

KG
11366
v. 7/10

R 14

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9
20

a Ursa Majoris

B Scorpionis

r "

31

2

3

4

5

6

7

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9

40

1

2

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4

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8

9

50

Jupiter's Satellites 1-2, 1-3

1

2

1-4

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3

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6

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7

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2

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60

3

- 61 Jupiter's Satellites 3
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 4 " " and Stars
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 7
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 1
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 1
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 3
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 5
 6 " Satellite
 7
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 9
 90

91

2

3

4

5

6

7

8

9

100

Antares (90)

1

2

3

4

5

6

7

8

9

110

Mars and Saturn

1

2

3

4

5

6

7

8

119

120

Venus Jupiter

121

2

3

4

5

6

7

8

9

130

Zero Point of Phot. E.

1

2

3

4

Constant of Phot. E. by change of elements change note.

5

6

7

8

9

140

Constant of Phot. E. by Sky.

1

2

3

4

5

6

7

8

9

150

151

2

3

4

5

6

7

8

9

160

1

2

3

4

5

6

7

8

9

170

1

2

3

4

5

6

7

8

179

180

181

2

3

4

5

6

7

8

9

190

1

2

3

4

5

6

7

8

9

200

α Ursae Majoris

No. Obs. Ang. Long.

Aug 6th

4 P 4.57

8

10 4.37

6 5.65

8th

10 7.31

10 6.06

11th

10 6.37

10 7.53

10 u 12.14

10 7.81

12th

7 7.13

11 7.86

16th

10 8.39

22d

10 6.16

21

2 4.85

"

10 5.00

"

10 4.67

β Scorpiensis.

Aug 6th	4	P	18.7
			16.7
8			14.4
			13.5
12			13.04
19	10		19.35

r Leonianis

Minute Companions (Buenham)
S Andromedae

O Ceti

γ Arietis

\circ Ceti

β Persei

40 *Endani*

α *Lauti*

$\sigma^2 9$ Orionis

β Orionis

T. Cronis

8 Crinis

11 Menoculatus

Lilium

Proyer

...

o *Cromer*

a Lyrae

γ Lyrae

1877phae

β Aquilae

1877phae

γ Cygni

β Delphini

ϵ Egni

γ Egnili

β Egemlei

image 1

2 Pegasi

image 1

β Aquarii

μ Cygni.

γ Scutellari

Jupiter's Satellites 1-2 $2 = 1.00$

<i>Aug Set</i>	8	43.8
<i>Sept 23d.</i>	10	45.48
<i>29th</i>	10	49.20
<i>30th</i>	10	43.09

1-3

<i>Aug 6th</i>	6	P	30.2
"			24.3
8			40.7
11	8		35.24
	10		40.17
<i>Sept 25th</i>	10		38.39
			?

1-4

Sept 24	10	39.75
Oct-18	10	33.66
" "	10	34.38

2-3

Aug 4th	8	33.2
	4	33.35
Oct	8	33.3
	4	33.8
Oct	8	43.3
Oct- Oct	10	37.02
" "	10	33.21

2-4

Aug 12	11	P	32.04
19			40.19
Sept 25	5		29.18
"	10		40.86 +
29	10		36.47
Oct 18	2	u	46.65

3-4

Aug 4	8	P	28.55
11	8		27.82
"	8		23.9
17	8		33.8
Sept 23	10		24.02
29	10		30.96

Jupiter Satellite (I)

Sept 24th 6	10	P	25.64	B	R.3
Oct-17th	5	"	3.752	I	5"
	5	"	3.654	"	"
23rd	5	"	3.736		
6 5	5	"	3.930		
35	5		3.770		

Jupiter's Latitudes (2)

Aug 27th

Date	Lat	Long	Mag	Phase	Notes
4	P	47.2	10.799	B	A
4	"	46.0	10.355	"	"
4	"	42.7	9.228	"	"
4	"	46.2	10.428	"	"

Sept. 26th 6

12 " 24.16 B R3

Oct 13th 6

5 P 10.140 I' 15"

"

5 U 6.768 " "

"

5 P 10.996 " "

17th 6 35

5 " 4.374 " 5"

23

5 " 3.446 " "

6 8

5 U 3.754 " "

45

5 P 4.060 " "

Oct-13th 6

Jupiter Satellite 3

5 P 16.886 E. 15"

5 P 17.996 " "

5 P 6.574 " 5"

17th

5 P 4.696 " "

23

" 615

5 U 4.192

" 640

5 P 4.332

Oct 13th

"

17

23

5-45

6 28

6 30

Jupiter's Satellites 4

5 P

5 P

5 "

5 "

~~5~~ U

6 P

12.232 E 15"

9.720 " "

2.618 " 5"

2920 " "

2728 " "

2705 " "

Jupiter's Latitudes & Long.

Saturn's Satellites, Mimas.

