 157 | 259 | 81 | 169 | 115 | 406 [[/underlined]]
 [[double underlined]] 51 | 84 | 39 | 65 | 20 | 42 | 29 | 102 [[/double underlined]]
 [[/table]]

[[9 column table]]
 57 | 34 | 40 | 53 | 86 | 66 | 68 | 48 | 87
 50 | 44 | 36 | 44 | 77 | 59 | 61 | 43 | 80
 [[underlined]] 54 | 26 | 40 | 48 | 81 | 69 | 69 | 44 | 85 [[/underlined]]
 161 | 106 | 116 | 145 | 244 | 194 | 198 | 135 | 252
 54 | 35 | 39 | 48 | 81 | 65 | 66 | 45 | 84
 34 | 24 | 29 | 24 | 51 | 36 | 46 | 40 | 66
 [[underlined]] 195 | 130 | 145 | 169 | 295 | 230 | 244 | 175 | 318
 [[/underlined]]
 [[double underlined]] 49 | 32 | 36 | 42 | 74 | 57 | 61 | 44 | 79 [[/double underlined]]
 [[/table]]

[[9 column table]]
 36 | 35 | 32 | 79 | 36 | 37 | 39 | 63 | 37
 36 | 31 | 29 | 72 | 32 | 40 | 42 | 57 | 36
 [[underlined]] 33 | 33 | 34 | 76 | 38 | 41 | 44 | 64 [[/underlined]] | 36

[[strike through]] 22 [[/strike through]] 105 | 100 | 95 | 227 | 196 | 118 |
 125 | 184 | [[underlined]] 23 [[/underlined]]
 35 | 33 | 32 | 76 | 35 | 39 | 42 | 61 | 132
 [[underlined]] 23 | 27 | 23 | 53 | 27 | 27 | 34 | 46 [[/underlined]] | 34
 [[underlined]] 128 | 127 | 118 | 280 | 223 | 145 | 159 | 230 |
 [[/underlined]]
 [[double underlined]] 32 | 32 | 29 | 70 | 31 | 36 | 40 | 57 | [[/double underlined]]
 [[/table]]

[[7 column table]]
 51 | 30 | 23 | 15 | 24 | 35 | 38
 48 | 32 | 27 | 15 | 24 | 37 | 40
 [[underlined]] 48 [[/underlined]] | 37 | 22 | 17 | 24 | 36 | 36
 147 | [[underlined]] 29 | 20 | 17 | 23 | 30 | 33 [[/underlined]]
 49 | 128 | 92 | 64 | 95 | 138 | 147
 44 | 32 | 23 | 16 | 24 | 34 | 37
 [[underlined]] 191 [[/underlined]] | | | | |
 [[double underlined]] 48 [[/double underlined]] | | | | |
 [[/table]]

[[9 column table]]
 35 | 20 | 40 | 57 | 37 | 22 | 51 | 33 | 23
 35 | 28 | 39 | 50 | 36 | 22 | 44 | 36 | 16
 33 | 23 | 45 | [[underlined]] 63 [[/underlined]] | 31 | 24 | 46 | 34 | 38
 [[underlined]] 26 | 17 | 23 [[/underlined]] | 170 | 56 | [[underlined]] 21 | 21 |
 36 | 23 | 11 [[/underlined]]
 129 | 88 | 147 | 41 | 125 | 89 | 177 | 126 | 88

Means from Bk. 11, p. 87. Beginning line 55

58	84	53	74	28	54	31	110
51	88	50	69	26	42	28	110
53	94	54	72	27	46	33	109
156	268	157	215	81	142	92	329
52	89	52	72	27	47	31	110
47	67	-	44	-	27	23	77
203	335	157	259	81	169	115	406
51	84	39	65	20	42	29	102

57	34	40	53	86	66	68	48	87
50	44	36	44	77	59	61	43	80
54	26	40	48	81	69	69	44	85
161	106	116	145	244	194	198	135	252
54	35	39	48	81	65	66	45	84
34	24	29	24	51	36	46	40	66
195	130	145	169	295	230	244	175	318
49	32	36	42	74	57	61	44	79

36	35	32	79	36	37	39	63	37
36	31	29	72	32	40	42	57	36
33	33	34	76	38	41	44	64	36

22	105	100	95	227	196	118	125	184
23	35	33	32	76	35	39	42	61
132	23	27	23	53	27	27	34	46
34	128	127	118	280	223	145	159	230
32	32	29	70	31	36	40	57	

51	30	23	15	24	35	38	48	32
27	15	24	35	38	48	32	27	15
48	32	27	15	24	35	38	48	32
37	22	17	24	36	36	147	29	20
17	23	30	33	49	128	92	64	95
138	147	44	32	23	16	24	34	37
191	48							
48								

35	20	40	57	37	22	51	33	23
35	28	39	50	36	22	44	36	16
33	23	45	63	31	24	46	34	38
26	17	23	170	56	21	21	36	23
11	129	88	147	41	125	89	177	126
88								

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32 | 22 | 37 | 211 52 | 31 | 42 | 44 | 31 | 22

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line 97 2

[[9 column table]]

27 | 23 | 23 | 19 | 23 | 37 | 09 | 22 | 20
 25 | 22 | 20 | 20 | 19 | 39 | 10 | 18 | 18
 24 | 21 | 20 | 16 | 19 | 34 | 07 | 23 | 19
 [[underlined]] 23 | 16 | 13 | 09 | 16 | 26 | 06 | 17 | 20 [[/underlined]]
 99 | 86 | 76 | 64 | 81 | 136 | 32 | 80 | 77
 [[double underlined]] 25 | 22 | 19 | 16 | 20 | 34 | 08 | 20 | 19
 [[/table]]

[[9 column table]]

13 | 51 | 11 | 15 | 18 | 08 | 21 | 11 | 13
 06 | 28 | 09 | 05 | 13 | 06 | 11 | [[underlined]] 04 [[/underlined]] | 17
 19 | 34 | 12 | 12 | 17 | 02 | [[underlined]] 17 [[/underlined]] | 15 |
 [[underlined]] 07 [[/underlined]]
 [[underlined]] X | 23 | 06 | 06 | 10 | 03 [[/underlined]] | 49 | [[underlined]]
 [[/underlined]] | 37
 38 | 136 | 38 | 38 | 58 | 19 | 16 | 8 | 12
 [[double underlined]] 12 | 34 | 10 | 10 | 14 | 05 [[/double underlined]] | 11
 | [[double underlined]] [[/double underlined]] | 11
 | | | | | 60 | 48
 | | | | | [[double underlined]] 15 [[/double underlined]] | |
 [[double underlined]] 12 [[/double underlined]]
 | | | | | 1
 [[/table]]

[[9 column table]]

63 | 25 | 24 | 15 | -3 | 27 | 12 | 07 | 03
 59 | 24 | 22 | 17 | 09 | 31 | 17 | 09 | 00
 [[underlined]] 65 | 24 | 21 | 19 | 13 | 34 | 18 | 06 | 11 [[/underlined]]
 87 | 73 | 67 | 51 | 19 | 92 | 47 | 22 | 14
 [[double underlined]] 29 | 24 | 22 | 17 | 06 | 31 | 16 | 07 | 05 [[/double underlined]]
 72 | 24 | 19 | 04 | 15 | 23 | | |
 159 | 97 | 86 | 55 | 34 | 115 | | |
 [[double underlined]] 40 | 24 | 22 | 14 | 08 | 29 [[/double underlined]] | |
 |
 [[/table]]

[[2 column table]]

22 | 28
 [[underlined]] 19 | 24 [[/underlined]]
 41 | 52
 [[double underlined]] 20 | 26 [[/double underlined]]
 [[/table]]

The image shows a handwritten manuscript page, likely a page from a historical astronomical or mathematical text. The page is numbered "line 97" in the top left corner. It contains several tables of numbers, some of which are underlined or double-underlined. The numbers are written in a cursive script, and some are in red ink. The page is aged and shows some wear.

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[[preprinted]] 93 [[/preprinted]]

Ap 1 (n) | Ap 1 (m+n) | Ap 1 D.m. | Ap 2 (n) | Ap 2 (m+n) | Ap 2 D.m. | Ap 3 (n) | Ap 3 (m+n) | Ap 3 D.m. | Ap 4 (n) | Ap 4 (m+n) | Ap 4 D.m. | Mean D.m. | Selected Mean D.m. | Selected Mean Residuals | Selected Mean dl

100 | 124 | 24 | 161 | 182 | 22 | 258 | 279 | 21 | 355 | 374 | 19 | 22 | 22 | 2,1,1 | 18

103 | 118 | 15 | 163 | 180 | 17 | 260 | 279 | 19 | 359 | 363 | 04 | 14 | 17 | 2,0,2 | 14

118 | 115 | -03 | 168 | 177 | 09 | 266 | 279 | 13 | 359 | 374 | 15 | 08 | 06 | 9,3,7 | 05

124 | 151 | 27 | 184 | 215 | 31 | 279 | 313 | 34 | 363 | 386 | 23 | 29 | 31 | 4,0,3 | 25

132 ~~144~~ | 144 ~~144~~ | 12 | 189 | 206 | 17 | 285 | 303 | 18 | - | - | 16 | 16 | 4,1,2 | 14

144 ~~153~~ | 153 ~~151~~ | 07 | 206 | 215 | 09 | 303 | 309 | 06 | - | - | 07 | 07 | 0,2,1 | 06

153 | 156 | 03 | 220 | 220 | 00 | 309 | 320 | 11 | - | - | 05 | 05 | 2,5,6 | 04

| 187 | - | 230 | 252 | 22 | 320 | 339 | 19 | - | - | 20 | 22 | - | 18

| 222 | - | 263 | 291 | 28 | 339 | 363 | 24 | - | - | 26 | 28 | - | 23

93														
Ap 1	Ap 2	Ap 3	Ap 4	Mean	Selected Mean	Selected Mean Residuals	Selected Mean dl							
100	124	24	161	182	22	258	279	21	355	374	19	22	22	2,1,1
103	118	15	163	180	17	260	279	19	359	363	04	14	17	2,0,2
118	115	-03	168	177	09	266	279	13	359	374	15	08	06	9,3,7
124	151	27	184	215	31	279	313	34	363	386	23	29	31	4,0,3
132	144	144	12	189	206	17	285	303	18	-	-	16	16	4,1,2
144	153	151	07	206	215	09	303	309	06	-	-	07	07	0,2,1
153	156	03	220	220	00	309	320	11	-	-	05	05	2,5,6	04
	187	-	230	252	22	320	339	19	-	-	20	22	-	18
	222	-	263	291	28	339	363	24	-	-	26	28	-	23

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[[underlined]] Pleiades [[/underlined]] H 2605 (Panchromatic plate)

[[14 column table]]

No. | x | 1 (m 2.096) n | 1 (m 2.96) m+n | 2 n | 2 m+n | 3 n | 3 m+n | 4 n |
4 m+n | 5 (m 4.37) n | 5 (m 4.37) m+n | 6 (m 5.43) n | 6 (m 5.43) m+n
1 | 1.4 | | | | | | 7.7 | 17.1 |
2 | H | 1.5 | | | | | 4.5 | 11.9 | 12.9
3 | H | 0.8 | | | | | 1.1 | 6.9 | 8.5
4 | H | 1.1 | | | | | 2.0 | 8.0 | 10.1
5 | H | 1.1 | | | | | 2.9 | 4.6 | 9.5 | 11.7
6 | H3 | 1.6 | | | | | 3.8 | 5.2 | 10.9 | 12.4
7 | Hy | 2.2 | | | | | 4.2 | 5.9 | 12.1 | 13.9
8 | H | 2.5 | | | | | 5.0 | 6.1 | 12.5 | 14.1
9 | H2 | 4.0 | | | | | 6.1 | 9.0 | 15.0 | 17.0
10 | 7.0 | | | | | 9.0 | - | 19.5 | -

[[/table]]

[[7 column table]]

| n | Mira m+n | [n] | [m+n] | dm
1 | kappa | 12.0 | 17.0 | 287 | 334 | 47
2 | H | 7.5 | 4.5 | 243 | 194 | 51
3 | H | 4.8 | 2.9 | 208 | 162 | 54
4 | 3.0 | 5.7 | 166 | 210 | 34
5 | 3.0 | 4.6 | 166 | 195 | 30

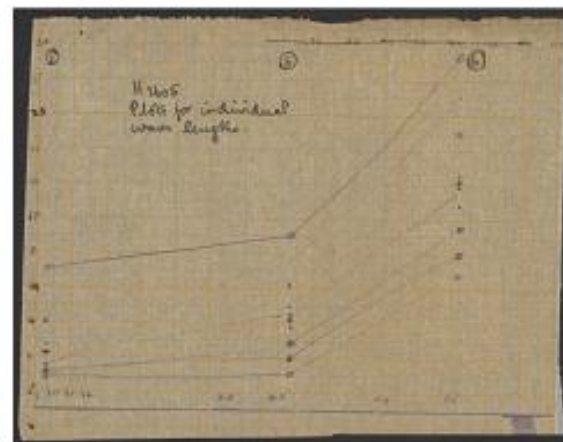
94													
Pleiades H 2605 (Panchromatic plate)													
No.	λ	(2"-94)		3		4		5 (9"-12)		6 (5"-94)		7	
		m	n	m	n	m	n	m	n	m	n	m	n
1		1.4						7.7		17.1			
2	H	1.5						4.5		11.9	12.9		
3	H	0.8						1.1		6.9	8.5		
4	H	1.1						2.0		8.0	10.1		
5	H	1.1						2.9	4.6	9.5	11.7		
6	H3	1.6						3.8	5.2	10.9	12.4		
7	Hy	2.2						4.2	5.9	12.1	13.9		
8	H	2.5						5.0	6.1	12.5	14.1		
9	H2	4.0						6.1	9.0	15.0	17.0		
10		7.0						9.0	-	19.5	-		

Mira						
No.	λ	m+n		[m+n]		dm
		m	n	m	n	
1	H	12.0	17.0	287	334	47
2	H	7.5	4.5	243	194	51
3	H	4.8	2.9	208	162	54
4		3.0	5.7	166	210	34
5		3.0	4.6	166	195	30

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[[image - line graph, six straight lines drawn through data points]]

H 2605
Plots for individual wave lengths



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[[7 column table]]

5 [n] | 5 [m+n] | 5 m | 6 [n] | 6 [m+n] | 6 m |

		285	296	11	11
		225	247	22	22
		240	266	26	26

162	191	29	259	283	24	26
-----	-----	----	-----	-----	----	----

182	203	21	264	291	27	24
-----	-----	----	-----	-----	----	----

185	212	27	288	304	16	22
-----	-----	----	-----	-----	----	----

200	215	15	295	307	12	14
-----	-----	----	-----	-----	----	----

215	253	38	296	334	38	38
-----	-----	----	-----	-----	----	----

[[/table]]

Mira and No. 6. compared

[[4 column table]]

Mira n | 6 n | m | Line

4.8 | 6.9 | 199-224-25 | H₂

7.5 | 8.0 | 233-240-07 | H

[[/table]]

On this table Mira is completely superimposed on another spectrum

95

5	6
[m] [m+n] Δm	[n] [m+n] Δm
	205 246 11 11
	225 247 22 22
	240 266 26 26
162 191 29	259 283 24 26
182 203 21	264 291 27 24
185 212 27	288 304 16 22
200 215 15	295 307 12 14
215 253 38	296 334 38 38

Mira and No. 6. compared

Mira n	6 n	Δm	Line
4.8	6.9	199-224-25	H ₂
7.5	8.0	233-240-07	H

On this table Mira is completely superimposed on another spectrum

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Pleisades H 2604 (Presto)

[[14 column table]]

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
No. 1	1(2.96) n	1(2.96) m+n	2(3.81) n	2(3.81) m+n	3(4.25) n	3(4.25) m+n	5(4.37) n	5(4.37) m+n	6(5.43) n	6(5.43) m+n	7(6.46) n	7(6.46) m+n		
1	H	0.7	-	-	0.9	-	0.4	0.7	2.5	3.6	6.9	8.0		
2	H	0.0	-	-	0.5	-	0.0	0.0	1.7	2.8	4.2	6.2		
3	H	0.0	-	-	0.7	-	0.1	0.5	2.0	3.6	5.4	8.0		
4	H	0.0	-	0.4	-	1.0	-	0.5	1.0	2.6	4.1	7.0	9.4	
5	H3	0.0	-	0.7	-	1.1	-	0.7	1.1	3.1	4.5	7.5	10.3	
6	Hn	0.1	-	-	1.3	-	0.9	1.2	4.0	5.2	9.8	11.2		
7	H	0.3	-	-	1.6	-	1.1	-	5.0	6.0	10.5	12.1		
8		0.4	-	-	2.0	-	1.3	-	5.3	6.4	10.5	8.0	12.1	13.1
9		-	-	-	-	-	-	-	13.0	14.1				

Star 1 as standard. Diff. of mag. from H, and H3-H

[[13 column table]]

No. 1	No. 1	No. 2	No. 2	No. 3	No. 3	No. 5	No. 5
No. 1	n	m	n	m	n	m	n
H	0.5	..	..	1.0	4.1	1.4	3.6
H3	0.5	3.6	0.5	0.5	2.9	2.4	3.9
H3-H	0.5	1.9	1.9	1.9	4.2	1.4	2.3
		2.4	5.1	1.9	3.2	2.0	1.5
Diff.							

96

Pleisades H 2604 (Presto)	No.	λ	1 (5.96)		2 (3.81)		3 (4.13)		5 (4.97)		6 (5.49)		7 (6.44)	
H	mag	H ₃	mag	H ₃	H	mag	H ₃	mag	H ₃	H	mag	H ₃	mag	H ₃
1	0.7	-	-	-	0.9	-	0.4	0.7	2.5	3.6	6.9	8.0		
2	0.0	-	-	-	0.5	-	0.0	0.0	1.7	2.8	4.2	6.2		
3	0.0	-	-	-	0.7	-	0.1	0.5	2.0	3.6	5.4	8.0		
4	0.0	-	0.4	-	1.0	-	0.5	1.0	2.6	4.1	7.0	9.4		
5	0.0	-	0.7	-	1.1	-	0.7	1.1	3.1	4.5	7.5	10.3		
6	0.1	-	-	-	1.3	-	0.9	1.2	4.0	5.2	9.8	11.2		
7	0.3	-	-	-	1.6	-	1.1	-	5.0	6.0	10.5	12.1		
8	0.4	-	-	-	2.0	-	1.3	-	5.3	6.4	10.5	12.1		
9	-	-	-	-	-	-	-	-	-	-	13.0	14.1		

Star 1 as standard. Diff. of mag. from H₁ and H₃-H₁

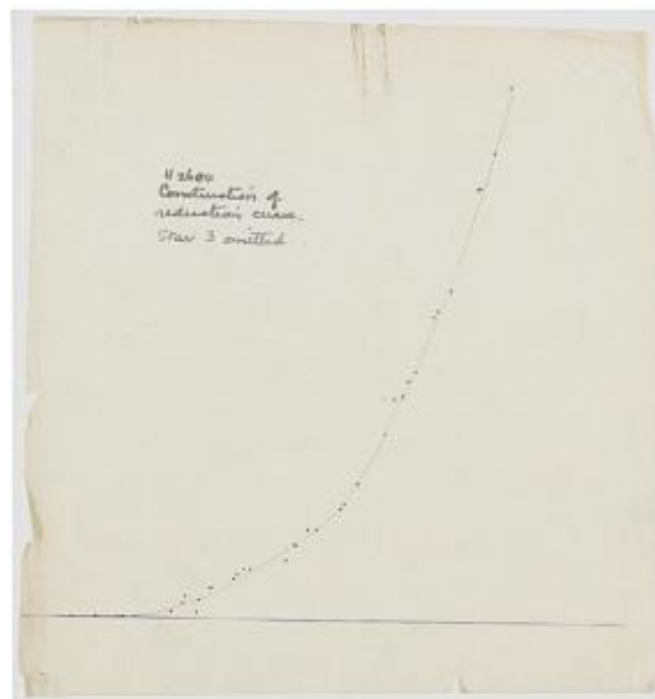
No. 1	No. 2	No. 3	No. 5	No. 6	No. 7
[u] Δm	[u] Δm	[u] Δm	[u] Δm	[u] Δm	[u] Δm
H ₁ 0.5	1.0	4.1	
H ₃ 0.5	3.6	0.5	0.5	2.9	
H ₃ -H ₁	1.9	1.9	1.9	4.2	
	2.4	5.1	1.9	3.2	
Diff.					