9.5150^x
 9.4746
8.2198
 0.9218
 1.0500
 0.6608
 213²¹³ 0.6568
 0.8198
 0.5620
 0.8300
 0.8756
 0.9456

Appr. Anomaly from Sup. d	Long from Elong.	Elongation	Hours since El. - Long.	Corr.
114	+24	13 10.2 E	-22	+2.5
		12 17.8 W	+14.2	+18.0
			-1.8	+2.9
122	+32		+14.6	+19.3
126	+36	24 9.2 E	-1.4	+3.3
144 = 321	+51	7 9.8 W	-0.1	+4.6
322			-0.0	+4.4
148	+52		-3.8	+4.7
	+13	13 10.5 E	-0.5	+4.2
103	+46			
	+16		-0.2	+4.5
106	+49			
61	-29	17 16.2 E	-7.3	-2.6
68	-22		-6.7	-2.0
282	+12	22 11.3 SW	-3.6	+1.1
91	+1	19 13.4 E	-4.6	+0.1
94	+3		-4.4	+0.3

^x Angles taken to nearest tenth.

Latus's Lattis Enucleatus

Sept 13 - 8	10	P	34.87	5717	
8 25	10	S	33.14	5467	
24 7 50	10	P	7.43		
Oct 7 9 45	5	P	17.628	2.8 ⁸ 8	2.89
50	5	S	18.086	3.3 ⁴ 6	3.35
13 10 0	5	U	16.876	2.1 ³ 6	2.14
20	5	P	16.874	2.1 ³ 4	2.13
17 8 55	5	P	17.310	2.5 ⁷ 0	2.57
9 30	5	U	16.654	1.9 ¹ 4	1.91
22 7 40	3	P	17.3	2.60	2.60
Nov. 19 th 8.8	5	"	17.4 ^{14.67}	2.740	2.74
9.0	5	"	17.644	2.974	2.97

8.9066	Apt. unknownly from Supr. 8		106	+14	24	12.2 E.	-2.7	+2.0
8.8860			94	+4	11	14.6 E.	-4.2	+0.5
9.8918				+32	11	11.2 W.	-0.7	+4.0
9.8468			219	-51	23	21.0 W.	-11.1	-6.4
8.9800				-54	29	14.4 E.	-7.8	-2.1
8.8644			220	-50			-11.0	-6.3
							-4.4	-2.0
8.7644							-10.9	-6.2
8.8444			40	-50	24	19.6 E.	-9.0	-4.3
8.7490					25	18.3 W.	-9.4	-4.9
			231	-39	25	14.9 E.	-6.2	-1.5
1.2192			289	+19	1	10.1 W.	-2.3	+2.4
1.1888			291	+21			-2.1	+2.6
1.4032								
1.3768								
1.1504								
1.1932								
1.2968			301	+31			-0.8	+3.9
1.3006			302	+32			-0.7	+4.0
1.4370			304	+34			-0.4	+4.3
1.1596			68	-22	13	16.6 E.	-7.5	-2.8
1.2650			69	-21			-7.3	-2.6
0.5202			? 98	+188	16	12.5 W.	+18.8	+23.5
1.2170								
1.0526								
0.9442			284	+14	19	12.0 W.	-2.6	+2.1
0.6402			289	+19			-2.3	+2.4

Tally

Aug 27th	9 30	4	P	16.5	.2962	.252
		4	"	16.1	.2886	.245
Sept. 11th	10 25	10	"	62.05	.8833	
		2	"	60.25	.8682	
23d	9 55	10	"	17.96	.3084	
"	10 0	10	S	15.67	.2701	
		10	P	13.99		
24th	8 40	10	P	15.17		
		10	S	13.66		
25d	8 40	10	P			
		10	S			
Oct 1st	7 50	5	P	19.826	4.07	
		5	P	19.690	3.93	
	8 0	5	U	20.790	5.03	
		5	"	20.636	4.88	
		5	S	19.522	3.76	
		5	"	19.712	3.95	
	9 20	5	P	20.212	4.45	
	25	5	S	20.226	4.47	
	45	5	U	20.986	5.22	
13	9 08	5	P	18.536	3.80	8
	20	5	U	19.026	4.29	8
* 17	7 20	5	U	16.558	1.82	5"
	8 50	5	P	18.798	4.06	8
	9 25	5	U	18.098	3.36	8
Nov. 19th	9.4	5	"	17.726	3.07	14.67
"	9.7	5	S	16.764	2.09	"

* Time at this time, now in Longitude 914°
 * Following Month's Sup. comp. is taken as 0° and 20.000000

*App. Anomaly
from Supr. 8*

8.9466	54	-36	24	19.3 E	-11.2	-6.5
1.0906	262	-8	1	15.4 W	-6.1	-1.4
1.1028	263	-4			-6.0	-1.8
1.2490	265	-5			-5.7	-1.0
0.9066	84	-3	5	19.9 E	-5.2	-0.5
1.0344	89	-1			-4.9	-0.2
1.0906	89.5	-0.5			-4.8	-0.1
1.0500	90	0.0			-4.7	0.0
1.1932	43	-44	13	22.9 E	-13.0	-8.5
1.2850	44	-43			-12.6	-7.9
0.8130						
1.2020	210	-60	18	14 W	-15.7	-11.0
1.1732	136	+46	22	3.9 E	+3.7	+8.4
1.25 ⁸ 8			7	14.0 E	+7.7	
1.2106	85	-5			-5.7	-1.0
1.0474	88	-2			-5.0	-0.3
1.3084	* 193	+103	15	19.1 E	+14.0	+18.7
1.3660	193	+103			+14.0	+18.7

Dine

Sept. Oct. 8	7	10 P	17.34		
Oct. Oct. 9	20	5 P	19.268	3.51	3.51
	25	5 S	19.316	3.56	3.56
	45	" U	20.120	4.36	4.36
Oct. Oct. 8	40	4 P	17.578	2.848	2.84
	0	5 P	18.032	3.292	3.29
	5	5 S	18.248	3.518	3.51
	10	5 U	18.094	3.352	3.35
13th	9 55	5 U	18.692	3.952	3.95
"	10 20	5 P	19.132	4.39	4.39
"		5 R	17.292	2.562	2.55
"	17th 9 40	5 U	17.732	2.99	2.99
"	22nd 7 35	7 P	18.604	3.874	3.86
Nov 7th		5 P	19.000	4.270	4.26
	8 20	5 U	18.764	4.034	4.03
	9 03	5 S	18.076	3.346	3.34
16th	9.1x	5 P	19.180	4.67	4.51
"	9.1	5 U	19.490		4.82

x at this time longitude of Vethys, derived from Mather's Tables = 143°

74

2ly R ²	Ly. Ord.	S. Lyte	Aphelion from Sun	Edg.			
8.7490			325 +55 +40	26	21.6 W.	+12	+16.7
9.4838			46 -14 -30	11	16.8 E.	-9	-4.3
9.5040			316 +46 +31	22	23.6 W.	+9.2	+13.9
9.4006							
9.6974			317 +47 +32			+9.5	+14.2
9.0340			318 +48 +33			+9.9	+14.6
9.0640							
9.1730			33 -57 -42	25	5.8 E.	-21.8	-17.1
1.5208			236 -34 -50	2	0.3 W.	+15.0	-10.3
1.3944			236 -34 -49			-14.9	-10.2
1.5056			237 -33 -48			-14.6	-9.9
1.3768			112 +22 +4	13	7.2 E	+1.8	+6.5
1.5342			113 +23 +5			+2.3	+7.0
0.4994				17	19.5 E		
1.4712			70 -20 -36			-10.7	-6.0
1.3330			72 -18 -34			-10.2	-5.5
1.5960			152 +62 +46	17	19.5 E	+14.0	+18.7
1.3624							
1.6378			105 +15 -1	22	7.9 E	-0.3	+4.4
0.1374			330 +60 +44	29	17.4 W	+13.4	+18.1
0.0086							
0.2606			-34 53 -34 -52	1	23.6 E	-15.8	-11.1
0.5344			54 -36 -52			-15.6	-10.9

Shea

"

Aug 27 th	10	9 P	13.67	2432	207
Sep 11	8	10 P	33.50	.5519	3 rd cat.
23	8 50 R+D Sat	2 P	34.4	.5650	
		10 P	30.10	.5015	
	9 5	10 S	44.93	7063	
	9 30	10 P	19.22	.3292	
		10 S	19.89	.3402	
	24 8 0	10 P	22.74		
Oct 1	9 20	5 P	21.518	5.76	5.76
	25	5 S	20.744	4.98	4.98
	45	5 U	21.420	5.66	5.66
13 th	9 0	5 P	19.616	4.886	4.88
	30	5 U	20.610 19.026	5.880 4.296	5.88
17 th		5 U	17.242	2.512	5" 2.51
	8 50	5 P	20.184	5.454	5.44
17 th	9 20	5 U	19.386	4.656	4.64
18 th	9 30	1 P	21.02	6.29	6.28
"		5 P	19.544	4.814	4.80
22	7 35	5 P	20.330	6.600	6.59
Nov. 30 th	6.8	5 S		1.168	1.17
"	7.2	5 U		1.015	1.01
Dec 1 st	7.8	5 U		1.352	1.35
"	8.0	5 P		1.850	1.85

9.6286

9.6876

9.5194

9.6676

9.3602

2.0588

1.8192

2.0748

1.7930

1.2506

2.0984

2.1438

1.8030

0.9938

1.1174

1.0074

0.3636

0.4640

0.8028

See A. N. ix. 49
for Anomaly
[By Bessel's Tables.]