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[[image - line graph drawn through data points]]

H 2644
Construction of reduction curve.
Star 3 omitted

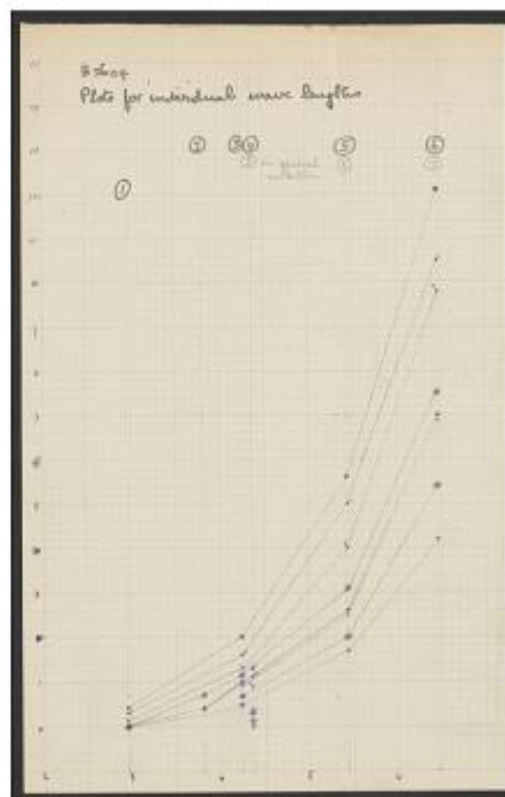


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[[image - seven line graphs drawn through data points]]

H 2604
Plots for individual wave lengths

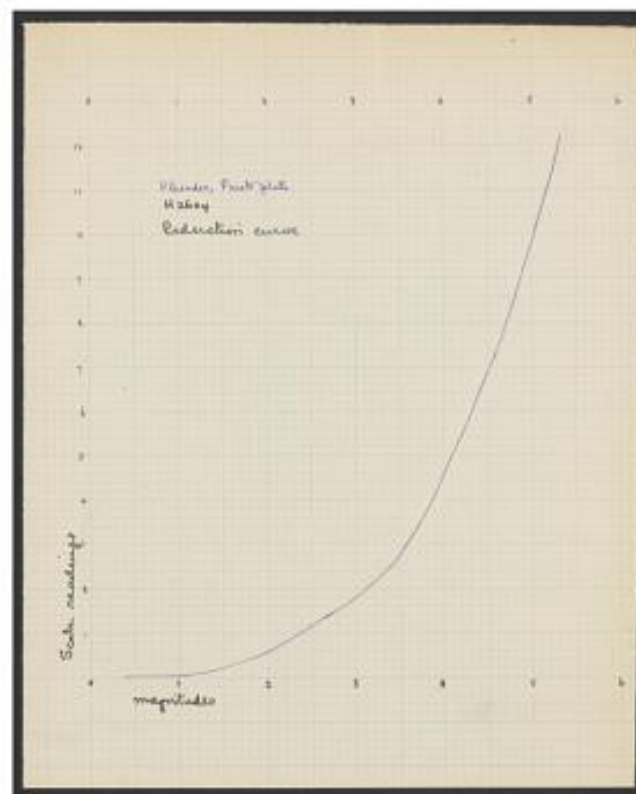


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[[image - line graph of Scale reading vs magnitudes]]

Pleiades, Presto plate
h 2604
Reduction Curve



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[[preprinted]] 97 [[/preprinted]]

[[12 column table]]

5 [n] | 5 [m+n] | 5 m | 6 [n] | 6 [m+n] | 6 m | 7 [n] | 7 [m+n] | 7 m | Mean

[[Presto]] | Pan | 11 inch 2 prism

178 | 212 | 34 | 339 | 376 | 37 | 450 | 471 | 21 | 31 | 11 | 49

.. | .. | - | 294 | 351 | 57 | 390 | 436 | 46 | 52 | 11 | 83

130 | 190 | 60 | 312 | 376 | 64 | 419 | 471 | 52 | 58 | 22 | 94

190 | 238 | 46 | 344 | 388 | 44 | 452 | 493 | 41 | 44 | 26 | 103

212 | 244 | 32 | 360 | 400 | 40 | 463 | 507 | 44 | 38 | 26 | 101

229 | 253 | 24 | 387 | 414 | 27 | 500 | 520 | 20 | 24 | 24 | 101

- | .. | - | 409 | 431 | 22 | 509 | 531 | 22 | 22 | 22 | 88

- | .. | - | 423 | 440 | 17 | 531 | 5408 | 09 | 13 | 14 | 122

- | - | - | - | - | - | - | - | - | - | - | -

[[/table]]

Mira and No. 6

[[4 column table]]

Mira | 6 | m | Line

2.2 | 1.7 | 324 ~~[[strike through]]~~ 294 ~~[[strike through]]~~-260+58 | H

4.3 | 2.0 | 393-312+81 | H

[[/table]]

58

25

83

81

7

88

97

5	6	7	Mean	Pave	11 inch
178 212 34 339 376 37 450 471 21 31 11 49	178 212 34 339 376 37 450 471 21 31 11 49	178 212 34 339 376 37 450 471 21 31 11 49	178 212 34 339 376 37 450 471 21 31 11 49	178 212 34 339 376 37 450 471 21 31 11 49	178 212 34 339 376 37 450 471 21 31 11 49
.. .. - 294 351 57 390 436 46 52 11 83	.. .. - 294 351 57 390 436 46 52 11 83	.. .. - 294 351 57 390 436 46 52 11 83	.. .. - 294 351 57 390 436 46 52 11 83	.. .. - 294 351 57 390 436 46 52 11 83	.. .. - 294 351 57 390 436 46 52 11 83
130 190 60 312 376 64 419 471 52 58 22 94	130 190 60 312 376 64 419 471 52 58 22 94	130 190 60 312 376 64 419 471 52 58 22 94	130 190 60 312 376 64 419 471 52 58 22 94	130 190 60 312 376 64 419 471 52 58 22 94	130 190 60 312 376 64 419 471 52 58 22 94
190 238 46 344 388 44 452 493 41 44 26 103	190 238 46 344 388 44 452 493 41 44 26 103	190 238 46 344 388 44 452 493 41 44 26 103	190 238 46 344 388 44 452 493 41 44 26 103	190 238 46 344 388 44 452 493 41 44 26 103	190 238 46 344 388 44 452 493 41 44 26 103
212 244 32 360 400 40 463 507 44 38 26 101	212 244 32 360 400 40 463 507 44 38 26 101	212 244 32 360 400 40 463 507 44 38 26 101	212 244 32 360 400 40 463 507 44 38 26 101	212 244 32 360 400 40 463 507 44 38 26 101	212 244 32 360 400 40 463 507 44 38 26 101
229 253 24 387 414 27 500 520 20 24 24 101	229 253 24 387 414 27 500 520 20 24 24 101	229 253 24 387 414 27 500 520 20 24 24 101	229 253 24 387 414 27 500 520 20 24 24 101	229 253 24 387 414 27 500 520 20 24 24 101	229 253 24 387 414 27 500 520 20 24 24 101
- .. - 409 431 22 509 531 22 22 22 88	- .. - 409 431 22 509 531 22 22 22 88	- .. - 409 431 22 509 531 22 22 22 88	- .. - 409 431 22 509 531 22 22 22 88	- .. - 409 431 22 509 531 22 22 22 88	- .. - 409 431 22 509 531 22 22 22 88
- .. - 423 440 17 531 5408 09 13 14 122	- .. - 423 440 17 531 5408 09 13 14 122	- .. - 423 440 17 531 5408 09 13 14 122	- .. - 423 440 17 531 5408 09 13 14 122	- .. - 423 440 17 531 5408 09 13 14 122	- .. - 423 440 17 531 5408 09 13 14 122
- - - - - - - - - - - -	- - - - - - - - - - - -	- - - - - - - - - - - -	- - - - - - - - - - - -	- - - - - - - - - - - -	- - - - - - - - - - - -

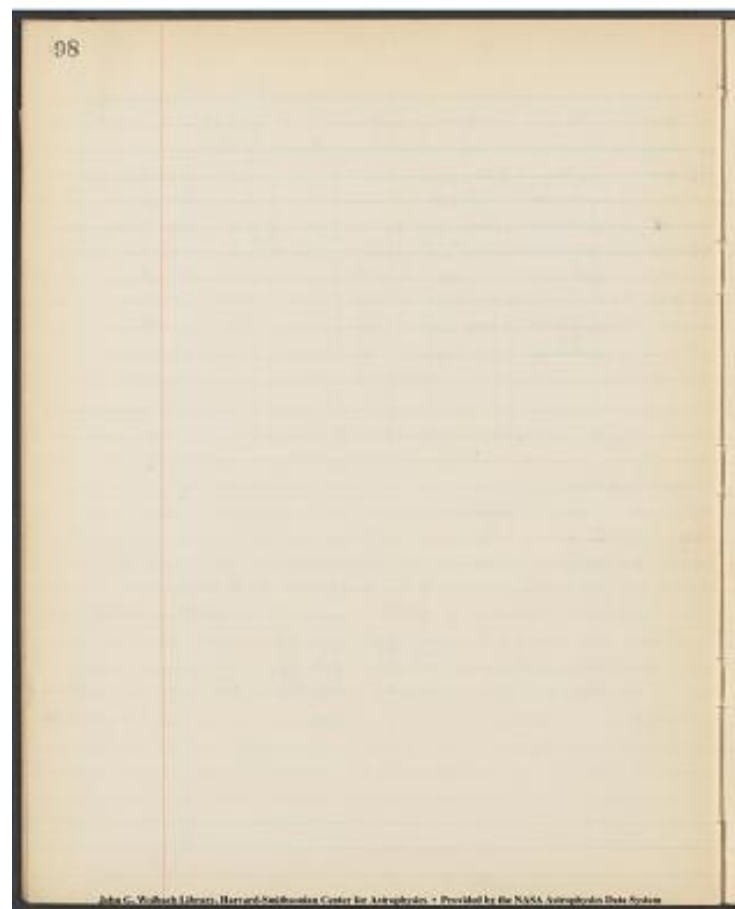
Mean and No. 6

Mira	6	Line	Line
2.2	1.7	324 - 260 = 64	88
4.3	2.0	393 - 312 = 81	116

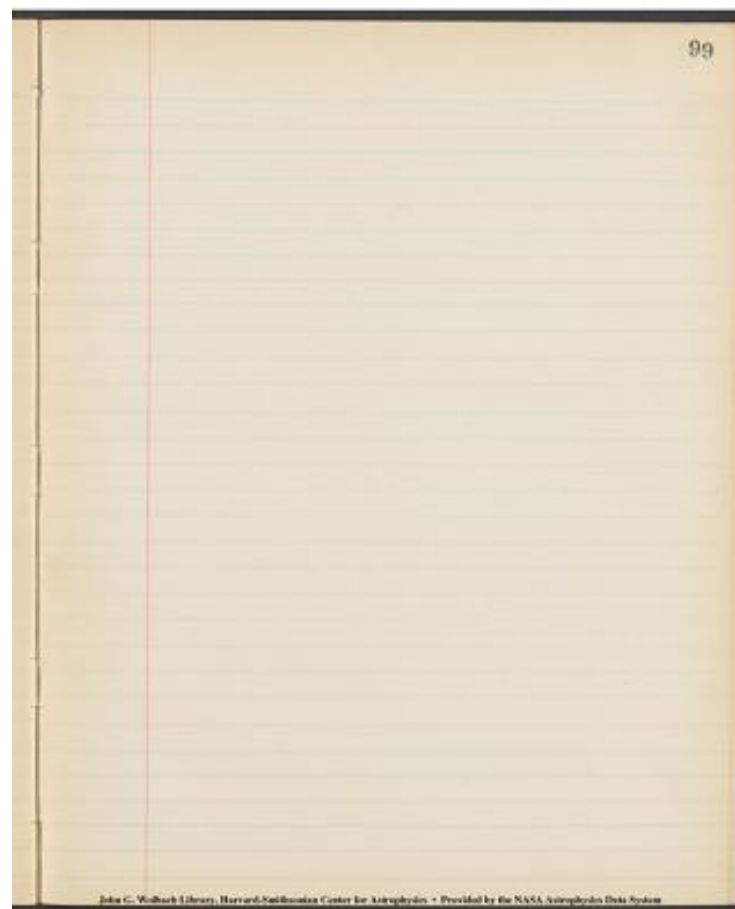
33
 25
 88

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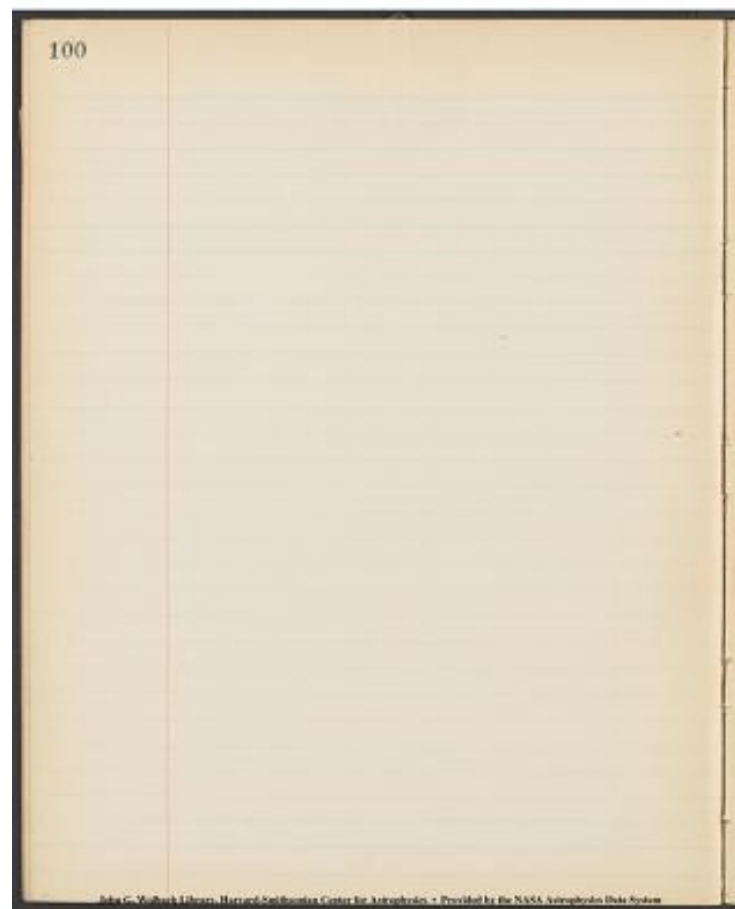


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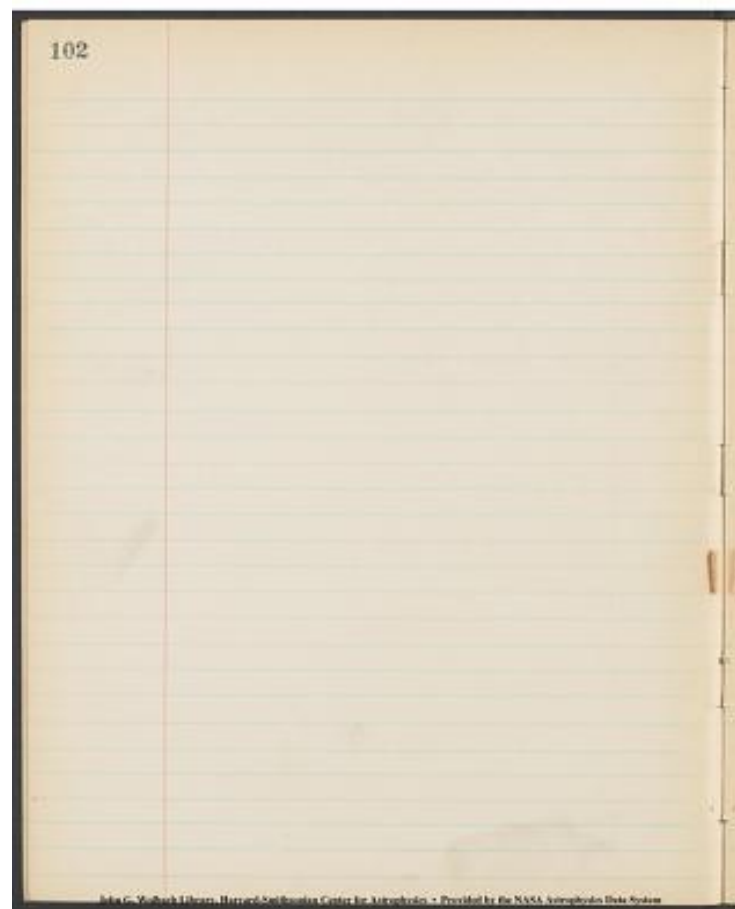
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[[preprinted]] 104 [[preprinted]]

X-14882 l+m+n Reduced to 42

[[17 column table]]

#7 n #7 m+n #7 l+m+n #7 <u>n</u> #7 <u>m+n</u> #7 (n) #7 m+n #7 m #6 n #6 m+n #6 l+m+n #6 <u>n</u> #6 <u>m+n</u> #6 m																
1	34	35	43	32	33											
2	35	37	43	33	37											
3	39	40	43	37	38											
4	39	41	43	37	39											
5	40	41	43	38	39											
6	40	41	43	38	39											
7	39	41	43	37	34											
8	39	41	43	37	39											
8a	-	-	-	-	-											
9	39	41	43	37	39											
9a	-	-	-	-	-											
10	39	41	43	37	39											
11	37	40	43	35	38											
12	37	38	43	35	36											
13	30	33	43	29	31											
14	26	27	43	25	25											
15	19	23	43	18	21											
16	17	20	43	16	16											
17	13	16	43	12	15											

104

X-14882

Reduced to 42

#7

#6

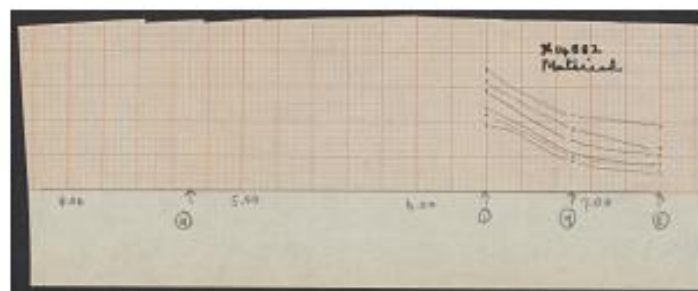
n	m+n	l+m+n	n	m+n	l+m+n	n	m+n	l+m+n	n	m+n	l+m+n	n	m+n	l+m+n	n	m+n	l+m+n
1	34	35	43	32	33	-	-	-	-	-	-	-	-	-	-	-	-
2	35	37	43	33	37	17	38	39	17	38	-	-	-	-	-	-	-
3	39	40	43	37	38	-	-	-	-	-	-	-	-	-	-	-	-
4	39	41	43	37	39	-	-	-	-	-	-	-	-	-	-	-	-
5	40	41	43	38	39	-	-	-	-	-	-	-	-	-	-	-	-
6	40	41	43	38	39	-	-	-	-	-	-	-	-	-	-	-	-
7	39	41	43	37	39	20	39	40	20	39	-	-	-	-	-	-	-
8	39	41	43	37	39	32	39	40	20	39	-	-	-	-	-	-	-
8a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	39	41	43	37	39	25	39	40	21	39	-	-	-	-	-	-	-
9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	39	41	43	37	39	29	39	40	25	39	-	-	-	-	-	-	-
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12	37	38	43	35	36	30	32	40	19	31	-	-	-	-	-	-	-
13	30	33	43	29	31	12	26	34	11	27	-	-	-	-	-	-	-
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15	19	23	43	18	21	3	6	32	3	6	-	-	-	-	-	-	-
16	17	20	43	16	16	-	-	-	-	-	-	-	-	-	-	-	-
17	13	16	43	12	15	-	-	-	-	-	-	-	-	-	-	-	-

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[[image - six line graphs drawn through data points]]

X 14882
Material



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#1* n		#1* m+n		#1* l+m+n		#1* [[bar]] n		#1* [[bar]] m+n		[[bar]]											
#1* (n)		#1* (m+n)		#1* m		#4* n		#4* m+n		#4* l+m+n		#4* [[bar]] n		[[bar]]							
[[bar]]		#4* [[bar]] m+n		[[bar]]		#4* (n)		#4* (m+n)		#4* m											
-		-		-		-		-		-		-		-							
19	|	22	|	42	|	19	|	22	|		|		|								
32	|	35	|	42	|	32	|	35	|		|		|								
32	|	35	|	42	|	32	|	35	|		|		|								
-		-		-		-		-		-		-		-							
-		-		-		-		-		-		-		-							
31	|	35	|	42	|	31	|	35	|		|		|								
31	|	34	|	42	|	31	|	34	|		|		|								
30	|	32	|	42	|	30	|	32	|		|		|								
27		32		42		27		32													
28		32		42		28		32													
26		29		42		26		29													
20		24		42		28		24		22		24		40		23		25			
18		19		42		18		19													
9		14		42		9		14													

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[illegible]

B 12														107
B 13														
h	m	s	h	m	s	h	m	s	h	m	s	h	m	s
0	7	91												
15	12	91												
16	18	91												
—	—	—												
—	—	—												
18	17	91												
—	—	—												
19	18	91												
8	19	91												
19	18	91												
19	18	91												
2	18	91												

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#3 n | #3 m+n | #3 l+m+n | #3 mean n | #3 mean m+n | #3 (n) | #3
(m+n) | #3 delta m | #2 n | #2 m+n | #2 l+m+n | #2 mean n | #2 mean
m+n | #2 (n) | #2 (m+n) | #2 delta m

1	35	37	42	35	37					-	-	-	-	-	-				
2	34	37	42	34	37					34	41	42	34	41		149	108	41	
3	35	37	42	35	37					40	41	42	40	41					
4	34	37	42	34	37					39	41	42	39	41					
5	34	37	42	34	37					-	-	-	-						
6	35	37	42	35	37					-	-	-	-						
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11	33	36	42	33	36					38	41	42	38	41					
12	34	36	42	34	36					-	-	-	-						
13	33	36	42	33	36					37	41	42	37	41					
14	33	36	42	33	36					38	41	42	38	41					
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21	-	-	-	-	-	39	41			42	39	41							
22	31	34	42	31	34					37	41	42	37	41					
23	31	34	42	31	34					-	-	-	-						
24	32	34	42	32	34					36	40	42	36	40					
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28	31	32	42	31	32					38	40	42	38	40					
29	28	30	42	28	30					36	39	42	36	39					
30	27	29	42	27	29					35	37	42	35	37					