Hours since Sept 24. 7.25.	Long. from Super- merid. Conjunction
d h	264
1.6	266

50.8	311
13 ^d 2.6	200

23 ^d 1.4	65
	47
23 2.5	66
	47
24 23.0	175
	146
56 2.5	91
66 2.5	91
56 2.6	91
66 23.5	336
67 23.5	359
126 1.0	230

See note
Bottom of P. 103
R. 26

Litan
Hayfution

Sept 24th 7h 25m	10	P	40.72		
9 0	10	P	33.97		
	10	S	35.08		
26th	10	P	43.03		
9 30	10	S	28.59		
Oct 7th 10 0	5	P	25.486 10.756 22.864	10.756	10.75
	5	S	8.134	8.134	8.12
13th	5	P	25.646	10.926	10.91
	5	U	22.622	7.892	7.88
17th	5	U	18.962	4.232	5" 4.22
" 9 7	5	P	25.966	11.236	11.23
" 9 52	5		26.570	11.840	11.83
22nd 6 20	5	P	22.698	7.968	7.97
Nov. 19th 9.9	5	U	17.810	14.67	3.14
" 9.9	5	S	18.294		3.62
" 10.0	5	P	17.860		3.19
" 30th 6.9	5	S		1.522	1.52
Dec 1st 6.9	5	S		2.412	2.41
Jan 28th 8.4	5	P		2.576	2.52

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Pro. Rucut
= Inf. Cym.
Sept. 29 at 5.4

Hours since
Risaturnum from Per. H.
No. of degrees
from Per. H.
Long. sup.
(by H. H. H.)
213

~~0.4458~~ .2670
~~1.0856~~ .7924
~~0.6402~~ .0748
~~0.8028~~ .3636
~~1.0076~~ .8808
~~0.4148~~ .2144
0.6320 .6320
0.4136
0.0086
0.3694
0.2734
0.6568
0.6730
0.0510
0.2542
0.3464
0.4710

+51.2 +36 =214
+51.5 +36 =216
+51.7 +36 =218
+51.9 +34 =217
57

+52.8 +34 =217

+146.3 +103 =283

+148.0 +104 =284

+148.1 +104 =284 282

+234.8 +166 =344

+235.0 +166 =344

-83.9 -59 =171 119
-84.4 -60 =180

Oct. 20 at 12.9

Nov. 10 at 20.4

-84.9
+204.5
-84.4 +144 =324 322

Hepheria
gafel

Oct-1st 8h 35m

54.

9 5

9 20

10 15

54

7 40

9 25

30

30 7 45

53

Nov. 7

8 30

8

19th 8.9

5 P 17.122

5 S 18.254

5 U 16.856

1 P 17.28

1 U 17.95

6 P 17.037

2 S 17.83

5 P 16.354

5 U 15.748

5 P 16.268

5 S 16.106

5 P 16.866

5 U 16.914

5 P 15.928

5 U 16.080

5 S 16.228

5 P 16.386

12.36

22.49

12.09

12.52

22.19

12.28

20.7

20.7

16.1

1.01

1.53

1.37

2.13

2.17

1.19

1.35

1.49

1.72

1.52

	App. Annually
9.0640	200
9.0030	
9.6286	259
8.8538	260
8.9066	260
1.4550	
1.1844	319
1.2340	319
1.2790	
1.3498	
0.8400	4
0.8432	4
1.1696	9
0.8692	
1.0264	24
0.7958	—
0.9248	99
1.2360	99
0.6444	
0.8944	140
0.9426	99 154 140
0.3580	154
0.5712	154
0.5008	
0.6608	154

Saturn's Satellites *Hephæstus* *Jupiter*
~~confused with the~~

Sept. 11 th	7 45	10	P	19.90	34.04	3 rd
		10		18.50		
24 th	7 25	10		40.75		
	9 15	10	P	15.46		
	25	10	S	16.57		
Oct-5 th		5	P	20.084	5.350	
				16.354	16.29	5.34
Oct-7 th	10 15	5	P	18.648	3.918	3.91
"	" 20	5	S	18.876	4.146	4.14
13 th		5	P	19.094	4.364	4.36
"		5	U	19.472	4.742	4.73
17	8 50	5	P	17.368	2.638	2.63
"	9 45	5	U	17.378	2.648	2.64
18	9 30	1	P	18.54	3.81	3.80
14	"	5	P	17.462	2.732	2.72
22 nd	6 24	5	P	18.000	3.270	3.26
Nov 7 th		5	P	17.242	2.522	2.50
	8	5	U	17.636	2.906	2.90
	8 41	5	S	18.892	4.162	4.15
16 th		5	P	16.768	1.967	2.10
"	9 15	5	U	17.472		2.80
18 th	8 50	5	P	17.634		2.96
19 th	9 13	5	U	16.184		1.57
	9 32	5	S	16.598		1.93
20 th		5	S	16.448		1.78
	6 30	5	P	16.806		2.14

~~92738~~
~~92322~~
~~91242~~
~~93112~~
~~92774~~
~~93544~~
~~93268~~

22eq Sm star
should be 22eq
tn.