108

1

3

4 Runned out

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	25	27	28	29	30	31	32	33	34	-	-	-	-	-	-	-	-	-	-
2	25	27	28	29	30	31	32	33	34	25	27	28	29	30	31	32	33	34	35
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45	25	27	28	29	30	31	32	33	34	25	27	28	29	30	31	32	33	34	35
46	25	27	28	29	30	31	32	33	34	25	27	28	29	30	31	32	33	34	35
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49	25	27	28	29	30	31	32	33	34	25	27	28	29	30	31	32	33	34	35
50	25	27	28	29	30	31	32	33	34	25	27	28	29	30	31	32	33	34	35

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1	30	21	42	30	21
2	42	34	42	42	34
3	40	34	42	40	34
4	35	34	42	35	34
5	37	34	42	37	34
6	36	33	42	36	33
7	34	32	42	34	32
8	33	32	42	33	32
9	34	32	42	34	32
10	36	32	42	36	32
11	33	30	42	33	30
12	31	28	42	31	28
13	34	28	42	34	28
14	36	28	42	36	28
15	33	27	42	33	27
16	28	25	42	28	25
17	23	21	42	23	21
18	18	15	42	18	15
19	14	11	42	14	11
20	16	10	42	16	10
21	10	9	42	10	9

109

419

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[[17 column table]]

#3 n | #3 m+n | #3 l+m+n | #3 [[bar]] n [[/bar]] | #3 [[bar]] m+n [[/bar]] |
#3 (n) | #3 (m+n) | #3 m | #2 n | #2 m+n | #2 l+m+n | #2 [[bar]] n [[/bar]] |
#2 [[bar]] m+n [[/bar]] | #2 (n) | #2 (m+n) | #2 m
31 | 26 | 28 | 42 | 26 | 28 | | | 35 | 36 | 42 | | | |
32 | 24 | 27 | 42 | 24 | 27 | | | 33 | 35 | 42 | | | |
33 | - | - | - | - | - | - | - | - | - | - | - | - | - |
H 34 | 2 | 25 | 42 | 2 | 25 | | | 6 | 31 | 42 | 290 | 156 | 134 | |
35 | 5 | 20 | 42 | 5 | 20 | | | - | - | - | | | |
K 36 | 1 | 20 | 42 | 1 | 20 | | | 2 | 23 | 42 | | | |
37 | 3 | 20 | 42 | 3 | 20 | | | 11 | 22 | 42 | | | |
38 | 13 | 17 | 42 | 13 | 17 | | | [[circled]] 37a [[/circled]] 11 | 20 | 42 |
| | | | | | | | | | | | | | | |
39 | 11 | 15 | 42 | 11 | 15 | | | 11 | 15 | 42 | | | |
40 | 4 | 13 | 42 | 4 | 13 | | | | | | | | | |

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Vega C 18900 Reduced to 61

[[24 column table]]

| ap4 #3 n | ap4 m+n | ap4 l+m+n | ap4 [[bar]] n [[/bar]] | ap4 [[bar]]
m+n [[/bar]] | ap4 (n) | ap4 (m+n) | ap4 [[m]] | #6 n | #6 m+n | #6 l+m+n |
#6 [[bar]] n [[/bar]] | #6 [[bar]] m+n [[/bar]] | #6 (m) | #6 (m+n) | #6 m | ap.
10 n | ap. 10 m+n | ap. 10 l+m+n | ap. 10 [[bar]] n [[/bar]] | ap. 10 [[bar]]
m+n [[/bar]] | ap. 10 (n) | ap. 10 (m+n) | ap. 10 m

beta | 59 | 64 | 65 | 56 | 61 | 152 | 35 | (117) | 47 | 59 | 63 | 45 | 57 | 251 |
143 | 108 | beta | 22 | 39 | 62 | 22 | 38 | 387 | 292 | 95

gamma | 63 | 65 | 64 | 60 | 62 | [[95]] | 0 | (85) | 54 | 61 | 62 | 53 | 60 | 186
| 85 | (101) | gamma | 30 | 51 | 62 | 30 | 50 | 339 | 213 | 126

zeta | 61 | 65 | 64 | 58 | 62 | 130 | 0 | (130) | 51 | 61 | 62 | [[50]] | 60 | 213
| 85 | (128) | zeta | 26 | 50 | 62 | 26 | 49 | 363 | 220 | 143

epsilon | 58 | 65 | 64 | 55 | 62 | 164 | 0 | (164) | 45 | 60 | 61 | 45 | 60 | 251
| 85 | (166) | epsilon | 20 | 46 | 62 | 20 | 45 | 399 | 251 | 148

kappa | - | - | - | - | - | - | - | 57 | 59 | 61 | 57 | 59 | 143 | 118 | (25) |
kappa | 38 | 43 | 61 | 38 | 43 | 292 | 262 | 30

xi | 52 | 64 | 64 | 49 | 61 | 220 | 35 | (185) | 37 | 57 | 61 | 37 | 57 | 297 |
143 | 154 | xi | 9 | 37 | 61 | 9 | 37 | 475 | 297 | 178

eta | 43 | 61 | 64 | 41 | 58 | 274 | 130 | 144 | 26 | 50 | 61 | 26 | 50 | 363 |
213 | 150 | eta | 7 | 26 | 61 | 7 | 26 | 494 | 363 | 131

theta | 37 | 57 | 64 | 35 | 54 | 308 | 175 | 133 | 20 | 42 | 61 | 20 | 42 | 398 |
168 | 130

iota | 33 | 52 | 64 | 31 | 49 | 333 | 220 | 113 | 18 | 35 | 61 | 18 | 35 | 410 |
308 | 102

kappa | 32 | 46 | 64 | 30 | 44 | 339 | 257 | 82 | 16 | 31 | 61 | 16 | 31 | 422 |
333 | 89

lambda | 30 | 41 | 64 | 29 | 39 | 344 | 286 | 58 | 15 | 26 | 61 | 15 | 26 | 428
| 363 | 65

mu | 29 | 37 | 64 | 28 | 35 | 350 | 308 | 42 | 14 | 22 | 61 | 14 | 22 | 434 |
387 | 47

nu | 27 | 33 | 64 | 26 | 31 | 363 | 333 | 30 | 13 | 19 | 61 | 13 | 19 | 440 |
403 | 37

xi | | | | | | | 12 | 17 | 61 | 12 | 17 | 450 | 416 | 34

Ap. 10

beta | 22 | 39 | 62 | 22 | 38 | 387 | 292 | 95
 gamma | 30 | 51 | 62 | 30 | 50 | 339 | 213 | 126
 delta | 26 | 50 | 62 | 26 | 49 | 363 | 220 | 143
 epsilon | 20 | 46 | 62 | 20 | 45 | 399 | 251 | 148
 kappa | 38 | 43 | 61 | 38 | 43 | 292 | 262 | 30
 xi | 9 | 37 | 61 | 9 | 37 | 475 | 297 | 178
 eta | 7 | 26 | 61 | 7 | 26 | 494 | 363 | 131
 theta | 4 | 17 | 61 | 4 | 17 | - | - | -
 iota | 3 | 12 | 61 | 3 | 12 | - | 450 | |
 kappa | 2 | 9 | 61 | 2 | 9 | - | - | |
 lambda | 2 | 7 | 61 | 2 | 7 | - | - | |
 mu | 1 | 5 | 60 | 1 | 5 | - | - | |

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#7 n | #7 m+n | #7 l+m+n | #7 mean n | #7 mean m+n | #7 (n) | #7 (m+n)
| #7 delta m | Ap. 8 n | Ap. 8 m+n | Ap. 8 l+m+n | Ap. 8 mean n | Ap. 8
mean m+n | Ap. 8 (n) | Ap. 8 (m+n) | Ap. 8 delta m

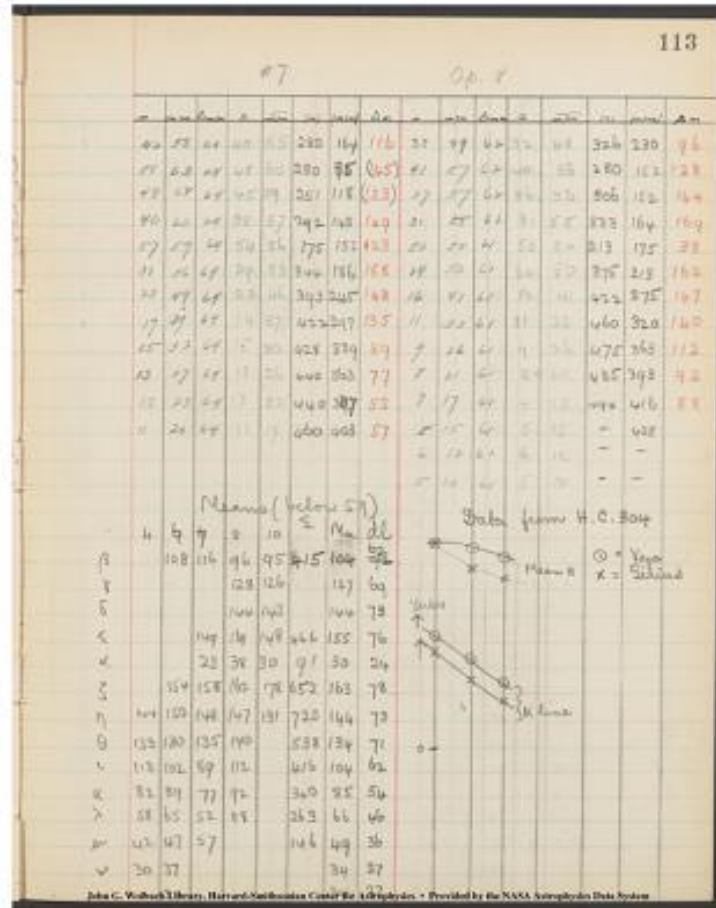
42 | 58 | 64 | 40 | 55 | 280 | 164 | 116 | 33 | 49 | 62 | 32 | 48 | 326 | 230 |
96
51 | 63 | 64 | 48 | 60 | 230 | 85 | (145) | 41 | 57 | 62 | 40 | 56 | 280 | 152 |
128
48 | 62 | 64 | 45 | 59 | 251 | 118 | (133) | 37 | 57 | 62 | 36 | 56 | 306 | 152 |
144
40 | 60 | 64 | 38 | 57 | 192 | 143 | 149 | 31 | 55 | 61 | 31 | 55 | 333 | 164 |
169
57 | 59 | 64 | 54 | 56 | 175 | 152 | ~~1~~ | ~~23~~ |
50 | 54 | 61 | 50 | 54 | 213 | 175 | 38
31 | 56 | 69 | 29 | 53 | 344 | 186 | 158 | 24 | 50 | 61 | 24 | 50 | 375 | 213 |
162
23 | 49 | 64 | 22 | 46 | 393 | 245 | 148 | 16 | 41 | 41 | 61 | 16 | 41 | 422 |
275 | 147
17 | 39 | 64 | 16 | 37 | 422 | 297 | 135 | 11 | 33 | 61 | 31 | 33 | 460 | 320 |
140
15 | 32 | 64 | 15 | 30 | 428 | 339 | 89 | 9 | 26 | 61 | 9 | 26 | 475 | 363
13 | 27 | 64 | 13 | 26 | 440 | 363 | 77 | 8 | 21 | 61 | 8 | 21 | 485 | 393 | 92
13 | 23 | 64 | 13 | 22 | 440 | 307 | 52 | 7 | 17 | 61 | 7 | 17 | 494 | 416 | 88
11 | 20 | 64 | 11 | 19 | 460 | 403 | 57 | 5 | 15 | 61 | 5 | 15 | - | 428 | |
| | | | | | 6 | 12 | 61 | 6 | 12 | - | - | |
| | | | | | 5 | 10 | 61 | 5 | 10 | - | - | |

Means (below 59)

| 4 | 6 | 7 | 8 | 10 | epsilon | Mean | dl
beta | 108 | 116 | 96 | 95 | 415 | 104 | ~~72~~
~~62~~
gamma | | | 128 | 126 | | 127 | 69
delta | | | 144 | 143 | | 144 | 73
epsilon | | | 149 | 169 | 148 | 466 | 155 | 76
kappa | | | 23 | 38 | 30 | 91 | 30 | 24
zeta | | 154 | 158 | 162 | 178 | 652 | 163 | 78
eta | 144 | 150 | 148 | 147 | 131 | 720 | 144 | 73
theta | 133 | 130 | 135 | 140 | | 538 | 134 | 71
iota | 113 | 102 | 89 | 112 | | 416 | 104 | 62
nu | 82 | 89 | 77 | 92 | | 340 | 85 | 54
lambda | 58 | 65 | 52 | 88 | | 263 | 66 | 46
mu | 42 | 47 | 57 | | | 146 | 49 | 36
upsilon | 30 | 37 | | | | 34 | 27
| | 34 | | | | 34 | 27

Data from H.C. 304

[[drawing graph Vega vs Sirius]]



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| #3 n | #3 m+n | #3 l+m+n | #3 mean n | #3 mean m+n | #3 (n) | #3
(m+n) | #3 delta m | #3 n | #3 m+n | #3 l+m+n | #3 mean n | #3 mean
m+n | #3 (n) | #3 (m+n) | #3 delta m

30	72	75	81	72	75			68	73	81	68	73					
31	71	75	81	71	75			(60)	65	73	81	65	73				
32	72	75	81	72	75			65	73	81	65	73					
33	72	75	81	72	75			69	73	81	67	73					
34	71	75	81	71	75			70	73	81	70	73					
35	72	76	81	72	76			71	73	81	71	73					
36	73	76	81	73	76			(65)	70	73	81	70	73				
37	73	76	81	73	76			65	73	81	65	73					
38	71	76	81	71	76			66	73	81	66	73					
39	74	76	81	74	74			65	72	81	65	72					
40	72	76	81	72	76			62	72	81	62	72					
41	72	76	81	72	76			(70)	57	72	81	57	72				
42	72	76	81	72	76			60	71	81	60	71					
43	72	76	81	72	76			61	71	81	61	71					
44	72	76	81	72	76			60	71	81	60	71					
45	70	76	81	70	76			58	71	81	58	71					
46	73	76	81	73	76			(75)	62	71	81	62	71				
47	72	76	81	72	76			61	70	81	61	70					
48	70	76	81	70	76			58	70	81	58	70					
49	71	76	81	71	76			52	69	81	52	69					
50	73	76	81	73	76			51	69	81	51	69					
51	73	75	81	73	75			(80)	60	69	81	60	69				
52	71	75	81	71	75			58	69	81	58	69					
53	71	75	81	71	75			55	69	81	55	69					
54	71	75	81	71	75			45	68	81	45	68					
55	70	74	81	70	74			56	67	81	56	67					
56	71	74	81	71	74			(85)	61	67	81	61	67				
57	70	74	81	70	74			61	67	81	61	67					
58	67	73	81	67	73			55	66	81	55	66					

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| #3 n | #3 m+n | #3 l+m+n | #3 mean n | #3 mean m+n | #3 (n) | #3
(m+n) | #3 delta m | #3 n | #3 m+n | #3 l+m+n | #3 mean n | #3 mean
m+n | #3 (n) | #3 (m+n) | #3 delta m

88	60	66	81					36	51	81							
89	58	66	81					35	50	81							
90	46	65	81					31	50	81							
91	59	65	81					(120)	29	50	81						
92	46	64	81					35	49	81							
93	58	64	81					36	49	81							
94	52	64	81					36	48	81							
95	37	63	81					32	48	81							
96	43	62	81					(125)	31	48	81						
97	39	62	81					29	47	81							
98	47	61	81					24	47	81							
99	38	61	81					34	46	81							
100	49	61	81					30	45	81							
101	50	61	81					(130)	32	45	81						
102	40	60	81					34	45	81							
103	40	59	81					31	44	81							
104	45	58	81					31	44	81							
105	41	58	81					33	44	81							
106	42	57	81					(135)	30	43	81						
107	41	56	81					31	43	81							
108	36	56	81					21	42	81							
109	22	55	81					32	41	81							
110	34	54	81					37	41	81							
111	42	53	81					(140)	38	41	81						
112	35	53	81					32	40	81							
113	32	52	81					31	40	81							
114	33	52	81					22	39	81							
115	35	52	81					27	38	81							
116	36	51	81					(145)	26	38	81						

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[illegible]118

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[[preprinted]] 120 [[/preprinted]]

X 14939

#3 B 56.69 | #2 A 06.12

| | #3 n | #3 m+n | #3 l+m+n | #3 mean n | #3 mean m+n | #3 (n) | #3
(m+n) | #3 delta m | #2 n | #2 m+n | #2 l+m+n | #2 mean n | #2 mean
m+n | #2 (n) | #2 (m+n) | #2 delta m

0	25	28	60						33	36	61						
1	24	37	60						38	45	61						
10	42	46	60						-	-	-						
2	50	54	60						54	56	61						
2a	52	54	60						54	56	61						
3	41	54	60						49	56	61						
3a	-	-	-						53	55	61						
3b	-	-	-						53	55	61						
4	50	53	60						51	54	61						
5	39	53	60						44	54	61						
6	46	52	59						49	51	61						
6a	48	51	59						49	50	61						
7	31	48	59						32	46	61						
7a	-	-	-						34	42	61						
8	17	33	59						23	32	61						
8a	-	-	-						18	22	61						
9	8	19	59						9	17	61						
10	4	10	59						5	10	61						
11	2	6	59						-	-	-						

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| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1
(m+n) | #1 delta m | #12 n | #12 m+n | #12 l+m+n | #12 mean n | #12
mean m+n | #12 (n) | #12 (m+n) | #12 delta m

0	7	9	60					9	13	63							
1	14	18	60					11	18	63							
1c	31	36	60					30	35	63							
2	32	35	60					-	-	-							
2a	-	-	-					-	-	-							
3	26	34	60					26	35	63							
3a	-	-	-					29	35	63							
3b	-	-	-					-	-	-							
4	-	-	-					32	35	63							
5	23	31	60					28	35	63							
6	24	27	60					31	34	63							
6a	-	-	-					-	-	-							
7	15	23	60					21	29	63							
7a	-	-	-					19	25	63							
8	6	11	60					13	19	63							
8a	-	-	-					-	-	-							
9																	
10																	
11																	

122

#1

#12

	n	m	l+m+n	mean n	mean m	(n)	(m)	delta m			n	m	l+m+n	mean n	mean m	(n)	(m)	delta m		
0	7	9	60								9	13	63							
1	14	18	60								11	18	63							
1c	31	36	60								30	35	63							
2	32	35	60								-	-	-							
2a	-	-	-								-	-	-							
3	26	34	60								26	35	63							
3a	-	-	-								29	35	63							
3b	-	-	-								-	-	-							
4	-	-	-								32	35	63							
5	23	31	60								28	35	63							
6	24	27	60								31	34	63							
6a	-	-	-								-	-	-							
7	15	23	60								21	29	63							
7a	-	-	-								19	25	63							
8	6	11	60								13	19	63							
8a	-	-	-								-	-	-							
9																				
10																				
11																				

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#6 B3 8.9 | #10

| #6 n | #6 m+n | #6 l+m+n | #6 mean n | #6 mean m+n | #6 (n) | #6 (m+n) | #6 delta m | #10 n | #10 m+n | #10 l+m+n | #10 mean n | #10 mean m+n | #10 (n) | #10 (m+n) | #10 delta m

[illegible][illegible]

1b | 10 | 14 | 59 |

2	14	19	59					-	-	-	-	-	-	
36								20	33	63				

2a	-	-	-	-	-	-	-	-	50	55	62	-	-	-	-	-	-	-	-
3	12	19	59	-	-	-	-	-	-	28	33	62	-	-	-	-	-	-	-

3a | 16 | 19 | 59 | | | | | | | | - | - | - | | | | | |

3b | - | - | - | | | | | | | | | | - | - | - | | | | |
4 | - | - | - | | | | | | | | | | 25 | 31 | 62 | | | | |

[illegible]

6 | 12 | 16 | 59 | | | | | 26 | 30 | 62 | | | |

[illegible]

7a | 9 | 10 | 59 | | | | | | | | - | | | | | | | | | |

[illegible]

9 | | | | | | | | | | 12 | 15 | 62 | | | | | |

10 | | | | | | | | | | 6 | 10 | 62 | | | | | |

11 | | | | | | | | | | | | | | | | | | | |

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| #5 n | #5 m+n | #5 l+m+n | #5 mean n | #5 mean m+n | #5 (n) | #5
(m+n) | #5 delta m | #5 n | #5 m+n | #5 l+m+n | #5 mean n | #5 mean
m+n | #5 (n) | #5 (m+n) | #5 delta m

1	19	1	63					(31)	43	16	63						
	5	4	63					38	16	63							
	8	5	63					35	16	63							
	8	6	63					24	16	63							
5	30	6	63					(35)	40	16	63						
	15	8	63					26	16	63							
	26	8	63					36	16	63							
	55	9	63					42	16	63							
	34	11	63					42	16	63							
10	14	11	63					(40)	20	16	63						
	22	12	63					18	15	63							
	15	13	63					55	15	63							
	36	13	63					18	15	63							
	16	13	63					21	15	63							
15	18	13	63					(45)	22	15	63						
	16	14	63					32	15	63							
	17	14	63					31	15	63							
	17	14	63					57	15	63							
	25	14	63					48	15	63							
20	26	14	63					(50)	51	15	63						
	32	15	63					30	14	63							
	40	15	63					37	14	63							
	25	15	63					25	14	63							
	22	16	63					34	14	63							
25	48	16	63					(55)	21	14	63						
	25	16	63					55	14	63							
	41	16	63					42	14	63							
	41	16	63					17	13	63							
	25	16	63					19	13	63							
30	27	16	63					(60)	53	12	63						

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	n	m+n	l+m+n	mean n	mean m+n	(n)	(m+n)	delta m			
61	40	11	63			(91)	12	5	63		
	15	11	63			8	5	63			
	13	11	63			12	4	63			
	14	11	63			19	4	63			
65	16	11	63			(95)					
16	11	63									
	20	11	63								
	13	10	63								
	35	10	63								
70	27	10	63			(100)					
	14	10	63								
	14	10	63								
	16	10	63								
	15	10	63								
75	17	10	63								
	22	10	63								
	35	10	63								
	12	10	63								
	12	9	63								
80	16	9	63			(110)					
	26	9	63								
	10	8	63								
	10	8	63								
	11	8	63								
85	12	7	63			(115)					
	12	7	63								
	10	7	63								
	10	6	63								
	9	6	63								
90	10	5	63			(121)					

127

n	m+n	l+m+n	mean n	mean m+n	(n)	(m+n)	delta m
61	40	11	63			(91)	12
	15	11	63			8	5
	13	11	63			12	4
	14	11	63			19	4
65	16	11	63			(95)	
16	11	63					
	20	11	63				
	13	10	63				
	35	10	63				
70	27	10	63			(100)	
	14	10	63				
	14	10	63				
	16	10	63				
	15	10	63				
75	17	10	63				
	22	10	63				
	35	10	63				
	12	10	63				
	12	9	63				
80	16	9	63			(110)	
	26	9	63				
	10	8	63				
	10	8	63				
	11	8	63				
85	12	7	63			(115)	
	12	7	63				
	10	7	63				
	10	6	63				
	9	6	63				
90	10	5	63			(121)	

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| n | m+n | l+m+n | mean n | mean m+n | (n) | (m+n) | delta m | m+n |
 l+m+n | mean n | mean m+n | (n) | (m+n) | delta m

1	58	61	62					(31)	35	55	62								
	58	61	62					48	55	62									
	59	61	62					37	54	62									
	59	61	62					35	54	62									
5	57	61	62					(35)	42	53	62								
	54	61	62					38	53	62									
	56	61	62					41	53	62									
	56	61	62					46	53	62									
	54	61	62					44	52	62									
10	57	60	62					(40)	41	52	62								
	56	60	62					39	52	62									
	64	60	62					15	52	62									
	48	60	62					33	51	62									
	56	60	62					42	50	62									
15	55	59	62					(45)	36	50	62								
	53	59	62					33	50	62									
	52	59	62					37	49	62									
	56	59	62					36	49	62									
20	56	59	62					(50)	37	49	62								
	53	58	62					33	48	62									
	55	58	62					29	48	62									
	45	58	62					36	48	62									
	55	58	62					38	48	62									
25	44	58	62					(55)	40	47	62								
	54	58	62					35	47	62									
	50	57	62					34	47	62									
	36	57	62					25	46	62									
	39	56	62					30	45	62									
30	47	56	62					(60)	33	45	62								

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61|32|44|62|
36	44	62
32	44	62
34	44	62
65	24	43
33	43	62
38	43	62
34	42	62
33	42	62
70	19	41
25	41	62
29	40	62
21	39	62
27	39	62
75	29	38
29	37	62
17	37	62
30	36	62
17	35	62
80	20	34
24	32	62
27	31	62
28	30	62
24	29	62
85	20	27
17	23	62
15	20	62
10	16	62
 89|0|13|62|
 90|0|7|62|

64	22	98	62				
	26	98	62				
	32	98	62				
	39	98	62				
65	24	93	62				
	33	93	62				
	38	93	62				
	44	92	62				
	53	92	62				
70	19	91	62				
	25	91	62				
	28	89	62				
	31	89	62				
	37	89	62				
85	29	88	62				
	39	87	62				
	47	87	62				
	54	86	62				
	17	85	62				
91	20	85	62				
	30	82	62				
	37	81	62				
	38	80	62				
	38	79	62				
95	20	77	62				
	17	75	62				
	15	70	62				
	16	66	62				
97	0	65	62				

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C-18592 Reduced to 40

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1
(m+n) | #1 delta m | #2 n | #2 m+n | #2 l+m+n | #2 mean n | #2 mean
m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 32 | 36 | 43 | 30 | 33 | | | 16 | 22 | 40 | 16 | 22 | | |
gamma | 37 | 41 | 43 | 34 | 38 | | | 24 | 32 | 40 | 24 | | | |
delta | 34 | 41 | 43 | 32 | 38 | | | 21 | 31 | 40 | 21 | 31 | | |
epsilon | 30 | 39 | 43 | 28 | 36 | | | 16 | 28 | 40 | 16 | 28 | | |
zeta | 25 | 36 | 43 | 23 | 33 | | | 11 | 23 | 40 | 11 | 23 | | |
eta | 20 | 31 | 43 | 19 | 29 | | | 8 | 18 | 40 | 8 | 18 | | |
theta | 16 | 26 | 43 | 15 | 24 | | | 6 | 14 | 40 | 6 | 14 | | |
iota | 15 | 23 | 43 | 14 | 21 | | | 5 | 11 | 40 | 5 | 11 | | |
kappa | 13 | 21 | 43 | 12 | 20 | | | 4 | 9 | 40 | 4 | 9 | | |
lambda | 13 | 18 | 43 | 12 | 17 | | | 3 | 7 | 40 | 3 | 7 | | |
mu | 11 | 15 | 43 | 10 | 14 | | | 4 | 6 | 40 | 4 | 6 | | |
nu | 10 | 14 | 43 | 9 | 13 | | | - | - | - | - | - | | |

#3 | #4

beta | 3 | 18 | 41 | 3 | 18 | | | 15 | 22 | 42 | 14 | 21 | | |
gamma | 19 | 29 | 41 | 19 | 28 | | | 20 | 29 | 42 | 19 | 28 | | |
delta | 16 | 27 | 42 | 15 | 26 | | | 19 | 28 | 42 | 18 | 27 | | |
epsilon | 12 | 23 | 42 | 11 | 22 | | | 14 | 25 | 42 | 13 | 24 | | |
zeta | 10 | 19 | 42 | 10 | 18 | | | 5 | 20 | 41 | 5 | 20 | | |
eta | 7 | 15 | 42 | 7 | 14 | | | 6 | 15 | 41 | 6 | 15 | | |
theta | 6 | 12 | 42 | 6 | 11 | | | 4 | 12 | 41 | 4 | 12 | | |
iota | 4 | 10 | 42 | 4 | 10 | | | 3 | 9 | 41 | 3 | 9 | | |
kappa | 4 | 9 | 42 | 4 | 9 | | | 3 | 7 | 41 | 3 | 7 | | |
lambda | - | - | - | - | - | | | 2 | 6 | 41 | 2 | 6 | | |
mu | | | | | | | 1 | 5 | 41 | 1 | 5 | | |
nu | | | | | | | - | - | - | - | - | | |

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$$\begin{aligned} & \{ \# n \mid \# m+n \mid \# l+m+n \mid \# \text{mean } n \mid \# \text{mean } m+n \mid \# (n) \mid \# \\ & (m+n) \mid \# \delta m \mid \# n \mid \# m+n \mid \# l+m+n \mid \# \text{mean } n \mid \# \text{mean } m+n \mid \# \\ & (n) \mid \# (m+n) \mid \# \delta m \end{aligned}$$
[illegible]

#4 Repeated

[illegible]

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#5 | Repeated #4

Γ	m	n	$\text{mean } \Pi$	$\text{mean } m \cdot \Pi$	(Π)	$(m \cdot \Pi)$	$\Delta_{\text{eff}} \Pi$
0.00	10	10	0.987	9.869	0.000	0.000	-0.000
0.00	10	20	0.987	9.869	0.000	0.000	-0.000
0.00	10	30	0.987	9.869	0.000	0.000	-0.000
0.00	10	40	0.987	9.869	0.000	0.000	-0.000
0.00	10	50	0.987	9.869	0.000	0.000	-0.000
0.00	10	60	0.987	9.869	0.000	0.000	-0.000
0.00	10	70	0.987	9.869	0.000	0.000	-0.000
0.00	10	80	0.987	9.869	0.000	0.000	-0.000
0.00	10	90	0.987	9.869	0.000	0.000	-0.000
0.00	10	100	0.987	9.869	0.000	0.000	-0.000
0.00	20	10	0.987	19.738	0.000	0.000	-0.000
0.00	20	20	0.987	19.738	0.000	0.000	-0.000
0.00	20	30	0.987	19.738	0.000	0.000	-0.000
0.00	20	40	0.987	19.738	0.000	0.000	-0.000
0.00	20	50	0.987	19.738	0.000	0.000	-0.000
0.00	20	60	0.987	19.738	0.000	0.000	-0.000
0.00	20	70	0.987	19.738	0.000	0.000	-0.000
0.00	20	80	0.987	19.738	0.000	0.000	-0.000
0.00	20	90	0.987	19.738	0.000	0.000	-0.000
0.00	20	100	0.987	19.738	0.000	0.000	-0.000
0.00	30	10	0.987	29.610	0.000	0.000	-0.000
0.00	30	20	0.987	29.610	0.000	0.000	-0.000
0.00	30	30	0.987	29.610	0.000	0.000	-0.000
0.00	30	40	0.987	29.610	0.000	0.000	-0.000
0.00	30	50	0.987	29.610	0.000	0.000	-0.000
0.00	30	60	0.987	29.610	0.000	0.000	-0.000
0.00	30	70	0.987	29.610	0.000	0.000	-0.000
0.00	30	80	0.987	29.610	0.000	0.000	-0.000
0.00	30	90	0.987	29.610	0.000	0.000	-0.000
0.00	30	100	0.987	29.610	0.000	0.000	-0.000
0.00	40	10	0.987	39.482	0.000	0.000	-0.000
0.00	40	20	0.987	39.482	0.000	0.000	-0.000
0.00	40	30	0.987	39.482	0.000	0.000	-0.000
0.00	40	40	0.987	39.482	0.000	0.000	-0.000
0.00	40	50	0.987	39.482	0.000	0.000	-0.000
0.00	40	60	0.987	39.482	0.000	0.000	-0.000
0.00	40	70	0.987	39.482	0.000	0.000	-0.000
0.00	40	80	0.987	39.482	0.000	0.000	-0.000
0.00	40	90	0.987	39.482	0.000	0.000	-0.000
0.00	40	100	0.987	39.482	0.000	0.000	-0.000
0.00	50	10	0.987	49.354	0.000	0.000	-0.000
0.00	50	20	0.987	49.354	0.000	0.000	-0.000
0.00	50	30	0.987	49.354	0.000	0.000	-0.000
0.00	50	40	0.987	49.354	0.000	0.000	-0.000
0.00	50	50	0.987	49.354			

[illegible]

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#5 | #4 repeated

| | #5 n | #5 m+n | #5 l+m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m | #4 n | #4 m+n | #4 mean n | #4 mean m+n | #4 (n) | #4 (m+n) | #4 delta m

beta 6 | 12 | 29 | 6 | 12 | | | 13 | 19 | 30 | 13 | 19 | | |
gamma 12 | 21 | 30 | 12 | 21 | | | 21 | 27 | 30 | 21 | 27 | | |
delta | 11 | 21 | 30 | 11 | 20 | | | 20 | 27 | 31 | 19 | 26 | | |
epsilon | 9 | 18 | 32 | 8 | 17 | | | 16 | 25 | 31 | 15 | 24 | | |
zeta | 7 | 14 | 32 | 7 | 13 | | | 13 | 22 | 32 | 12 | 21 | | |
eta | 4 | 10 | 32 | 4 | 9 | | | 9 | 18 | 32 | 8 | 17 | | |
theta | 4 | 7 | 33 | 4 | 6 | | | 6 | 14 | 32 | 6 | 13 | | |
iota | 3 | 5 | 33 | 3 | 5 | | | 4 | 11 | 32 | 4 | 10 | | |
kappa | 1 | 4 | 33 | -1 | -4 | | | 4 | 9 | 32 | 4 | 8 | | |
lambda | | | | | | | 3 | 7 | 32 | 3 | 7 | | |
mu | | | | | | | | | | | | | | |
nu | | | | | | | | | | | | | | |

137

5

4 repeated

	n	m+n	l+m+n	mean n	mean m+n	(n)	(m+n)	delta m	delta n
β	6	12	29	6	12		13	19	30
γ	12	21	30	12	21		21	27	30
δ	11	21	31	11	20		20	27	31
ϵ	9	18	32	8	17		16	25	31
ζ	7	14	32	7	13		13	22	32
η	4	10	32	4	9		9	18	32
θ	4	7	33	4	6		6	14	32
ι	3	5	33	3	5		4	11	32
κ	1	4	33	-1	-4		4	9	32
λ							3	7	32

μ

ν

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[[preprinted]] 138 [[/preprinted]]
C 18655 Reduced to 35

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1 (m+n) | #1 delta m | #2 n | #2 m+n | #2 mean n | #2 mean m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 23 | 26 | 28 | 29 | 35 | | | 16 | 22 | 32 | 18 | 24 | | |
gamma | 27 | 28 | 28 | 34 | 35 | | | 25 | 30 | 32 | 27 | 33 | | |
delta | 26 | 29 | 29 | 31 | 35 | | | 22 | 30 | 33 | 23 | 32 | | |
epsilon | 25 | 28 | 29 | 30 | 34 | | | 19 | 28 | 33 | 20 | 30 | | |
zeta | 23 | 27 | 29 | 28 | 33 | | | 15 | 24 | 33 | 16 | 25 | | |
eta | 20 | 26 | 30 | 23 | 30 | | | 12 | 20 | 33 | 13 | 21 | | |
theta | 16 | 23 | 30 | 19 | 27 | | | 9 | 16 | 33 | 10 | 17 | | |
iota | 15 | 22 | 30 | 18 | 26 | | | 8 | 14 | 33 | 8 | 15 | | |
kappa | 14 | 20 | 30 | 16 | 23 | | | 8 | 13 | 33 | 8 | 14 | | |
[[/strikethrough]] mu [[/strikethrough]] lambda | 13 | 17 | 30 | 15 | 20 | | |
| 7 | 12 | 33 | 7 | 13 | | |
[[/strikethrough]] nu [[/strikethrough]] mu | 12 | 15 | 30 | 14 | 15 | | | 6
| 10 | 33 | 6 | 11 | | |
nu | | | | | | | | | | | | | |

#3 | #4

beta | 20 | 24 | 32 | 22 | 26 | | | 11 | 15 | 30 | 13 | 18 | | |
gamma | 28 | 31 | 33 | 30 | 33 | | | 19 | 25 | 31 | 21 | 28 | | |
delta | 26 | 31 | 34 | 27 | 32 | | | 17 | 25 | 31 | 19 | 28 | | |
epsilon | 23 | 31 | 35 | 23 | 31 | | | 15 | 24 | 32 | 16 | 26 | | |
zeta | 19 | 28 | 35 | 19 | 28 | | | 11 | 20 | 32 | 12 | 22 | | |
eta | 14 | 24 | 35 | 14 | 24 | | | 9 | 16 | 32 | 10 | 18 | | |
theta | 10 | 20 | 35 | 10 | 20 | | | 7 | 13 | 32 | 8 | 14 | | |
iota | 9 | 17 | 36 | 9 | 17 | | | 5 | 11 | 32 | 5 | 12 | | |
[[/strikethrough]] mu [[/strikethrough]] lambda | 8 | 12 | 36 | 8 | 12 | | |
| | | | | | | | | | | | | |
[[/strikethrough]] nu [[/strikethrough]] mu | - | - | - | | | | | | | | |
| | | | | | | | | | | | | |
nu | - | - | - | | | | | | | | |

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[[preprinted]] 140 [[/preprinted]]
C 18679 Reduced to 60

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1 (m+n) | #1 delta m | #2 n | #2 m+n | #2 mean n | #2 mean m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 44 | 50 | 56 | 47 | 53 | | | 25 | 37 | 63 | 24 | 35 | | |
gamma | 52 | 55 | 57 | 55 | 58 | | | 40 | 53 | 63 | 38 | 50 | | |
delta | 50 | 55 | 58 | 52 | 57 | | | 33 | 51 | 62 | 32 | 49 | | |
epsilon | 45 | 55 | 58 | 47 | 57 | | | 25 | 47 | 62 | 24 | 45 | | |
zeta | 37 | 52 | 59 | 38 | 53 | | | 18 | 38 | 62 | 17 | 37 | | |
eta | 28 | 45 | 59 | 28 | 46 | | | 13 | 29 | 62 | 13 | 28 | | |
theta | 22 | 38 | 59 | 22 | 39 | | | 9 | 22 | 62 | 9 | 21 | | |
iota | 20 | 34 | 59 | 20 | 5 | | | 8 | 18 | 61 | 8 | 18 | | |
kappa | 18 | 29 | 59 | 18 | 30 | | | 7 | 16 | 61 | 7 | 16 | | |
lambda | 15 | 25 | 59 | 15 | 25 | | | 7 | 13 | 61 | 7 | 13 | | |
mu | 15 | 20 | 59 | 15 | 20 | | | - | - | - | - | - | | |
nu | | | | | | | - | - | - | - | - | | |

#3 | #4

beta | 26 | 38 | 58 | 27 | 39 | | | 18 | 30 | 64 | 17 | 28 | | |
gamma | 41 | 51 | 58 | 42 | 53 | | | 33 | 49 | 64 | 31 | 46 | | |
delta | 30 | 51 | 58 | 38 | 53 | | | 30 | 49 | 64 | 28 | 46 | | |
epsilon | 28 | 46 | 57 | 30 | 48 | | | 21 | 42 | 63 | 20 | 40 | | |
zeta | 20 | 39 | 57 | 21 | 41 | | | 14 | 31 | 63 | 13 | 30 | | |
eta | 13 | 29 | 57 | 14 | 31 | | | 9 | 22 | 63 | 9 | 21 | | |
theta | 9 | 22 | 57 | 9 | 23 | | | 7 | 18 | 63 | 7 | 17 | | |
iota | 8 | 18 | 57 | 8 | 19 | | | 5 | 14 | 63 | 5 | 13 | | |
kappa | 7 | 13 | 57 | 7 | 14 | | | 5 | 10 | 63 | 5 | 10 | | |
lambda | 6 | 10 | 57 | 6 | 11 | | | - | - | - | - | - | | |
mu | - | - | - | - | - | | | - | - | - | - | - | | |
nu | - | - | - | - | - | | | - | - | - | - | - | | |

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[[preprinted]] 142 [[/preprinted]]
C 18689 Reduced to 40

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1 (m+n) | #1 delta m | #2 n | #2 m+n | #2 mean n | #2 mean m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 36 | 39 | 40 | 36 | 39 | | | | 22 | 31 | 41 | 20 | 30 | | | |
gamma | 40 | 41 | 41 | 39 | 40 | | | | 32 | 38 | 41 | 31 | 37 | | | |
delta | 39 | 42 | 42 | 37 | 40 | | | | 28 | 37 | 41 | 27 | 36 | | | |
epsilon | 37 | 42 | 43 | 34 | 39 | | | | 22 | 35 | 40 | 22 | 35 | | | |
zeta | 32 | 40 | 43 | 30 | 37 | | | | 15 | 30 | 40 | 15 | 30 | | | |
eta | 26 | 37 | 43 | 24 | 34 | | | | 11 | 22 | 40 | 11 | 22 | | | |
theta | 22 | 33 | 43 | 20 | 31 | | | | 8 | 18 | 40 | 8 | 18 | | | |
iota | 19 | 29 | 43 | 18 | 27 | | | | 8 | 14 | 40 | 8 | 14 | | | |
kappa | 18 | 26 | 43 | 17 | 24 | | | | 7 | 12 | 40 | 7 | 12 | | | |
lambda | 17 | 22 | 43 | 16 | 20 | | | | 7 | 10 | 40 | 7 | 10 | | | |
mu | 15 | 18 | 43 | 14 | 17 | | | | - | - | - | - | - | | | |
nu | - | - | - | - | - | | | | - | - | - | - | - | | | |

#3 | #4

beta | 26 | 33 | 42 | 25 | 31 | | | | 17 | 26 | 41 | 17 | 25 | | | |
gamma | 35 | 40 | 42 | 33 | 38 | | | | 27 | 35 | 41 | 26 | 34 | | | |
delta | 32 | 40 | 42 | 30 | 38 | | | | 23 | 34 | 41 | 22 | 33 | | | |
epsilon | 27 | 38 | 42 | 26 | 36 | | | | 19 | 32 | 40 | 19 | 32 | | | |
zeta | 21 | 34 | 42 | 20 | 32 | | | | 14 | 25 | 40 | 14 | 25 | | | |
eta | 16 | 28 | 42 | 15 | 27 | | | | 9 | 19 | 40 | 9 | 19 | | | |
theta | 12 | 23 | 41 | 12 | 22 | | | | 7 | 11 | 40 | 7 | 11 | | | |
iota | 11 | 19 | 41 | 11 | 19 | | | | 5 | 11 | 40 | 5 | 11 | | | |
kappa | 10 | 16 | 41 | 10 | 16 | | | | 4 | 10 | 40 | 4 | 10 | | | |
lambda | 9 | 13 | 41 | 9 | 13 | | | | 5 | 8 | 40 | 5 | 8 | | | |
mu | 7 | 10 | 41 | 7 | 10 | | | | - | - | - | - | - | | | |
nu | - | - | - | - | - | | | | - | - | - | - | - | | | |

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#5 | Mira

[illegible]

beta	24	32	42	23	30			14	23	40	14	23			
gamma	32	38	41	31	37			23?	32	40	23	32			
delta	29	38	41	28	37			20	32	40	20	32			
epsilon	24	35	40	24	35			15	29	40	15	29			
zeta	18	31	40	19	31			11	23	40	11	23			
eta	13	24	40	13	24			8	16	40	8	16			
theta	10	20	40	10	20			6	12	40	6	12			
iota	9	17	40	9	17			4	10	40	4	10			
kappa	8	14	40	8	14			4	9	40	4	9			
lambda	7	11	40	7	10			-	-	-	-	-			
mu	-	-	-	-	-			-	-	-	-	-			
nu	-	-	-	-	-			-	-	-	-	-			