		Saturn's Satellites		enter the		
Sept 2d	1	Titan	Rhea	10	P	29.09 .5563
23d	8 10	Titan	Rhea Dione	10	P	24.36 .4125
	20	"	"	10	S	21.36 .3643
29	27 50	"	Rhea	10	P	26.86 .5064
Oct 5th		"	Dione	10	P	25.85
Oct 5th	10 5	"	"	10	U	28.49
Oct 5th	10 20	"	"	8	S	27.43
	20	"	"			

0.3974

1.1504

0.4608

0.2606

0.2212

0.0668

92 +2

93 +3

36 +126

80 -10

86 -4

90 0

20 10.7 E -4.5 +0.2

-4.3 +0.4

30 ~~19.7~~ +11.1 +15.8

22 13.1 E -6.0 -1.3

-5.2 -0.5

4.7 0.0

Repetition why concluded.

2	Mar 20.6	6.2	5 S	16,146	¹⁸⁷ S	1.58	1.58
4	"	6.4	5 P	18,432	P	76	3.76
8	Dec. 1st	7.0	5 S	16		1.696	1.70
3	" 22d	7.1	5 P			1.350	1.35
5	"	7.9	5 "			1.288	1.29
0	"	8.4	5 S			1.076	1.08

	Apparent Thomson Long. from Superior δ 154°
0.3580	
0.5712	154
0.5008	
0.3406	
0.6608	154
0.2076	203
0.0256	203
0.0504	208
0.1062	208
0.1290	208
0.2606	214
0.3168	303
0.1938	303
0.2542	303
0.2734	304
0.1584	304
0.2008	330
9.9370	316 = 14°
9.7842	316 = 14°
9.46 ⁴ 28	416 = 56°
9.7266	416 = 56°

Neptunian Satellite Jupiter

Nov. 19 th	9.2	S U	16.184	1.51
" "	9.6	S S	16.598	1.93
" 20 th		S S	16.446	1.78
" "		S S	16.146	1.48
" "	6.5	S P	16.806	2.14
" 30 th	6.6	S S	1.271	1.27
" "	6.7	S U	1.030	1.03
Dec 1 st	6.8	S S	1.038	1.06
" "	7.5	S U	1.130	1.13
" "	7.9	S P	1.158	1.16
" 16 th	9.0	S S	1.35	1.35
" 22 nd	7.8	S P	1.444	1.44
" "	7.9	S "	1.248	1.25
" "	8.3	S S	1.336	1.34
" 23 rd	6.2	S P	1.360	1.37
" "	6.3	S S	1.198	1.20
" 28 th	8.2	S P	1.264	1.26
Jan. 5 th	6.7	S "	.926	.93
" "	6.8	S S	.784	.78
Jan 16 th	6.2	S S	.542	.54
" "	6.4	S P	.730	.73

Saturn's Satellites

Mon. Evol. Lib. Dis. Rh. Lit. Hph. Jph

Aug 27thSept. 2nd.13th

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Oct- 1

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Obser. Uranus

	St.	Id.					Elong. cm. p.	
1		9.9	Regulus	5	P	.554	S	305h + 5h
2	"	10.0	Uranus	5	"	3.46	"	"
3	"	9.2	Regulus	5	"	.54	"	+ 28
4	"	9.2	Uranus	5	"	3.33	"	"
5	"	9.5	Regulus	5	U	.43	"	+ 29
6	"	9.6	Uranus	5	"	2.37	"	"
7	"	9.9	Regulus	5	S	.44	"	"
8	"	10.2	Uranus	5	"	2.45	"	"
9	Man. St.	9.3	"	5	P	2.64	N	8 21 - 12
10	"	9.4	α Leonis	5	"	.39	"	"
11	"	9.6	Uranus	5	U	2.58	"	- 11
12	"	9.6	α Leonis	5	"	.42	"	"
13	"	9.0	"	5	P	.47	"	"
14	"	9.1	Uranus	5	"	2.68	"	"
15	"	8.6	"	5	"	3.51	"	"
16	"	8.9	"	5	U	3.56	"	"

Tetania, Uranus

Feb. 3d	9.7	Regulus	5 P	.47	N
"	9.8	Uranus	5 "	3.03	"
" 7th	9.6	Regulus	5 "	.64	S
"	9.6	Uranus	5 "	3.80	"
"	9.7	"	5 U	3.30	"
"	9.8	Regulus	5 "	.52	"
"	10.0	"	5 S	.53	"
"	10.1	Uranus	5 "	3.00	"
March 1st	9.5	α Leonis	5 U	.43	N
"	9.7	"	5 S	.40	"
"	9.7	"	5 P	.51	"
"	9.9	Uranus	5 P	2.76	"
"	10.0	"	5 S	2.00 1.77	"
"	10.2	"	5 U	2.66	"
" 5th	8.0	"	5 P	3.34	S
"	8.0	α Leonis	5 "	.64	"
"	8.1	"	6 U	.45	"
"	8.5	Uranus	5 "	2.68	"
" 22d	9.1	"	5 P	3.39	"
"	9.3	"	5 U	2.16	"
"	9.4	α Leonis	5 P	.54	"
"	9.5	"	5 U	.45	"

Antiope (90)

			No	Obs	Phot	Alg
Sept 6	10.10	Mar.	10	P	13.28	.2297
	15	"	10	S	17.66	.3035
	25	"	10	P	10.67	.1857
		"	12	S	15.56	.2883
Sept 9	25	Satur	10	P	30.74	.5111
	30	"	3	R	42.1	.6704
	35	"	10	R	38.05	.6167
	55	"	10	S	35.64	.5827
10	20	Mar	10	P	10.04	.1743
	25	"	10	S	7.61	.1325
Oct 30		Satur.	5	P	16.864	.2134
		Mar	5	"	15.804	.873
7	27	Satur	5	U	15.654	.924
	35	Satur	5	"	16.890	.2160

Vista ④

Oct 7th	8 55	Satur.	5 P	6.516	Alt. Ang.
"	9 0	"	5 S	7.362	
"	10	"	5 P	6.898	
"	15	"	5 S	5.470	
23d	7 35	"	5 P	6.784	
"	"	"	5 U	7.648	
"	7 50	Phars.	5 U	2.830	
"	8 0	"	5 P	3.196	
Nov. 18th	9 5	"	5 P		
"	12	"	5 S		
"	17	"	5 P		
"	20	Libra	5 P		
"	27	"	5 S		

Brunhild (123)

Nov 7th	10	12	β Aintis	5 P	4.408
		17	"	5 P	5.040
		22	"	5 U	7.932

Eva.

Feb. 7 th	10.8	β Aurigae	5 U	.50
" "	10.7	" "	" P	.62
" "	11.0	" "	" U	.60
" "	11.1	" "	" P	.64

Mass and Latent

2 W turn. ang.	2.75	log Albedo	Albedo	an. co. 2 log turn ang.	diff. in magnitudes
8.424	1.970	0.694	4.98	1.273	3.18
8.699	"	0.669	4.64	1.301	3.25
8.434	"	0.704	5.06	1.266	3.16
8.424	"	0.694	4.98	1.243	3.18
8.420	1.997	0.717	4.90	5.21 1.280	3.20
8.593	1.999	0.592	3.66	3.94 1.404	3.52
8.632	"	0.631	4.00	4.28 1.368	3.42
8.609	2.000	0.609	3.99	4.06 1.391	3.48
8.524	"	0.527	3.14	3.37 1.443	3.68
8.625	"	0.625	3.94	4.22 1.345	3.44
8.444	"	0.774	5.55	5.89 1.226	3.06
8.440	1.888	0.739	5.13	5.48 1.260	3.15
8.420	"	0.719	4.90	5.24 1.280	3.20
8.426	"	0.725	4.94	5.31 1.244	3.18
8.850	1.881	0.431	5.38	1.150 1.239	2.84
8.461	"	0.642	4.38	1.239 1.145	3.10
8.825	1.806	0.631	4.28	1.175 1.244	2.94
8.454	"	0.560	3.63	1.246	3.11
8.954	"	0.760	5.45	1.046	2.61
8.434	1.850	0.584	3.84	1.266	3.16
8.943	"	0.493	6.21	1.054	2.64
8.444	"	0.624	4.21	1.226	3.06
8.938	"	0.488	6.14	1.062	2.65
8.921	1.761	0.682	4.81	1.049	2.70
8.850	"	0.611	4.08	1.150	2.84
8.916	1.733	0.648	4.45	1.085	2.71
8.494	"	0.524	3.34	1.206	3.01

Mass & Latitude

	Aug.	No.	Obs.	No.
1877 Aug 18 th	13.04	10	P	C
"	12.65	"	"	
"	13.13	"	U	
"	13.03	"	P	
27 th	12.9	2	"	
28 th 9.20 ^m	11.20	10	"	
"	11.75	"	"	
30 th	11.40	"	"	
"	10.40	"	"	
" 12.12	11.59	"	"	
"	13.69	"	"	
Sept 30 9 50	13.17	"	"	
"	12.87	"	"	
"	13.05	"	"	
26 th 10 35	14.88	"	"	
" 40	13.51	"	"	
Oct. 5 th 8 25	14.51	"	"	
" " 30	13.42	10	S	
" " 45	14.68	"	U	
Sept 30 th 9 50	13.09	"	P	
" " 55	16.46	"	S	
" 10 5	13.74	"	P	
" " 10	16.45	"	S	
Oct. 10 th 11 15	16.15	"	P	C
" " 25	14.93	"	P	"
" 13 " 35	16.03	"	"	
" 10 30	13.96	"	"	