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[[preprinted]] 144 [[/preprinted]]
C 18695 Reduced to 45

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1 (m+n) | #1 delta m | #2 n | #2 m+n | #2 mean n | #2 mean m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 31 | 36 | 42 | 33 | 39 | | | 17 | 24 | 41 | 19 | 26 | | |
gamma | 37 | 41 | 42 | 40 | 44 | | | 15 | 33 | 41 | 16 | 36 | | |
delta | 35 | 41 | 42 | 38 | 44 | | | 22 | 33 | 41 | 24 | 36 | | |
epsilon | 32 | 40 | 42 | 34 | 43 | | | 16 | 30 | 41 | 18 | 33 | | |
zeta | 27 | 37 | 42 | 29 | 40 | | | 12 | 24 | 41 | 13 | 26 | | |
eta | 21 | 32 | 42 | 22 | 34 | | | 7 | 15 | 41 | 8 | 16 | | |
theta | 16 | 28 | 42 | 17 | 30 | | | 8 | 15 | 41 | 9 | 16 | | |
iota | 14 | 24 | 42 | 15 | 26 | | | 5 | 12 | 41 | 5 | 13 | | |
kappa | 15 | 21 | 42 | 16 | 22 | | | 6 | 10 | 41 | 7 | 11 | | |
lambda | 13 | 18 | 42 | 14 | 19 | | | 5 | 10 | 41 | 5 | 11 | | |
mu | 11 | 15 | 42 | 12 | 16 | | | 4 | 9 | 41 | 4 | 10 | | |
nu | - | - | - | - | - | | | - | - | - | - | - | | |

#3 | #4

beta | 19 | 27 | 41 | 21 | 30 | | | 18 | 26 | 43 | 19 | 27 | | |
gamma | 18 | 36 | 41 | 20 | 39 | | | 26 | 35 | 43 | 27 | 37 | | |
delta | 26 | 36 | 42 | 28 | 39 | | | 23 | 35 | 43 | 24 | 37 | | |
epsilon | 22 | 34 | 42 | 24 | 36 | | | 19 | 32 | 42 | 20 | 33 | | |
zeta | 18 | 29 | 42 | 19 | 31 | | | 14 | 27 | 43 | 15 | 28 | | |
eta | 13 | 24 | 43 | 14 | 25 | | | 8 | 20 | 43 | 9 | 21 | | |
theta | 9 | 19 | 43 | 9 | 20 | | | 6 | 16 | 43 | 6 | 17 | | |
iota | 9 | 17 | 43 | 9 | 18 | | | 8 | 15 | 42 | 9 | 16 | | |
kappa | 8 | 13 | 43 | 8 | 14 | | | 7 | 12 | 42 | 8 | 13 | | |
lambda | 8 | 11 | 43 | 8 | 12 | | | 6 | 10 | 42 | 6 | 11 | | |
mu | 6 | 10 | 43 | 6 | 10 | | | 6 | 9 | 42 | 6 | 10 | | |
nu | - | - | - | - | - | | | - | - | - | - | - | | |

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[[preprinted]] 146 [[/preprinted]]
C 187065

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1 (m+n) | #1 delta m | #2 n | #2 m+n | #2 mean n | #2 mean m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 39 | 41 | 42 | | | | 18 | 25 | 34 | | | |
gamma | 40 | 42 | 42 | | | | 28 | 34 | 36 | | | |
delta | 39 | 41 | 42 | | | | 25 | 34 | 37 | | | |
epsilon | 38 | 41 | 42 | | | | 22 | 33 | 38 | | | |
zeta | 35 | 40 | 42 | | | | 17 | 30 | 39 | | | |
eta | 29 | 38 | 42 | | | | 12 | 24 | 39 | | | |
theta | 26 | 35 | 42 | | | | 10 | 20 | 40 | | | |
iota | 24 | 33 | 42 | | | | 9 | 17 | 40 | | | |
kappa | 23 | 30 | 42 | | | | 9 | 15 | 40 | | | |
lambda | 22 | 27 | 42 | | | | 9 | 13 | 40 | | | |
mu | - | - | - | | | | 8 | 12 | 40 | | | |
nu | - | - | - | | | | 8 | 11 | 40 | | | |

#3 | #4

beta | 26 | 34 | 44 | | | | 7 | 13 | 25 | | | |
gamma | 39 | 43 | 46 | | | | 18 | 25 | 29? | | | |
delta | 38 | 45 | 47 | | | | 18 | 27 | 32 | | | |
epsilon | 33 | 45 | 48 | | | | 14 | 26 | 34 | | | |
zeta | 28 | 41 | 48 | | | | 10 | 22 | 36 | | | |
eta | 22 | 35 | 49 | | | | 6 | 16 | 37 | | | |
theta | 18 | 31 | 49 | | | | 3 | 12 | 37 | | | |
iota | 15 | 27 | 49 | | | | 4 | 9 | 38 | | | |
kappa | 15 | 22 | 49 | | | | 3 | 7 | 38 | | | |
lambda | 14 | 20 | 49 | | | | - | - | - | | | |
mu | - | - | - | | | | - | - | - | | | |
nu | - | - | - | | | | - | - | - | | | |

146

C 187065

#1

	ra	dec	mag	pa	pm (a)	pm (d)	pa	dec	mag	pa	pm (a)	pm (d)	pa	dec	mag
β	39	41	42					28	34	36					
γ	40	42	42					25	34	37					
δ	39	41	42					22	33	38					
ε	38	41	42					17	30	39					
ζ	35	40	42					12	24	39					
η	29	38	42					10	20	40					
θ	26	35	42					9	17	40					
ι	24	33	42					9	15	40					
κ	23	30	42					9	13	40					
λ	22	27	42					8	12	40					
μ	-	-	-					8	11	40					
ν	-	-	-					-	-	-					

#2

	ra	dec	mag	pa	pm (a)	pm (d)	pa	dec	mag	pa	pm (a)	pm (d)	pa	dec	mag
β	26	34	44					7	13	25					
γ	39	43	46					18	25	29?					
δ	38	45	47					18	27	32					
ε	33	45	48					14	26	34					
ζ	28	41	48					10	22	36					
η	22	35	49					6	16	37					
θ	18	31	49					3	12	37					
ι	15	27	49					4	9	38					
κ	15	22	49					3	7	38					
λ	14	20	49					-	-	-					
μ	-	-	-					-	-	-					
ν	-	-	-					-	-	-					

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	#5 n	#5 m+n	#5 l+m+n	#5 mean n	#5 mean m+n	#5 (n)	#5 (m+n)	#5 delta m	n	m+n	mean n	mean m+n	(n)	(m+n)	delta m
--	------	--------	----------	-----------	-------------	--------	----------	------------	---	-----	--------	----------	-----	-------	---------

#4 Repeated

beta	| 15 | 21 | 34 |
gamma	| 26 | 32 | 37 |
delta	| 25 | 34 | 40 |
epsilon	21 33 41
zeta	17 29 42
eta	12 22 43
theta	8 18 43
iota	8 15 44
kappa	8 13 44
lambda	- - -
mu	- - -
nu	- - -

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[[preprinted]] 148 [[/preprinted]]
C 18716 Reduced to 35

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1 (m+n) | #1 delta m | #2 n | #2 m+n | #2 mean n | #2 mean m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 31 | 33 | 34 | 32 | 34 | | | | 20 | 25 | 30 | 23 | 29 | | | |
gamma | 33 | 34 | 34 | 34 | 35 | | | | 25 | 28 | 30 | 29 | 33 | | | |
delta | 32 | 34 | 34 | 33 | 35 | | | | 24 | 28 | 30 | 28 | 33 | | | |
epsilon | 31 | 34 | 34 | 32 | 35 | | | | 22 | 27 | 30 | 26 | 32 | | | |
zeta | 28 | 32 | 34 | 29 | 34 | | | | 18 | 25 | 30 | 21 | 29 | | | |
eta | 24 | 31 | 34 | 25 | 32 | | | | 14 | 22 | 30 | 16 | 26 | | | |
theta | 20 | 29 | 34 | 21 | 30 | | | | 12 | 19 | 30 | 14 | 22 | | | |
iota | 18 | 27 | 34 | 19 | 28 | | | | 11 | 17 | 30 | 13 | 20 | | | |
kappa | 17 | 24 | 34 | 16 | 25 | | | | 11 | 15 | 30 | 13 | 17 | | | |
lambda | 17 | 22 | 34 | 18 | 23 | | | | 10 | 14 | 30 | 12 | 16 | | | |
mu | 16 | 19 | 34 | 16 | 20 | | | | 10 | 13 | 30 | 12 | 15 | | | |
nu | 14 | 17 | 34 | 14 | 18 | | | | 9 | 11 | 30 | 11 | 13 | | | |

#3 | #4

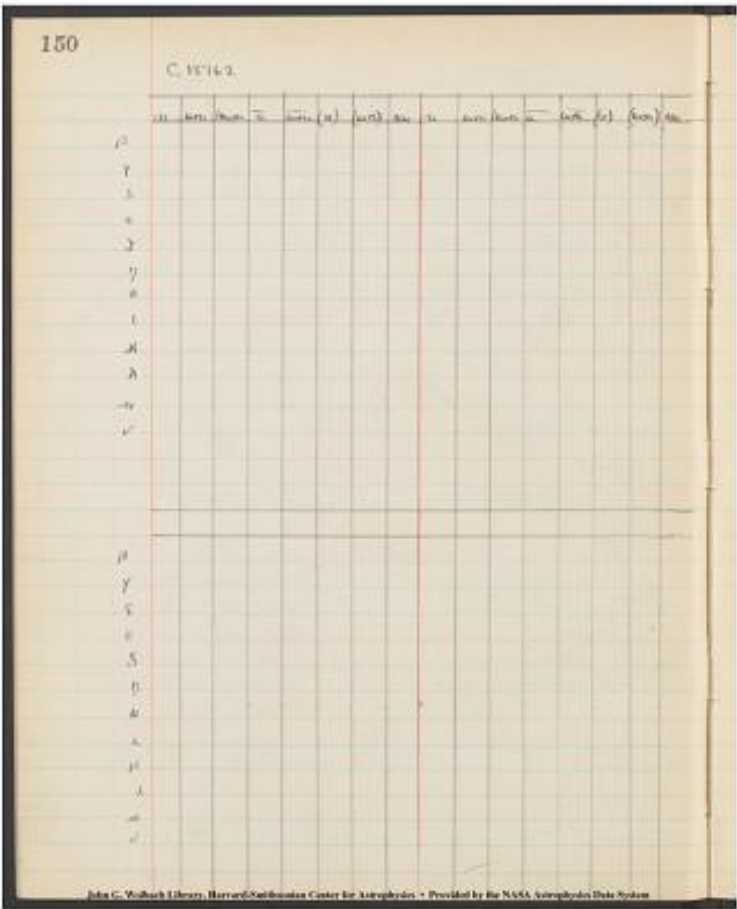
beta | 27 | 30 | 34 | 28 | 31 | | | | 19 | 24 | 33 | 20 | 25 | | | |
gamma | 32 | 33 | 34 | 33 | 34 | | | | 25 | 30 | 33 | 27 | 32 | | | |
delta | 32 | 35 | 35 | 32 | 35 | | | | 24 | 30 | 32 | 26 | 33 | | | |
epsilon | 30 | 35 | 35 | 30 | 35 | | | | 20 | 28 | 32 | 22 | 31 | | | |
zeta | 27 | 33 | 35 | 27 | 33 | | | | 15 | 24 | 32 | 16 | 26 | | | |
eta | 22 | 30 | 35 | 22 | 30 | | | | 12 | 20 | 32 | 13 | 22 | | | |
theta | 19 | 27 | 35 | 19 | 27 | | | | 9 | 17 | 32 | 10 | 19 | | | |
iota | 18 | 25 | 35 | 18 | 25 | | | | 8 | 14 | 32 | 9 | 15 | | | |
kappa | - | - | - | - | - | | | | 6 | 11 | 32 | 7 | 12 | | | |
lambda | - | - | - | - | - | | | | - | - | - | - | - | | | |
mu | - | - | - | - | - | | | | - | - | - | - | - | | | |
nu | - | - | - | - | - | | | | - | - | - | - | - | | | |

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C 18762

$$\frac{|n|}{m+n} \left| \frac{m+n}{n} \right| = \frac{|m+n|}{n} \left| \frac{n}{m+n} \right|$$

beta	
gamma	
delta	
epsilon	
zeta	
eta	
theta	
iota	
kappa	
lambda	
mu	
nu	

[illegible]

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[[preprinted]] 151 [[/preprinted]]

$$\frac{|n|}{m+n} \left| \frac{m+n}{l+m+n} \right| \frac{l+m+n}{\text{mean } n} \left| \frac{\text{mean } m+n}{(n)} \right| \frac{(n)}{(m+n)} \left| \frac{\delta m}{n} \right|$$
[illegible][illegible]

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[[preprinted]] 152 [[/preprinted]]
C 18572 Reduced to 45

| #1 n | #1 m+n | #1 l+m+n | #1 mean n | #1 mean m+n | #1 (n) | #1 (m+n) | #1 delta m | #2 n | #2 m+n | #2 mean n | #2 mean m+n | #2 (n) | #2 (m+n) | #2 delta m

beta | 17 | 22 | 43 | | | | 5 | 10 | 44 | | | | |
gamma | 28 | 36 | 43 | | | | 11 | 21 | 44 | | | | |
delta | 25 | 34 | 43 | | | | 9 | 21 | 45 | 9 | 21 | | |
epsilon | 19 | 30 | 44 | | | | 5 | 16 | 45 | 5 | 16 | | |
zeta | 12 | 23 | 44 | | | | 3 | 10 | 45 | 3 | 10 | | |
eta | 6 | 15 | 44 | | | | 0 | 6 | 45 | 0 | 6 | | |
theta | 4 | 11 | 44 | | | | - | - | - | - | - | | |
iota | 4 | 8 | 44 | | | | - | - | - | - | - | | |
kappa | 2 | 6 | 44 | | | | - | - | - | - | - | | |
lambda | 2 | 5 | 44 | | | | - | - | - | - | - | | |
mu | - | - | - | | | | - | - | - | - | - | | |
nu | - | - | - | | | | - | - | - | - | - | | |

#3 | #4

beta | 9 | 14 | 43 | | | | 6 | 9 | 42 | | | | |
gamma | 17 | 25 | 43 | | | | 7 | 14 | 42 | | | | |
delta | 14 | 24 | 43 | | | | 6 | 15 | 43 | | | | |
epsilon | 9 | 20 | 42 | | | | 3 | 12 | 43 | | | | |
zeta | 6 | 13 | 42 | | | | 1 | 7 | 43 | | | | |
eta | 3 | 8 | 42 | | | | 0 | 4 | 43 | | | | |
theta | 0 | 5 | 42 | | | | - | - | - | | | | |
iota | 0 | 4 | 42 | | | | - | - | - | | | | |
kappa | 0 | 3 | 42 | | | | - | - | - | | | | |
lambda | - | - | - | | | | - | - | - | | | | |
mu | - | - | - | | | | - | - | - | | | | |
nu | - | - | - | | | | - | - | - | | | | |

152

C 18572

Reduced to 45

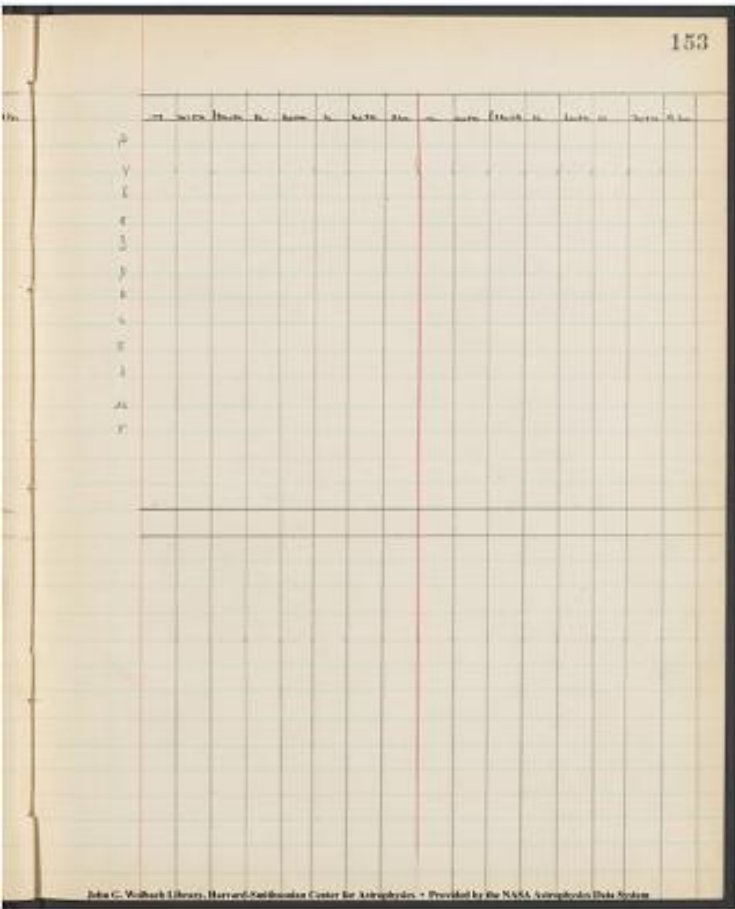
#1														#2															
n	m+n	l+m+n	mean n	mean m+n	(n)	(m+n)	delta m	n	m+n	l+m+n	mean n	mean m+n	(n)	n	m+n	l+m+n	mean n	mean m+n	(n)	(m+n)	delta m	n	m+n	l+m+n	mean n	mean m+n	(n)	(m+n)	delta m
17	22	43						5	10	44				5	10	44													
28	36	43						11	21	44				11	21	44													
25	34	43						9	21	45	9	21		9	21	45	9	21											
19	30	44						5	16	45	5	16		5	16	45	5	16											
12	23	44						3	10	45	3	10		3	10	45	3	10											
6	15	44						0	6	45	0	6		0	6	45	0	6											
4	11	44						-	-	-	-	-		-	-	-	-	-											
4	8	44						-	-	-	-	-		-	-	-	-	-											
2	6	44						-	-	-	-	-		-	-	-	-	-											
2	5	44						-	-	-	-	-		-	-	-	-	-											
-	-	-						-	-	-	-	-		-	-	-	-	-											
-	-	-						-	-	-	-	-		-	-	-	-	-											

#3														#4															
9	14	43						6	9	42				6	9	42													
17	25	43						7	14	42				7	14	42													
14	24	43						6	15	43				6	15	43													
9	20	42						3	12	43				3	12	43													
6	13	42						1	7	43				1	7	43													
3	8	42						0	4	43				0	4	43													
0	5	42						-	-	-				-	-	-													
0	4	42						-	-	-				-	-	-													
0	3	42						-	-	-				-	-	-													
-	-	-						-	-	-				-	-	-													
-	-	-						-	-	-				-	-	-													
-	-	-						-	-	-				-	-	-													

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$$\frac{|n|}{m+n} \left| \frac{m+n}{l+m+n} - \text{mean } n \right| \left| \frac{\text{mean } m+n}{(n)} - (m+n) \right| \Delta m \left| \frac{n}{m+n} - \text{mean } n \right| \left| \frac{\text{mean } m+n}{(n)} - (m+n) \right| \Delta m$$
[illegible]

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X 14925 eta Carinae Reduced to 50

| #13 n | #13 m+n | #13 |m+n| #13 mean n | #13 mean m+n | #13 (n)
| #13 (m+n) | #13 delta m | #14 n | #14 m+n | #14 mean n | #14 mean
m+n | #14 (n) | #14 (m+n) | #14 delta m

1	7	13	50	7	278	240		14	27	51	14	26			
2	22	26	50	22	26			49	39	51	48	38			
3	23	29	50	23	29			47	41	51	46	40			
3a	25	29	50	25	29			-	-	-	-	-			
3b	24	29	50	24	29			-	-	-	-	-			
4	18	28	50	18	28			43	42	51	42	41			
4a	22	25	49	22	25			-	-	-	-	-			
5	16	24	49	16	24			43	41	51	42	40			
5a	22	24	49	22	24			-	-	-	-	-			
5b	18	23	49	18	23			-	-	-	-	-			
5c	19	22	49	19	22			-	-	-	-	-			
6	10	18	49	10	18			44	40	51	43	39			
6a	12	15	49	12	15			-	-	-	-	-			
7	3	9	49	3	9			39	37	50	39	37			
8	-	-	-	-	-			42	36	50	42	36			
9	-	-	-	-	-			40	34	50	40	34			
10	-	-	-	-	-			25	29	50	25	29			
10a	-	-	-	-	-			22	24	50	22	24			
11	-	-	-	-	-			14	10	50	14	10			

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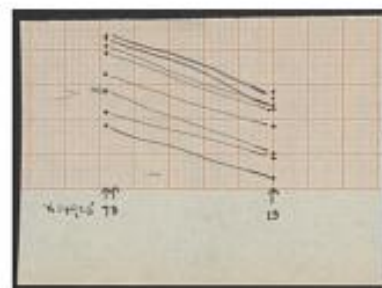
| #15 n | #15 m+n | #15 l+m+n | #15 mean n | #15 mean m+n | #15 (n)
#15 (m+n) | #15 delta m | #12 n | #12 m+n | #12 mean n | #12 mean
m+n | #12 (n) | #12 (m+n) | #12 delta m

1	1	3	45	1	3			9	13	48	9	14			
2	6	9	45	7	10			20	23	48	21	24			
3	7	10	45	8	11			21	25	48	22	26			
3a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	5	10	45	6	11			15	26	48	16	27			
4a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	4	9	45	4	10			22	27	48	23	28			
5a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5b	-	-	-	-	-	-	-	25	28	49	25	29			
5c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	22	26	49	22	27			
6a	-	-	-	-	-	-	-	21	24	49	21	24			
7	-	-	-	-	-	-	-	17	20	49	17	20			
8	-	-	-	-	-	-	-	11	16	49	11	16			
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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[[image - eight line graphs drawn through data points]]

X 14925



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| #7 n | #7 m+n | #7 l+m+n | #7 mean n | #7 mean m+n | #7 (n) | #7 (m+n) | #7 delta m | #11 n | #11 m+n | #11 mean n | #11 mean m+n | #11 (n) | #11 (m+n) | #11 delta m

1	-	-	-	-	-	-	15	18	48	16	19	|	|	|
2	-	-	-	-	-	-	-	-	-	-	-	|	|	|
3	37	40	46	40	43	|	|	|	|	|	|	|	|	|
3a	-	-	-	-	-	-	27	30	48	28	31	|	|	|
3b	-	-	-	-	-	-	-	-	-	-	-	|	|	|
4	36	40	46	40	44	|	|	24	28	48	25	29	|	|
4a	35	37	45	39	41	|	|	22	26	48	23	29	|	|
5	32	37	45	36	41	|	|	19	25	48	20	26	|	|
5a	34	37	45	38	41	|	|	21	25	48	22	26	|	|
5b	33	35	45	37	39	|	|	19	21	48	20	22	|	|
5c	32	34	45	36	38	|	|	17	20	48	18	21	|	|
6	25	30	45	28	33			10	16	48	11	17		
6a	24	27	45	27	30			9	13	48	10	14		
7	16	20	45	18	22			4	7	48	5	8		
8	-	-	-	-	-	-	-	-	-	-	-			
9	-	-	-	-	-	-	-	-	-	-	-			
10	-	-	-	-	-	-	-	-	-	-	-			
10a	-	-	-	-	-	-	-	-	-	-	-			
11	-	-	-	-	-	-	-	-	-	-	-			

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X 14925 Reduced to 45

| #5 n | #5 m+n | #5 l+m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m | n | m+n | mean n | mean m+n | (n) | (m+n) | delta m

1	16	0	47	0	-									
2	5	3	47	5	3	300	314							
3	23	3	47	22	3	178	314							
4	11	4	47	10	4	254	306							
5	19	4	47	20	4	306								
6	43	4	47	41	4	306								
7	13	5	47	12	5	300								
8	12	5	46	12	5	300								
9	25	5	46	24	5	300								
10	10	6	46	10	6	254	292							
11	17	6	46	17	6	292								
12	27	7	46	26	7	279	284							
13	16	9	46	16	9	270								
14	20	9	46	20	9	270								
15	15	9	46	15	9	270								
16	23	9	46	22	9	270								
17	29	10	46	28	10	263								
18	18	10	46	18	10	263								
19	15	10	46	15	10	263								
20	35	11	46	34	11	254								
21	22	11	46	21	11	254								
22	18	10	46	18	10	263								
23	30	10	46	29	10	263								
24	30	10	46	29	10	263								
25	16	10	46	16	10	263								
26	19	10	46	19	10	263								
27	31	10	46	30	10	263								
28	28	10	46	27	10	263								
29	25	10	46	24	10	263								
30	15	9	46	15	9	270								

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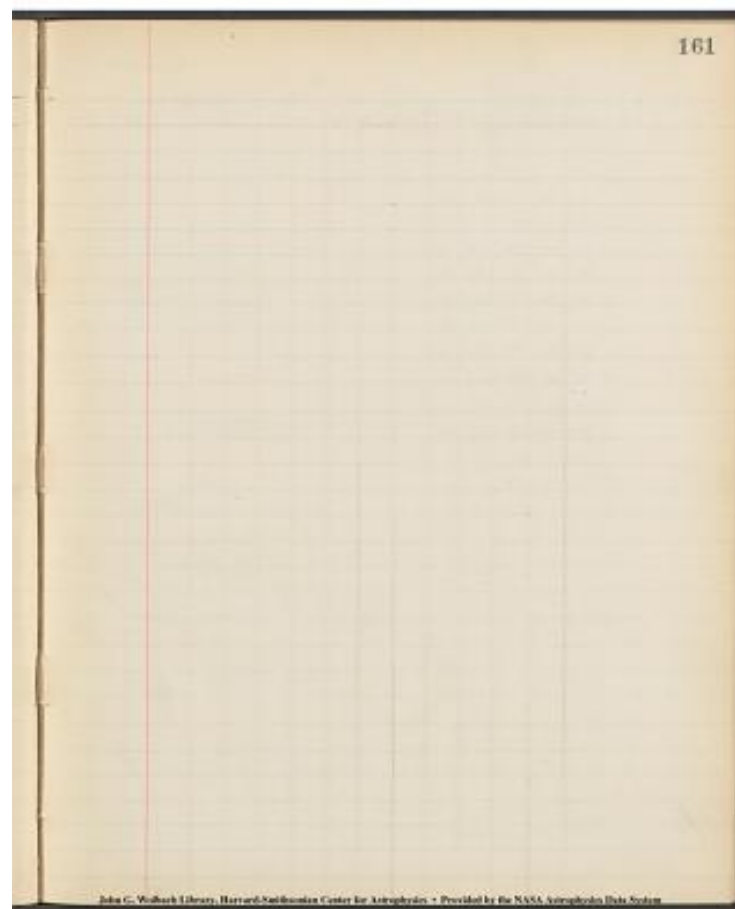
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	n	m+n	l+m+n	mean n	mean m+n	(n)	(m+n)	delta m
--	---	-----	-------	--------	----------	-----	-------	---------

[illegible]

Alt	Lat	Long	Dist	Alt	Lat	Long	Dist
67			46				
68	8	5	44	8	5		
69	8	5	44	8	5		
70	8	5	44	8	5		
71	10	4	46	10	4		
72	10	4	46	10	4		
73	12	4	46	12	4		
74	12	4	46	12	4		
75	12	4	46	12	4		
76	12	4	46	12	4		
77	12	4	46	12	4		
78	12	4	46	12	4		
79	12	4	46	12	4		
80	12	4	46	12	4		
81	12	4	46	12	4		
82	12	4	46	12	4		
83	12	4	46	12	4		
84	12	4	46	12	4		
85	12	4	46	12	4		
86	12	4	46	12	4		
87	12	4	46	12	4		
88	12	4	46	12	4		
89	12	4	46	12	4		
90	12	4	46	12	4		
91	12	4	46	12	4		
92	12	4	46	12	4		
93	12	4	46	12	4		
94	12	4	46	12	4		
95	12	4	46	12	4		

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X-13408 Reduced to 52

$$\begin{array}{l} | \#7 \ n | \#7 \ m+n | \#7 \ l+m+n | \#7 \ \text{mean } n | \#7 \ \text{mean } m+n | \#7 \ (n) | \#7 \ (\\ m+n) | \#7 \ \text{delta } m | \#8 \ n | \#8 \ m+n | \#8 \ \text{mean } n | \#8 \ \text{mean } m+n | \#8 \ (n) | \\ \#8 \ (m+n) | \#8 \ \text{delta } m \end{array}$$
[illegible]

162	X-13408	Reduced to 52
47	28	
1	—	—
2	—	—
3	21	14
4	22	15
5	23	16
6	24	17
7	25	18
8	26	19
9	27	20
10	28	21
11	29	22
12	30	23
13	31	24
14	32	25
15	33	26
16	34	27
17	35	28
18	36	29
19	37	30
20	38	31
21	39	32
22	40	33
23	41	34
24	42	35
25	43	36
26	44	37
27	45	38
28	46	39
29	47	40
30	48	41
31	49	42
32	50	43
33	51	44
34	52	45
35	53	46
36	54	47
37	55	48
38	56	49
39	57	50
40	58	51
41	59	52
42	60	53
43	61	54
44	62	55
45	63	56
46	64	57
47	65	58
48	66	59
49	67	60
50	68	61
51	69	62
52	70	63
53	71	64
54	72	65
55	73	66
56	74	67
57	75	68
58	76	69
59	77	70
60	78	71
61	79	72
62	80	73
63	81	74
64	82	75
65	83	76
66	84	77
67	85	78
68	86	79
69	87	80
70	88	81
71	89	82
72	90	83
73	91	84
74	92	85
75	93	86
76	94	87
77	95	88
78	96	89
79	97	90
80	98	91
81	99	92
82	100	93
83	101	94
84	102	95
85	103	96
86	104	97
87	105	98
88	106	99
89	107	100
90	108	101
91	109	102
92	110	103
93	111	104
94	112	105
95	113	106
96	114	107
97	115	108
98	116	109
99	117	110
100	118	111
101	119	112
102	120	113
103	121	114
104	122	115
105	123	116
106	124	117
107	125	118
108	126	119
109	127	120
110	128	121
111	129	122
112	130	123
113	131	124
114	132	125
115	133	126
116	134	127
117	135	128
118	136	129
119	137	130
120	138	131
121	139	132
122	140	133
123	141	134
124	142	135
125	143	136
126	144	137
127	145	138
128	146	139
129	147	140
130	148	141
131	149	142
132	150	143
133	151	144
134	152	145
135	153	146
136	154	147
137	155	148
138	156	149
139	157	150
140	158	151
141	159	152
142	160	153
143	161	154

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	#14 n	#14 m+n	#14 m+n	#14 mean n	#14 mean m+n	#14
(n)	#14 (m+n)	#14 delta m	#17 n	#17 m+n	#17 mean n	#17
mean m+n	#17 (n)	#17 (m+n)	#17 delta m			

[illegible]

164

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X 13408

| #19 n | #19 m+n | #19 l+m+n | #19 mean n | #19 mean m+n | #19
(n) | #19 (m+n) | #19 delta m | #5 n | #5 m+n | #5 mean n | #5 mean
m+n | #5 (n) | #5 (m+n) | #5 delta m

1	4	11	51						1	9	0	52	9	0				
2	-	-	-						2	3	0	52	3	0				
3	21	25	50						3	15	1	52	15	1				
3a	-	-	-						4	7	2	52	7	2				
3b	22	26	50						5	13	2	52	13	2				
4	11	25	50						6	40	3	52	40	30				
4a	-	-	-						7	8	3	52	8	3				
5	9	23	50						8	18	4	52	18	4				
5a	20	23	50						9	8	4	52	8	4				
5b	15	20	49						10	8	4	52	8	4				
5c	-	-	-						11	10	4	52	10	4				
6	5	15	49						11a	10	5	52	10	5				
6a	-	-	-						12	20	6	52	20	6				
7	3	7	49						13	15	8	52	15	8				
8									14	-	-	-	-	-				
9									15	17	9	52	17	9				
10									16	25	9	52	25	9				
10a									17	15	9	53	15	9				
11									18	-	-	-	-	-				
									19	22	9	53	22	9				
									20	18	9	53	18	9				
									21	14	9	53	14	9				
									22	25	9	53	25	9				
									23	26	9	53	26	9				
									24	14	9	53	14	9				
									25	15	9	53	15	9				
									26	18	9	53	18	9				
									27	14	9	53	14	9				
									28	11	9	53	11	9				
									29	8	13	53	8	13				

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X 13408

#5 cont.

	#19 n		#19 m+n		#19 m+n		#19 mean n		#19 mean m+n		#19
(n)	#19 (m+n)		#19 delta m		#5 n		#5 m+n		#5 mean n		#5 mean
m+n	#5 (n)		#5 (m+n)		#5 delta m						

[illegible]

168

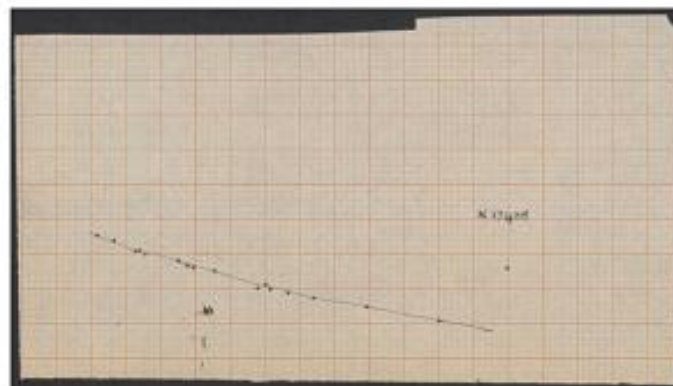
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|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

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[[image - line graph drawn through data points]]

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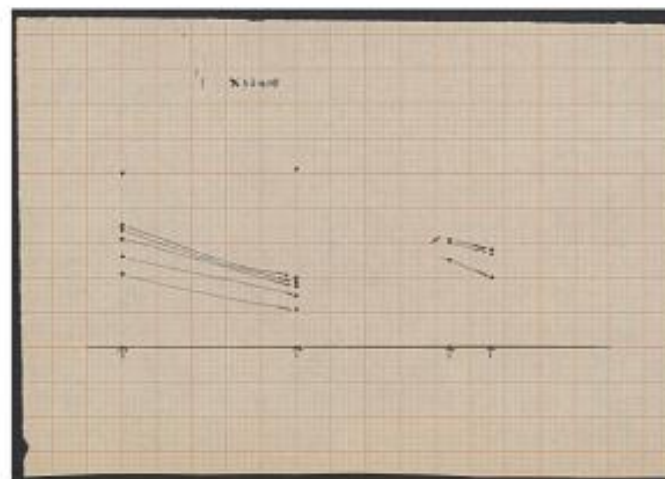


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[[image - eight line graphs drawn through data points]]

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?

[[9 column table]]

	n	m+n	l+m+n	\bar{n}	$\bar{m+n}$	(n)	(m+n)	m
61	7	11	51					
62	3	9	51					
63	1	8	51					
64	0	8	51					
65	0	5	51					
66	7	5	51					
67	0	4	51					
68								
69								

168

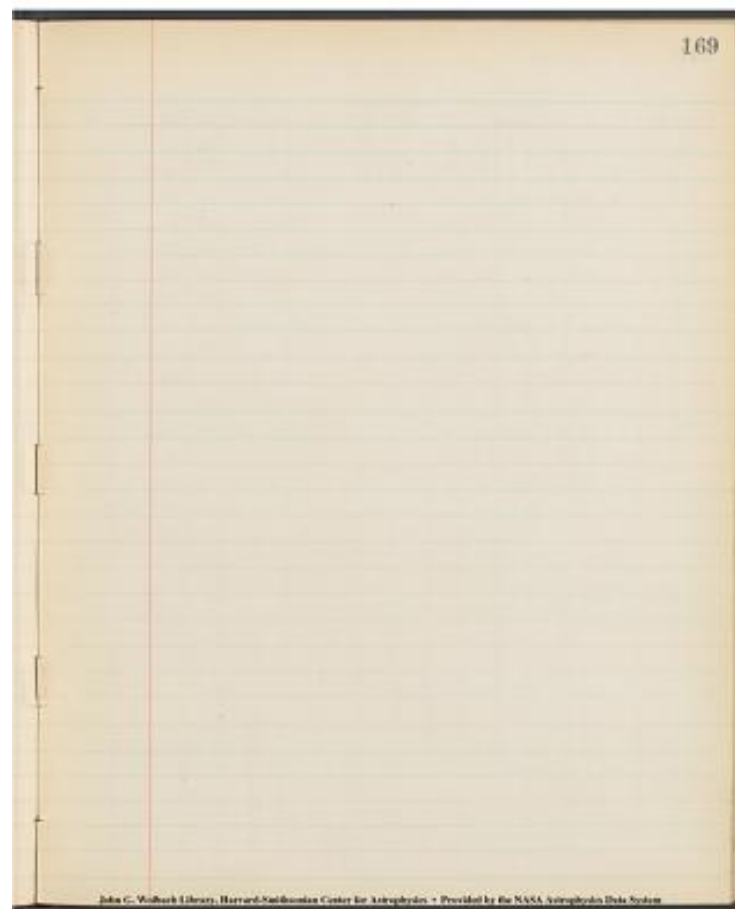
	n	m+n	l+m+n	\bar{n}	$\bar{m+n}$	(n)	(m+n)	m
61	7	11	51					
62	3	9	51					
63	1	8	51					
64	0	8	51					
65	0	5	51					
66	7	5	51					
67	0	4	51					
68								
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#3 n | #3 m+n | #3 l+m+n | #3 n | #3 m+n | #3 n | #3 m+n | #3 m | #4 n |
#4 m+n | #4 l+m+n | #4 n | #4 m+n | #4 n | #4 m+n | #4 m |
1 | 9 | 21 | 74 | 9 | 20 | | | 3 | 25 | 77 | 3 | 23 | | |
2 | - | - | - | - | - | - | - | - | - | - | - | - | - |
3 | 40 | 46 | 73 | 38 | 44 | | | 47 | 51 | 75 | 44 | 48 | | |
3a | - | - | - | - | - | - | - | 49 | 51 | 75 | 46 | 48 | | |
3b | 42 | 46 | 73 | 40 | 44 | - | - | 47 | 51 | 75 | 44 | 48 | | |
4 | 25 | 46 | 73 | 24 | 44 | | | 10 | 50 | 75 | 9 | 47 | | |
4a | - | - | - | - | - | - | - | - | - | - | - | - | - |
5 ~~[[strike through]]~~ 4b ~~[[/strike through]]~~ | 21 | 42 | 73 | 20 | 40 | | | 6 |
46 | 74 | 6 | 44 | | |
5a | - | - | - | - | - | - | - | - | - | - | - | - | - |
5b | 29 | 36 | 72 | 28 | 35 | | | - | - | - | - | - | - |
5c | 32 | 34 | 72 | 31 | 33 | | | - | - | - | - | - | - |
6 | 9 | 29 | 72 | 9 | 28 | | | 3 | 32 | 74 | 3 | 30 | | |
6a | 16 | 21 | 72 | 16 | 20 | | | 18 | 25 | 73 | 17 | 24 | | |
7 | 1 | 12 | 72 | 1 | 12 | | | 10 | 14 | 73 | 0 | 13 | | |
8 | - | - | - | - | - | - | - | - | - | - | - | - | - |
9 | - | - | - | - | - | - | - | - | - | - | - | - | - |
10 | - | - | - | - | - | - | - | - | - | - | - | - | - |
10a | - | - | - | - | - | - | - | - | - | - | - | - | - |
11 | - | - | - | - | - | - | - | - | - | - | - | - | - |

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[[17 column table]]

	#7 n	#7 m+n	#7 l+m+n	#7 n	#7 m+n	#7 n	#7 m+n	#7 m	#8
n	#8 m+n	#8 l+m+n	#8 n	#8 m+n	#8 n	#8 m+n	#8 m		
1	20	25	73	19	24	26	19	68	27 20
2	42	45	72	41	44	56	37	68	58 38
3	42	47	72	41	46	39	47	68	40 48
3a	44	47	72	43	46	-	-	-	-
3b	44	47	72	43	46	-	-	-	-
4	39	46	72	38	45	43	41	68	44 42
4a	38	41	71	37	40	-	-	-	-
5	35	40	71	37	40	43	41	68	44 42
5a	37	40	71	36	39	-	-	-	-
5b	36	39	71	35	38	-	-	-	-
5c	33	38	70	33	38	-	-	-	-
6	25	32	70	25	32	45	40	68	46 41
6a	23	26	70	23	26	-	-	-	-
7	13	18	70	13	18	-	-	-	-
8	-	-	-	-	-	43	38	68	44 39
9	-	-	-	-	-	46	36	68	47 37
through]] 3									
10	-	-	-	-	-	21	27	68	22 28
10a	-	-	-	-	-	20	22	68	21 23
11	-	-	-	-	-	10	14	68	10 14

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~~22~~ 9 | #5 eta Carinae

| | #9 n | #9 m+n | #9 l+m+n | #9 mean n | #9 mean m+n | #9 (n) | #9 (m+n) | #9 delta m | #5 n | #5 m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m

1	20	23	71						8	0	71				
2	18	25	71						3	2	71				
3	22	29	71						15	3	71				
4	21	31	71						8	3	71				
5	24	33	71						12	3	71				
6	30	39	71						6	4	71				
7	36	43	71						8	4	71				
8	37	44	71						9	4	71				
9	41	47	71						19	4	71				
10	42	49	71						9	5	71				
11	46	50	71						11	5	71				
12	49	51	71						20	6	71				
13	46	52	71						12	8	71				
14	48	53	71						15	8	70				
15	46	54	71						13	8	70				
16	54	56	71						18	9	70				
17	55	57	71						25	9	70				
18	56	58	71						14	9	70				
18a	-	-	-						7	9	70				
19	55	59	71						-	-	-				
20	55	60	71						35	10	70				
21	57	62	71						-	-	-				
22	58	63	71						14	10	70				
23	60	63	71						27	10	70				
24	60	63	71						26	10	70				
25	57	63	71						13	10	70				
26	60	63	71						14	10	70				
27	57	63	71						29	10	70				
28	59	64	71						24	10	70				
29	69	64	71						20	10	70				
30	68	63	71						13	10	70				

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22 (cont.) | #5 (cont)
| | #9 n | #9 m+n | #9 l+m+n | #9 mean n | #9 mean m+n | #9 (n) | #9 (m+n) | #9 delta m | #5 n | #5 m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m

31	58	63	71						25	10	70					
32	59	63	71						20	9	70					
33	58	62	71						26	9	70					
34	55	62	71						25	9	70					
35	53	61	71						17	9	70					
36	51	61	71						9	9	70					
37	57	61	71						44	8	70					
37a	-	-	-						5	8	70					
38	51	60	71						10	8	70					
39	54	60	71						16	8	69					
40	53	59	71						17	8	69					
41	50	59	71						47	8	69					
42	44	58	71						33	8	69					
43	46	58	71						36	8	69					
44	47	57	71						14	7	69					
45	45	57	71						18	7	69					
46	48	56	71						12	7	69					
47	47	56	71						18	7	69					
48	43	55	71						15	6	69					
49	33	55	71						43	6	69					
50	25	53	71						23	6	69					
51	40	52	71						9	6	69					
52	46	52	71						10	6	69					
53	45	51	71						37	5	69					
54	42	51	71						24	5	69					
55	33	50	71						9	5	69					
56	30	49	71						10	5	68					
57	35	48	71						8	5	68					
58	19	47	71						8	4	68					
59	22	47	71						17	4	68					
60	18	45	71						12	4	68					

175

22 (cont.) 5 (cont.)