990242
988
989 496
~ 4.2

8.994	1.694	0.691	4.91	1.003	2.51
8.960		0.654	4.51	1.040	2.60
9.003		0.694	4.98	0.994	2.49
8.919	1.684	0.593	3.92	1.091	2.43
8.868		0.552	3.56	1.132	2.83
9.455	1.644	1.099	12.56	0.545	1.36
9.486		1.430	26.91	0.214	0.53
8.946	1.633	0.609	4.06	1.024	2.56
9.103		0.736 0.423	5.44	0.894	2.24
9.098		0.431	5.38	0.902	2.25
9.098	1.592	0.690	4.90	0.902	2.25
9.074		0.666	4.63	0.926	2.31
9.018		0.610	4.04	0.982	2.45
9.039	1.581	0.620	4.14	0.961	2.40
9.150		0.431	5.38	0.850	2.12
9.150	1.571	0.421	5.26	0.850	2.12
9.049	1.561	0.610	4.04	0.951	2.38
8.984		0.548	3.53	0.013	2.53
9.195		0.456	5.40	0.805	2.01
8.464	1.530	0.294	1.98	1.233	3.08
8.825	1.510	0.335	2.16	1.145	2.94
9.003	1.490	0.493	3.11	0.994	2.49
9.098		0.588	3.84	0.902	2.25
9.114		0.604	4.05	0.883	2.21
9.103	1.480	0.583	3.83	0.894	2.24
9.213		0.693	4.93	0.784	1.94
9.136	1.462	0.598	3.96	0.864	2.16

			hr. 29 ²	Obs.	hr. Phot.
Oct 17 th	8 20	17.50	10	M ₆	B
Oct 18 th		16.82	9	M	"
"	9 40	17.65	10	P	"
18	9 40	15.92	10	U	"
"	10 45	15.20	10	P	"
22	9 20	28.10	10	P	C
"	9 23	37.96	10	U	"
23	8 12	17.09	10	P	E
"	9 30	19.63	10	U	"
"	9 45	19.52	10	P	C
27		19.52	10	P	C
"	9 42	19.04	7	S	"
"	10 20	17.86	10	P	"
28	9 45	18.29	10	"	"
"	10 5	20.65	10	S	"
29	7 15	20.62	10	U	"
30	5 50	18.49	10	P	"
"	6 10	17.26	10	U	"
"	8 53 ³	21.62	10	S	"
Mar 2		13.60	10	"	"
4	5 55	14.49	10	"	" E
6	5 45	17.59	10	"	"
"	8 53	19.48	10	P	"
"	9	19.93	10	"	"
7	8 30	19.63	10	"	"
"	9 8	21.99	10	U	"
9	6 10	20.30	10	P	"

9.392	1.399	0.491	6.18	0.608	1.52
9.445		0.444	22.08	0.655	1.64
9.426		0.825	6.68	0.544	1.43
9.301		0.400	5.01	0.699	1.45
9.325	1.382	0.404	5.09	0.645	1.69
9.466		0.848	4.05	0.534	1.33
9.369		0.451	5.64	0.631	1.58
9.440		0.822	6.64	0.560	1.40

Nov 16	9 05	26.44	528	10	S	C
"	8	25.23	10	10	S	C
"	15	27.30	10	10	P	
"	20	24.09	10	10	P	
18	6 31	24.69	8	8	S	
		28.45	8	8	S	
		25.83	8	8	P	
		27.67	8	8	P	
			600			

Log tan angle ²	log $\frac{L_{\text{star}}}{L_{\odot}}$	Log Albino.	Albino. Units = 1 J =	ancor. 2 w.p. tan. ang.	Diff. mag.	Diet on R 25, 166
9.334	0.787	0.224	1.33	0.663	1.66	13.5
9.301	791	0.092	1.24	0.699	1.45	12.7
9.434	791	0.228	1.69	0.563	1.41	
9.293	804	0.097	1.25	0.404	1.44	8.3
9.168	800	9.978	0.95	0.832	2.08	6.6
9.294	814	0.111	1.29	0.403	1.46	5.7
9.084	821	9.905	0.80	0.916	2.29	4.1
9.313	811	0.134	1.36	0.684	1.42	"
9.108	824	9.932	0.85	0.892	2.23	3.6
9.230		0.054	1.13	0.440	1.92	"
9.191		0.015	1.04	0.809	2.02	"
9.049		9.903	0.80	0.921	2.30	"
9.173		9.997	0.99	0.824	2.04	2"
9.244		0.101	1.26	0.423	1.81	"
9.155	831	9.986	0.97	0.845	2.11	2.7
9.164		9.995	0.99	0.836	2.09	"
9.150		9.981	0.96	0.850	2.12	"
9.214		0.048	1.12	0.483	1.96	"
9.230		0.061	1.15	0.440	1.92	"
347 9.245		0.176	1.50	0.653	1.63	"
9.333		0.164	1.46	0.664	1.64	"
9.243		0.074	1.19	0.454	1.89	"
9.093	846	9.941	0.84	0.904	2.24	4.5
9.150		9.998	0.99	0.850	2.12	"
9.132		9.980	0.95	0.868	2.14	"
9.044		9.892	0.78	0.956	2.39	"