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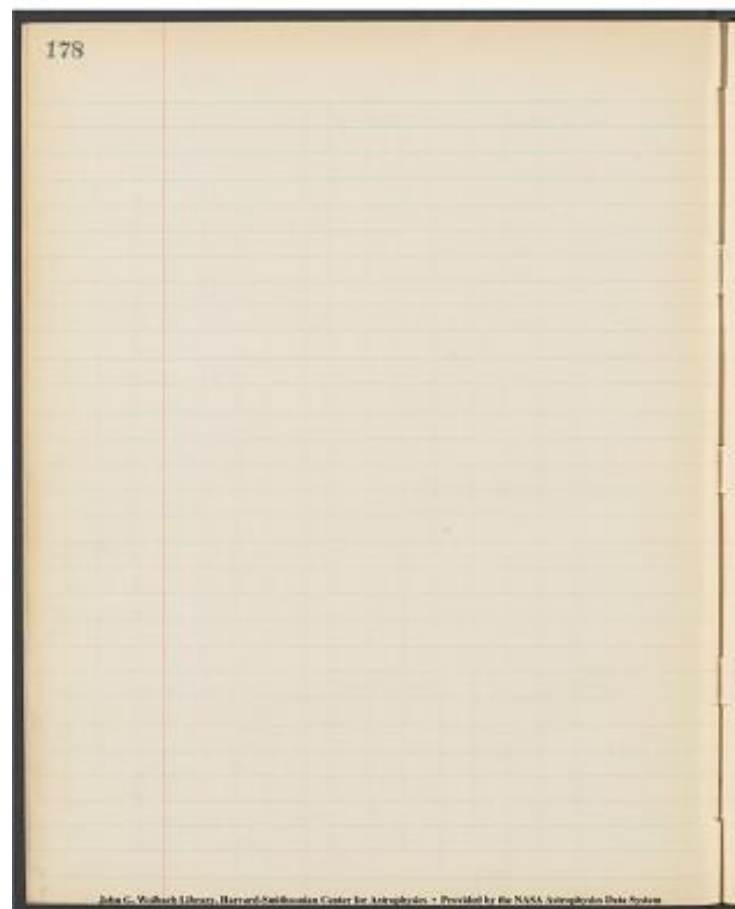
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```
# 22 (cont.) | #5 (cont)
| | #22 n | #22 m+n | #22 l+m+n | #22 mean n | #22 mean m+n | #22
(n) | #22 (n) | #22 delta m | #5 n | #5 m+n | #5 mean n | #5 mean
m+n | #5 (n) | #5 (m+n) | #5 delta m
```

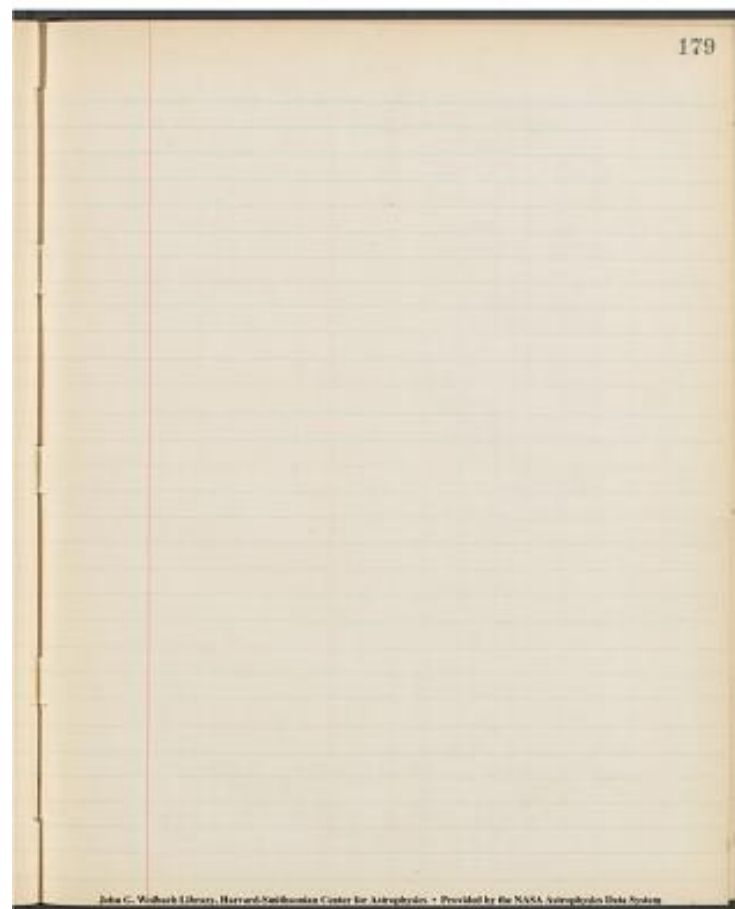
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Date	# 22 (cont)				# 5 (cont)			
	Time	Lat	Long	Alt	Time	Lat	Long	Alt
61	16	45	71		16	45	71	
62	17	44	71		17	44	71	
63	18	43	71		18	43	71	
64	19	42	71		19	42	71	
65	20	41	71		20	41	71	
66	21	40	71		21	40	71	
67	22	39	71		22	39	71	
68	23	38	71		23	38	71	
69	24	37	71		24	37	71	
70	25	36	71		25	36	71	
71	26	35	71		26	35	71	
72	27	34	71		27	34	71	
73	28	33	71		28	33	71	
74	29	32	71		29	32	71	
75	30	31	71		30	31	71	
76	31	30	71		31	30	71	
77	32	29	71		32	29	71	
78	33	28	71		33	28	71	
79	34	27	71		34	27	71	
80	35	26	71		35	26	71	
81	36	25	71		36	25	71	
82	37	24	71		37	24	71	
83	38	23	71		38	23	71	
84	39	22	71		39	22	71	
85	40	21	71		40	21	71	
86	41	20	71		41	20	71	
87	42	19	71		42	19	71	
88	43	18	71		43	18	71	
89	44	17	71		44	17	71	
90	45	16	71		45	16	71	

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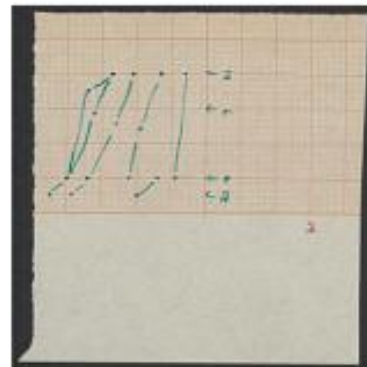


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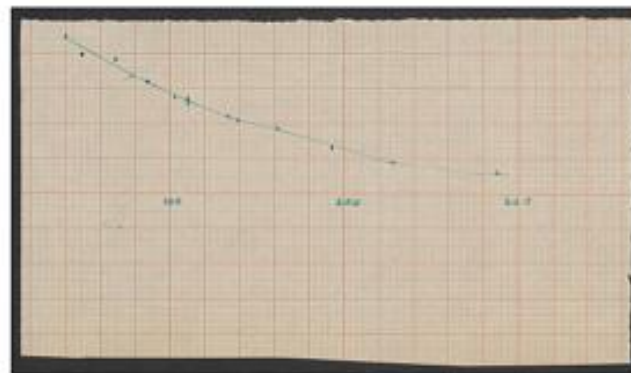
[[image - line graphs drawn through data points]]



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[[image - line graph drawn through data points]]



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 #7 B0, 6.6 | #3 B5, 5.8

#7 n | #7 m+n | #7 l+m+n | #7 mean n | #7 mean m+n | #7 (n) | #7 (m+n) | #7 delta m | #3 n | #3 m+n | #3 mean n | #3 mean m+n | #3 (n) | #3 (m+n) | #3 delta m

-	-	-	-	-	-	6	14	81	6	14				
29	35	82	28	34				30	35	81	30	35		
31	34	82	30	33										
-	-	-	-	-		31	35	81	31	35				
26	33	82	25	32				15	35	81	15	35		
25	33	82	24	32										
19	27	82	19	26				11	31	81	11	31		
24	26	82	23	25										
19	24	82	19	23				19	26	81	19	26		
-	-	-	-	-		20	24	81	20	24				
13	19	82	13	19				6	20	81	6	20		
10	15	82	10	15				10	13	81	10	13		
						0	8	81	0	8				

Ocp, 6.3 # 8 | #5 eta Car

| #8 n | #8 m+n | #8 l+m+n | #8 mean n | #8 mean m+n | #8 (n) | #8 (m+n) | #8 delta m | #5 n | #5 m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m

1	19	12	79	19	12	206		1	-	-	-	-		
2	55	28	79	56	28	104		2	-	-	-	-		
3	40	31	79	41	31	91		3	11	1	80	11	1	
4	36	33	79	36	33	83		4	4	2	80	4	2	
5	37	33	79	37	33	83		5	7	2	80	7	2	
6	38	34	79	38	34	79		6	41	3	80	41	3	
7	-	-	-	-	-			7	6	3	80	6	3	
8	37	30	78	38	31	91		8	9	4	80	9	4	
9	40	28	78	41	29			9	14	4	80	14	4	
10	15	20	78	15	21	140		10	6	4	80	6	4	
10a	12	15	78	12	15			11	11	4	80	11	4	
11	2	6	78	2	6			11a	10	5	80	10	5	
								12	16	5	80	16	5	
								12a	6	4	79	6	4	
								13	10	6	79	10	6	

181

#7 B0, 6.6 | #3 B5, 5.8

29	35	82	28	34				30	35	81	30	35		
31	34	82	30	33										
-	-	-	-	-		31	35	81	31	35				
26	33	82	25	32				15	35	81	15	35		
25	33	82	24	32										
19	27	82	19	26				11	31	81	11	31		
24	26	82	23	25										
19	24	82	19	23				19	26	81	19	26		
-	-	-	-	-		20	24	81	20	24				
13	19	82	13	19				6	20	81	6	20		
10	15	82	10	15				10	13	81	10	13		
						0	8	81	0	8				

Ocp, 6.3 # 8 | #5 eta Car

1	19	12	79	19	12	206		1	-	-	-	-		
2	55	28	79	56	28	104		2	-	-	-	-		
3	40	31	79	41	31	91		3	11	1	80	11	1	
4	36	33	79	36	33	83		4	4	2	80	4	2	
5	37	33	79	37	33	83		5	7	2	80	7	2	
6	38	34	79	38	34	79		6	41	3	80	41	3	
7	-	-	-	-	-			7	6	3	80	6	3	
8	37	30	78	38	31	91		8	9	4	80	9	4	
9	40	28	78	41	29			9	14	4	80	14	4	
10	15	20	78	15	21	140		10	6	4	80	6	4	
10a	12	15	78	12	15			11	11	4	80	11	4	
11	2	6	78	2	6			11a	10	5	80	10	5	
								12	16	5	80	16	5	
								12a	6	4	79	6	4	
								13	10	6	79	10	6	

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[[preprinted]] 182 [[/preprinted]]
#5 Cont. | #5 cont.

| #5 n | #5 m+n | #5 l+m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m | #5 n | #5 m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m

14	14	6	79	14	6				43)	30	7	78	31	7			
15	11	6	79	11	6				44)	11	7	78	11	7			
16	15	7	79	15	7				45)	16	7	78	16	7			
17	22	7	79	22	7					11	7	78	11	7			
18	12	7	79	12	7					15	7	78	15	7			
19	11	8	79	11	8					12	7	78	12	7			
20	30	8	79	30	8					38	7	78	39	7			
21	16	8	79	16	8				50)	20	6	78	21	6			
22	12	8	79	12	8					8	6	78	8	6			
23	24	8	79	24	8					8	5	78	8	5			
24	23	8	79	23	8					32	5	78	33	5			
25	13	8	79	13	8					19	5	78	19	5			
26	13	8	79	13	8				55)	8	5	78	8	5			
26a	16	8	79	16	8					7	5	78	7	5			
27	25	8	79	25	8					7	5	78	7	5			
28	21	8	79	21	8					7	4	78	7	4			
29	17	8	79	17	8					14	4	78	14	4			
30	11	18	79	11	18				60)	11	3	78	11	3			
31	31	8	79	31	8					-	-	-	-	-			
32	18	8	79	18	8					-	-	-	-	-			
33	20	8	79	20	8					-	-	-	-	-			
34	22	8	79	22	8					-	-	-	-	-			
35	9	7	79	22	8				65)	6	2	78	6	2			
36	8	8	79	8	8					8	2	78	6	2			
37	38	8	79	38	8					12	2	78	12	2			
38	10	8	79	10	8					5	2	77	5	2			
39	13	8	78	13	8					6	2	77	6	2			
40	12	8	78	12	8				70)	8	2	77	8	2			
41	42	7	78	43	7												
42	27	7	78	28	7												

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[[preprinted]] 184 [[/preprinted]]
 #9 cont.

| #9 n | #9 m+n | #9 l+m+n | #9 mean n | #9 mean m+n | #9 (n) | #9 (m+n) | #9 delta m |
 | #9 n | #9 m+n | #9 mean n | #9 mean m+n | #9 (n) | #9 (m+n) | #9 delta m

61	21	41	84	20	39				91	9	19	84	9	18			
62	26	40	84	25	38				92	11	18	84	10	17			
63	11	39	84	10	37				93	12	18	84	11	17			
64	14	39	84	13	37				94	8	17	84	8	16			
65	11	38	84	10	36				95	10	17	84	10	16			
66	20	37	84	19	35				96	7	17	84	7	16			
67	13	36	84	12	34				97	10	16	84	10	15			
68	11	36	84	10	34				98	7	15	84	7	14			
69	17	35	84	16	33				99	9	15	84	9	14			
70	13	35	84	12	33				100	6	15	84	6	14			
71	13	34	84	12	32												
72	15	33	84	14	31												
73	13	32	84	12	30												
74	2	32	84	2	30												
75	11	30	84	10	29												
76	10	29	84	9	28												
77	11	29	84	10	28												
78	14	28	84	13	27												
79	13	28	84	12	27												
80	13	27	84	12	26												
81	8	26	84	8	25												
82	12	26	84	11	25												
83	14	25	84	13	24												
84	10	25	84	10	24												
85	8	24	84	8	23												
86	10	23	84	10	22												
87	11	22	84	10	21												
88	11	21	84	10	20												
89	11	21	84	10	20												
90	10	20	84	10	19												

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 #5 cont. Reduced to 85

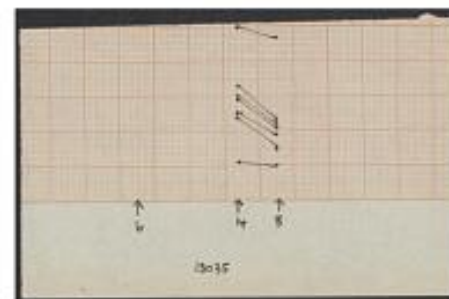
| #5 n | #5 m+n | #5 l+m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m |
 | #5 n | #5 m+n | #5 mean n | #5 mean m+n | #5 (n) |
 | #5 (m+n) | #5 delta m

13	6	4	84	6	4			44	6	4	83	6	4				
14	8	4	84	8	4			45	9	4	83	9	4				
15	7	4	84	7	4			46	7	4	83	7	4				
16	9	4	84	9	4			47	10	4	83	10	4				
17	14	4	84	14	4			48	9	4	83	9	4				
18	7	4	83	7	4			49	24	4	83	25	4				
19	5	5	83	5	5			50	10	4	83	10	4				
20	22	5	83	23	5			51	5	4	83	5	4				
21	[[strikethrough]] 10 | 5 | 83 [[/strikethrough]]							- | - | - | - | - |									52 | -
22	10	5	83	10	5			53	19	3	83	13	4				
23	18	5	83	18	5			54	13	4	83	13	4				
24	17	5	83	17	5			55	5	3	83	5	3				
25	7	5	83	7	5			56	-	-	-	-	-				
26	9	5	83	9	5			57	-	-	-	-	-				
27	17	5	83	17	5			58	-	-	-	-	-				
28	13	5	83	13	5			59	9	2	83	9	2				
29	11	5	83	11	5			60	6	2	83	6	2				
30	7	5	83	7	5			61	-	-	-	-	-				
31	13	5	83	13	5			62	-	-	-	-	-				
32	9	5	83	9	5			63	-	-	-	-	-				
33	12	5	83	12	5			64	-	-	-	-	-				
34	12	5	83	12	5			65	-	-	-	-	-				
35	5	83	5	5				66	5	1	83	5	1				
36	3	5	83	3	5			67	-	-	-	-	-				
37	24	5	83	25	5			67a	9	1	83	9	1				
38	7	5	83	7	5			68	5	1	83	5	1				
39	8	5	83	8	5			69	9	1	83	9	1				
40	7	4	83	7	4			70	24	1	83	25	1				
41	27	4	83	28	4			70a	10	1	83	10	1				
42	18	4	83	18	4												
43	19	4	83	19	4												

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[[image - line seven graphs drawn through data points]]

13035

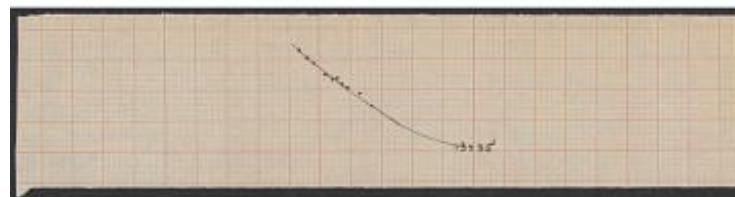


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[[image - line graph drawn through data points]]

13035



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Reduced to 85

#9

		n		m+n		l+m+n		n		m+n		n		m+n		delta m		[[strikethrough]] m
[[/strikethrough]]		n		m+n		l+m+n		n		m+n		n		m+n		delta m		
-3	|	7	|	12	|	84	|	7	|	12	|		|	27	|	42	|	49
-2	|	10	|	15	|	84	|	7	|	12	|		|	28	|	38	|	50
-1	|	11	|	17	|	84	|	11	|	17	|		|	29	|	43	|	50
0	|	11	|	18	|	84	|	11	|	18	|		|	30	|	38	|	50
1	|	15	|	23	|	85	|	15	|	23	|		|	31	|	42	|	50
2	|	20	|	25	|	85	|	20	|	25	|		|	32	|	46	|	50
3	|	20	|	27	|	85	|	27	|	85	|		|	33	|	47	|	50
4	|	23	|	31	|	85	|	23	|	31	|		|	34	|	42	|	50
5	|	-	|	-	|	-	|		|		|	35	|	40	|	49	|	49
6	|	23	|	34	|	85	|	23	|	34	|		|	36	|	39	|	49
7	|	28	|	35	|	85	|	28	|	35	|		|	37	|	42	|	48
8	|	26	|	37	|	85	|	26	|	37	|		|	38	|	41	|	48
9	|	30	|	38	|	85	|	30	|	38	|		|	39	|	35	|	47
10	|	26	|	39	|	85	|	26	|	39	|		|	40	|	37	|	47
11	|	31	|	39	|	85	|	31	|	39	|		|	41	|	42	|	47
12	|	34	|	39	|	85	|	34	|	39	|		|	42	|	30	|	47
13	|	15	|	40	|	85	|	15	|	40	|		|	43	|	40	|	46
14	|	34	|	41	|	85	|	34	|	41	|		|	44	|	42	|	46
15	|	17	|	41	|	85	|	17	|	41	|		|	45	|	[[subscript]] a	|	[[/subscript]]
	|	85	|	35	|	45	|		|		|		|		|	35	|	45
16	|	37	|	42	|	85	|	37	|	42	|		|	46	|	33	|	44
17	|	36	|	43	|	85	|	36	|	43	|		|	47	|	30	|	43
18	|	39	|	43	|	85	|	39	|	43	|		|	48	|	24	|	43
18	|	[[subscript]] a	|	[[/subscript]]	|		|		|		|	36	|	44	|	85	|	36
19	|	37	|	44	|	85	|	37	|	44	|		|	[[subscript]] a	|	[[/subscript]]	|	26
85	|	26	|	42	|		|		|		|		|		|		|	42
20	|	37	|	45	|	85	|	37	|	45	|		|	49	|	27	|	42
21	|	42	|	47	|	85	|	42	|	47	|		|	50	|	23	|	41
22	|	38	|	48	|	85	|	38	|	48	|		|	50	|	[[subscript]] a	|	[[/subscript]]
	|	85	|	28	|	41	|		|		|		|		|	28	|	41
23		42		48		85		42		48				51		27		40
24		41		48		85		41						52		16		39
25		42		48		85		42		48				53		11		38
26		42		49		85		42		49				54		-		-

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[illegible][illegible]

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[[preprinted]] 190 [[/preprinted]]
 X 13033 Reduced to 105
 #2 [[over column 2 of table]] #3 [[over column 10 of table]]
 [[solid line over 16 column table header]]
 #2 n | #2 m+n | #2 l+m+n | #2 n | #2 m+n | #2 n | #2 m+n | #2 delta m
 #3 n | #3 m+n | #3 l+m+n | #3 n | #3 m+n | #3 n | #3 m+n | #3 delta m |
 [[solid line under 16 column table header]]
 1 | 2 | 6 | 106 | 2 | 6 | | | 3 | 5 | 107 | 3 | 5 | | |
 2 | - | - | - | - | - | | | - | - | - | - | - | | |
 3 | 12 | 17 | 106 | 12 | 17 | | | 11 | 17 | 107 | 11 | 17 | | |
 3 [[subscript]] a [[/subscript]] | 13 | 17 | 106 | 13 | 17 | | | - | - | - | - | - | | |
 3 [[subscript]] b [[/subscript]] | - | - | - | - | - | | | - | - | - | - | - | | |
 4 | 6 | 16 | 106 | 6 | 16 | | | 6 | 17 | 107 | | | | | |
 4 [[subscript]] a [[/subscript]] | 8 | 12 | 106 | 8 | 12 | | | - | - | - | - | - | | |
 5 | 4 | 12 | 106 | 4 | 12 | | | 5 | 14 | 107 | | | | | |
 5 [[subscript]] a [[/subscript]] | 9 | 11 | 106 | 9 | 11 | | | - | - | - | - | - | | |
 5 [[subscript]] b [[/subscript]] | 7 | 9 | 106 | 7 | 9 | | | 8 | 11 | 107 | 8 | | | |
 11 | | | | | | | | | | | | | | | |
 5 [[subscript]] c [[/subscript]] | 5 | 8 | 106 | 5 | 8 | | | - | - | - | - | - | | |
 6 | 2 | 8 | 106 | 2 | 8 | | | 2 | 8 | 107 | 2 | 8 | | | |
 6 [[subscript]] 6 [[/subscript]] | 3 | 6 | 106 | 3 | 6 | | | - | - | - | - | - | | |
 7 | | | | | | | | | | | | | | | |
 8 | | | | | | | | | | | | | | | |
 [[solid line column 1 thru column 16]]
 #4 [[over column 3]] #7 [[over column 10]]
 1 | 0 | 6 | 105 | 0 | 6 | | | - | - | - | - | - | | |
 2 | - | - | - | - | - | | | - | - | - | - | - | | |
 3 | - | - | - | - | - | | | - | - | - | - | - | | |
 3 [[subscript]] a [[/subscript]] | - | - | - | - | - | | | - | - | - | - | - | | |
 3 [[subscript]] b [[/subscript]] | - | - | - | - | - | | | - | - | - | - | - | | |
 4 | 4 | 17 | 105 | 4 | 17 | | | 14 | 20 | 106 | 14 | 20 | | |
 4 [[subscript]] a [[/subscript]] | 12 | 14 | 105 | 12 | 14 | | | - | - | - | - | - | | |
 5 | 0 | 13 | 105 | 0 | 13 | | | 11 | 16 | 106 | 11 | 16 | | |
 5 [[subscript]] a [[/subscript]] | 10 | 13 | 104 | 10 | 13 | | | - | - | - | - | - | | |
 5 [[subscript]] b [[/subscript]] | - | - | - | - | - | | | - | - | - | - | - | | |
 5 [[subscript]] c [[/subscript]] | - | - | - | - | - | | | 11 | 14 | 105 | 11 | 14 | | |
 6 | 0 | 7 | 104 | 0 | 7 | | | 8 | 12 | 105 | 8 | 12 | | |
 6 [[subscript]] a [[/subscript]] | 2 | 5 | 104 | 2 | 5 | | | - | - | - | - | - | | |
 7 | - | - | - | - | - | | | - | - | - | - | - | | |
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190

X 13033

Reduced to 105

#2

#3

n	m+n	l+m+n	n	m+n	n	m+n	delta m	n	m+n	l+m+n	n	m+n	n	m+n	delta m
1	2	6	106	2	6			3	5	107	3	5			
2	-	-	-	-	-			-	-	-	-	-	-	-	
3	12	17	106	12	17			11	17	107	11	17			
3a	13	17	106	13	17			-	-	-	-	-	-	-	
3b	-	-	-	-	-			-	-	-	-	-	-	-	
3c	5	8	106	5	8			7	9	107					
4	6	16	106	6	16			6	17	107					
4a	8	12	106	8	12			-	-	-	-	-	-	-	
4b	-	-	-	-	-			-	-	-	-	-	-	-	
4c	4	12	106	4	12			5	14	107	5	14			
5	4	12	106	4	12			9	11	107	9	11			
5a	9	11	106	9	11			-	-	-	-	-	-	-	
5b	7	9	106	7	9			8	11	107	8	11			
5c	-	-	-	-	-			-	-	-	-	-	-	-	
6	2	8	106	2	8			2	8	107	2	8			
6a	3	6	106	3	6			-	-	-	-	-	-	-	
7	-	-	-	-	-			-	-	-	-	-	-	-	
8	-	-	-	-	-			-	-	-	-	-	-	-	

#4

#7

n	m+n	l+m+n	n	m+n	n	m+n	delta m	n	m+n	l+m+n	n	m+n	n	m+n	delta m
1	0	6	105	0	6			-	-	-	-	-	-	-	
2	-	-	-	-	-			-	-	-	-	-	-	-	
3	-	-	-	-	-			-	-	-	-	-	-	-	
3a	-	-	-	-	-			-	-	-	-	-	-	-	
3b	-	-	-	-	-			-	-	-	-	-	-	-	
3c	4	17	105	4	17			14	20	106	14	20			
4	4	17	105	4	17			-	-	-	-	-	-	-	
4a	12	14	105	12	14			-	-	-	-	-	-	-	
4b	-	-	-	-	-			-	-	-	-	-	-	-	
4c	0	13	105	0	13			11	14	106	11	14			
5	0	13	105	0	13			-	-	-	-	-	-	-	
5a	10	13	104	10	13			8	12	105	8	12			
5b	-	-	-	-	-			-	-	-	-	-	-	-	
5c	-	-	-	-	-			-	-	-	-	-	-	-	
6	0	7	104	0	7			-	-	-	-	-	-	-	
6a	2	5	104	2	5			8	12	105	8	12			
7	-	-	-	-	-			-	-	-	-	-	-	-	

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[[preprinted]] 192 [[/preprinted]]
X 13033 cont. #9

#5

[[There is a darker thicker vertical line between #9 and #5 data cells]]
[[solid line over 16 column table header]] #9 n | #9 m+n | #9 l+m+n |
#9 n | #9 m+n | #9 n | #9 m+n | #9 delta m | #5 n | #5 m+n | #5 l+m+n |
#5 n | #5 m+n | #5 n | #5 m+n | #5 delta m |

[[solid line under 16 column table header]]

4	12	17	105	12	17										
5	-	-	-	-	-										
6	11	19	105	11	19			15	2	104	15	2			
7	16	20	105	16	20										
7a	17	21	105	17	21										
8	15	22	105	15	22										
9	17	24	105	17	24										
10	14	24	105	14	24										
11	20	25	105	20	25										
12	21	25	105	21	25										
13	20	26	105	20	26										
14	21	27	105	21	27										
15	23	27	105	23	27										
16	24	28	105	24	28										
17	23	29	105	23	29										
18	25	30	105	25	30										
18a	22	31	105	22	31										
19	23	31	105	23	31										
20	24	33	105	24	33			13	6	104	13	6			
21	28	34	105	28	34			8	6	104	8	6			
22	24	35	105	24	35			9	6	104	9	6			
23	29	36	105	29	36			10	6	104	10	6			
24	27	36	105	27	36			11	6	104	11	6			
25	30	36	105	30	36			8	6	104	8	6			
26	29	36	105	29	36			9	6	104	9	6			
27	29	37	105	29	37			12	6	104	12	6			
28	25	38	105	25	38			10	6	104	10	6			
29	29	38	105	29	38			9	5	104	9	5			
30	23	38	105	23	38			-	-	-	-	-			

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| | #9 n | #9 m+n | #9 l+m+n | #9 mean n | #9 mean m+n | #9 (n) | #9 (m+n) | #9 delta m | #5 n | #5 m+n | #5 mean n | #5 mean m+n | #5 (n) | #5 (m+n) | #5 delta m

31	28	38	104	28	38					9	5	104	9	5			
32	33	38	104	33	38												
33	35	38	104	35	38												
34	27	38	104	27	38												
35	26	37	104	26	37												
35a	29	36	104	29	36												
36	25	36	104	25	36												
37	28	36	104	28	36												
38	26	36	104	26	36												
39	23	35	104	23	35												
40	24	35	104	24	35					8	5	104	8	5			
41	20	34	104	20	34					17	5	104	17	5			
42	16	34	104	16	34					12	5	104	12	5			
43	26	33	104	26	33					12	5	104	12	5			
44	28	33	104	28	33												
45	18	32	104	18	32												
46	20	31	104	20	31												
47	17	30	104	17	30												
48	13	29	104	13	29												
48a	14	29	104	14	29												
49	15	28	104	15	28					15	5	104	15	5			
50	12	28	104	12	28					9	5	104	9	5			
51	14	26	104	14	26												
52	11	26	104	11	26												
53	6	25	104	6	25					14	5	104	14	5			
54	5	23	104	5	23					10	4	104	10	4			
55	10	23	104	10	23												
56	14	22	104	14	22												
57	14	21	104	14	21												

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31	28	38	104	28	38					9	5	104	9	5			
32	33	38	104	33	38												
33	35	38	104	35	38												
34	27	38	104	27	38												
35	26	37	104	26	37												
35a	29	36	104	29	36												
36	25	36	104	25	36												
37	28	36	104	28	36												
38	26	36	104	26	36												
39	23	35	104	23	35												
40	24	35	104	24	35					8	5	104	8	5			
41	20	34	104	20	34					17	5	104	17	5			
42	16	34	104	16	34					12	5	104	12	5			
43	26	33	104	26	33					12	5	104	12	5			
44	28	33	104	28	33												
45	18	32	104	18	32												
46	20	31	104	20	31												
47	17	30	104	17	30												
48	13	29	104	13	29												
48a	14	29	104	14	29												
49	15	28	104	15	28					15	5	104	15	5			
50	12	28	104	12	28					9	5	104	9	5			
51	14	26	104	14	26												
52	11	26	104	11	26												
53	6	25	104	6	25					14	5	104	14	5			
54	5	23	104	5	23					10	4	104	10	4			
55	10	23	104	10	23												
56	14	22	104	14	22												
57	14	21	104	14	21												

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Plates of Carinae region. Identifications.

[[4 column table]]

No. | Star | H.D. | M

1			
2	HR 4228	10 44.2 -59 24	6.12 AO
3	CPD-59°2713	10 43.9 -59 21	6.69 B5-
4			
5	HR 4210	10 41.2 -59 10	var. Pec
6	93027		8.9 B3-
7	HD 93027 | 93206	10 39.4 -59 37 ->	
8	HD 93028 | 93028	10 40.6 40.1 39.4 59 41	
9			
10			
11			
12			
13	-59°2447	10 37.4 -59 27	7.6 B3 -
14	HR 4188	10 37.4 -59 9 10 45.5 -58 48	
15			6.48 Ocp
16			
17			
18			
19			
20	HR 4239	10 45.5 -58 48	6.10 AO
21	HD 94345	10 48.2 -59 25	8.3 B8 -

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Plates of η Carinae region. Identifications.

No.	Star	H.D.	M
1			
2	HR 4228	10 44.2 -59 24	6.12 AO
3	CPD-59°2713	10 43.9 -59 21	6.69 B5-
4			
5	HR 4210	10 41.2 -59 10	var. Pec
6			
7	HD 93027	10 39.4 -59 37	8.9 B3-
8	HD 93028	10 40.6 40.1	39.4 59 41
9			
10			
11			
12			
13	-59°2447	10 37.4 -59 27	7.6 B3 -
14	HR 4188	10 37.4 -59 9	10 45.5 -58 48
15			6.48 Ocp
16			
17			
18			
19			
20	HR 4239	10 45.5 -58 48	6.10 AO
21	HD 94345	10 48.2 -59 25	8.3 B8 -

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[[7 column table]]

No. 4	No. 20	No. 21	No. 8	Mean A	Carinae	Mean A
11 [84] 11	17 83 17	14 76 15	9 79 9	211 174 -37	2 80	
25 84 25	33 83 33	21 76 22	20 80 21	136 104 -32	5 80	
37 84 37	44 83 44	26 77 27	29 80 30	92 71 -21	6 80	
43 83 40	48 83 48	27 77 28	33 79 34	75 64 -11	8 79	
41 83 41	48 83 48	27 77 28	33 79 34	75 63 -12	8 79	
41 83 41	47 [38] 47	27 78 28	34 79 35	70 64 -6	8 79	
41 83 41	47 83 47	27 79 28	33 79 34	75 64 -11	7 79	
39 [82] 39	44 [83] 44	24 80 24	31 79 32	83 74 -9	4 78	
36 82 36	40 83 40	22 81 22	30 79 31	87 83 -4	2 78	
28 82 28		17 82 17	24 79 25	115 119 +4		
11 82 11		7 83 7	11 78 11	198 212 +14	[[strike through]] 86	[[/strike through]]

For Mean A₀

[[6 column table]]

	4	20	21	mean
a	198	157	168	523
b	115	68	130	313
c	63	45	106	214
d	54	37	101	192
e	51	37	101	189
f	51	39	101	191
g	51	39	101	191
h	57	44	120	221
i	66	54	130	250
k	101	-	157	258
l	198	-	250	448

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No. 4	No. 20	No. 21	No. 8	Mean A	Carinae	Mean A
11 [84] 11	17 83 17	14 76 15	9 79 9	211 174 -37	2 80	
25 84 25	33 83 33	21 76 22	20 80 21	136 104 -32	5 80	
37 84 37	44 83 44	26 77 27	29 80 30	92 71 -21	6 80	
43 83 40	48 83 48	27 77 28	33 79 34	75 64 -11	8 79	
41 83 41	48 83 48	27 77 28	33 79 34	75 63 -12	8 79	
41 83 41	47 [38] 47	27 78 28	34 79 35	70 64 -6	8 79	
41 83 41	47 83 47	27 79 28	33 79 34	75 64 -11	7 79	
39 [82] 39	44 [83] 44	24 80 24	31 79 32	83 74 -9	4 78	
36 82 36	40 83 40	22 81 22	30 79 31	87 83 -4	2 78	
28 82 28		17 82 17	24 79 25	115 119 +4		
11 82 11		7 83 7	11 78 11	198 212 +14	[[strike through]] 86	[[/strike through]]

	4	20	21	mean
a	198	157	168	523
b	115	68	130	313
c	63	45	106	214
d	54	37	101	192
e	51	37	101	189
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i	66	54	130	250
k	101	-	157	258
l	198	-	250	448

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| | | Discussion of intensity | 16-23
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C 18483	α Cygni	Measures & Reductions	30-41
		Discussion	42-43

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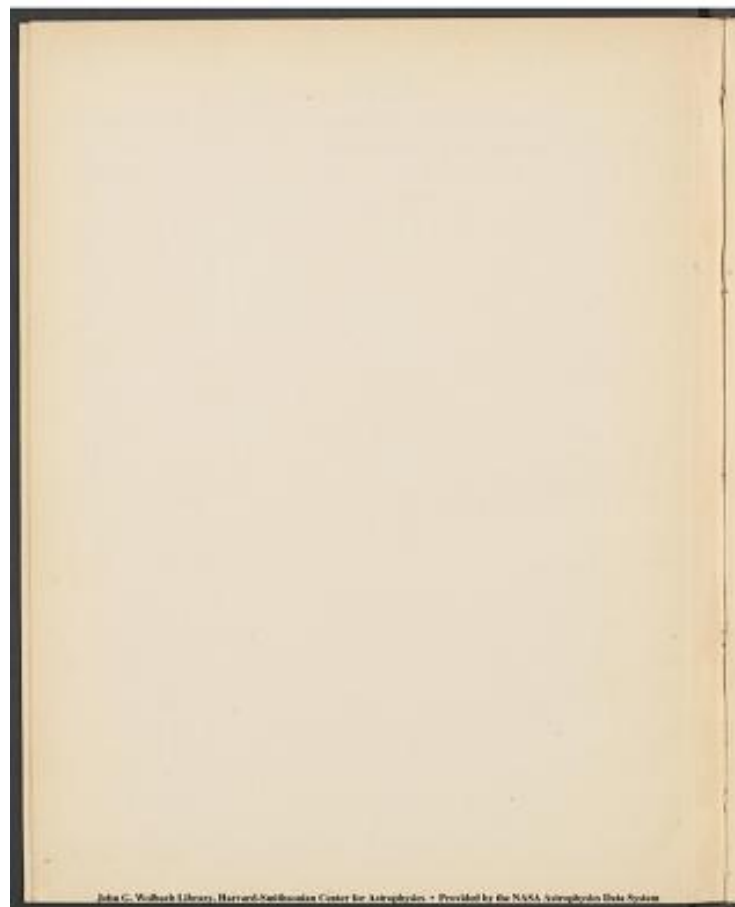
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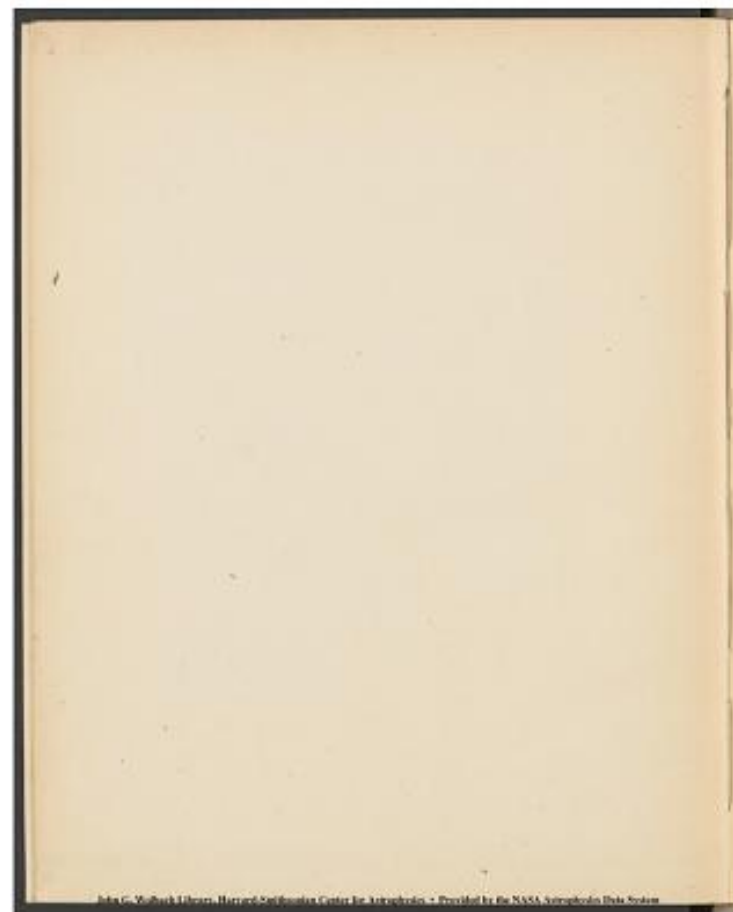
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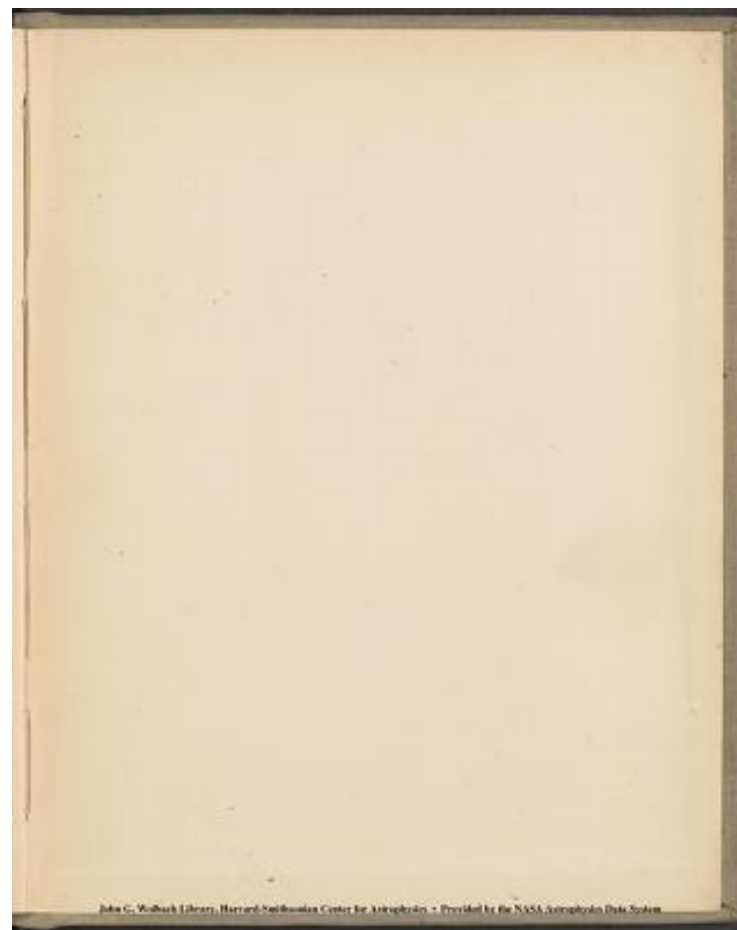
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