Venus and Jupiter

ph. pub. making chart both Venus and Jupiter.
 V or J
 150 40
 310 220

Oct 27 th 5 50	10	25.03	P	C	V
" 28 5 45	10	24.07	P	C	J
" " 5 50	10	27.61	S	C	J
Nov. 1 st 5 25	10	23.87	P	C	J
" 3 rd 5 35	10	20.96	S	C	V
" 4 th 5 45	10	24.00	S	C	J
" 6 th 5 35	10	19.22	S	C	V
" " 6 15	10	24.36	U	C	J
" 7 th 5 25	10	19.72	P		V
" " 35	10	22.37	"		J
" " 42	10	21.51	S		J
" " 55	10	19.09	"		V
" 6 10	10	21.13	U		V
" " "	10	23.55	"		J
" 9 th 5 46	10	20.71	P		V
" " 51	"	20.89	"		J
" 6 10	"	20.65	"		J
" " 15	"	22.12	"		V
" " 21	"	22.41	S		V
" 20 th 38	"	25.25	"		J
" " "	"	24.90	U		J
" " 50	"	22.67	"		V
" 12 th "	"	19.45	S		V
" 6 3	"	20.59	"		J
" " 10	"	20.21	U		J
" " 15	"	18.40	"		V

9.114		9.965	0.92	0.883	2.21	4.5
9.155		0.003	1.01	0.845	2.11	"
8.832	.863	9.695	0.49	1.168	2.92	7.7
8.880		9.443	0.55	1.120	2.80	"

Signatures of Jupiter (continued)

Nov 13th 6 20

280 " 26

17th 6 10

260
10 19.90 P V

" 20.69 " J

" 14.61 " J

" 15.38 "

300

				Venus		Jupiter		Results	
Obs.	Obs.	No. obs.	No. nights	albedo	Dev.	P.E.	albedo	Dev.	P.E.
P	V	5		1.011					
S	V	5		.958					
U	V	3		.988					
P	J	6		1.037					
S	J	5		1.106					
U	J	4		1.095					
	V	13		.985					
	J	15		1.075					
all.		28		1.033					

+ 229		+ 159
122		+ 52
112		+ 42
104		+ 34
9		- 61
57 - 67		- 137
115		+ 45
90		+ 20
47		23
88		+ 48
38		- 32
	- 48	- 118
956	115	741
889	$m = 74$	62
γ 841	70	

$$.070 \pm .002 \pm$$

Zee Point of Abstemie F.

Oct 1st	5	15.768
3rd	5	14.735
"	1	14.734
8th	5	14.729
23d 5 10	5	14.767
26th 27	5	14.743
Nov. 1st	5	14.739
14th 22	5	14.745
24th 23 00	5	14.664
" 23 50	5	14.671
22d 3.8	5	14.666
" 3.9	5	14.726

Constant of M.H. E. by large through holes.

Oct 16 th		Saturn	R.3	P.5	7.674
13 9.6	"	"	"	u.s.	7.942
17	"	"	"	P "	7.834
" 10 20	"	"	"	u "	7.636
18		Mercur.	P "		8.383
" 8 35	"	"	u "		7.684
"		Saturn	"		8.274
Nov 7 th		Mercur.	P		7.698
" 6 45	"	"	R?	P	2.370
" 7 05	"	"	R3	u	8.538
" 7 15	"	"	"	<u>P</u>	<u>8.532</u>

Constant of Phot. Ex. by Sky.

	No.	Ang.	Obs.	Ap.
Oct 8th	5	17.712	P	15"
"	5	5.772	"	5
"	5	5.606	"	5
23d 5 10	5	6.000?	"	5
24d 22 5	5	5.630	P	5
35	5	6.938	U	5
50	5	5.740	P	5
25 2	5	5.788	P	5
2 10	5	7.134	U	5
2	5	3.784	P	3
2 25	5	4.086	U	3
Mar 7th 2 40	5	6.058	P	5
13th 4 45	5	5.864	"	5
	5	17.336	"	15
14th 22 10	5	6.072	"	5
	5	5.762	"	"
20	5	7.056	U	"
30	5	6.844	P	"
23 5	5	6.342	S	"
8	5	5.976	P	"
19th 4 47	5	5.750	"	"
51	5	16.966	"	15
20th 4 47	5	18.034	"	"

Constant of Phot G & Sky.

Nov. 30th 4.9

5 2143 P 5"

Dec. 1st 5.0

5 2176 " "

Dec 1st 4.0

5 1745 " "

3rd 4.8

5 1905 " "

" 4.9

5 2138 S "

Constant of Phot-I by Lhy. P. chs

June 3d.	June 5th	June 7th
0 1.070	1.195	1.050
" 1.153	1.066	1.083
" 1.122	1.164	1.122
" 1.110	1.171	1.124
" 1.081	1.139	1.103
1 0.906	0.994	0.863
2 0.869	0.952	0.926
3 0.930	1.014	0.855
4 0.906	0.942	0.864
5 0.889	0.946	0.889
6 0.944	0.940	0.905
7 0.912	0.943	0.895
8 0.914	0.964	0.935
9 0.949	0.931	0.918
10 0.920	1.032	0.886
11 0.936	0.901	0.911
12 0.838	0.931	0.910
13 0.934	0.965	0.906
14 0.935	0.935	0.906
15 0.946	0.958	0.892
16 0.981	0.904	0.881
17 0.953	0.972	0.894
18 0.955	0.941	0.904
19 0.940	0.944	0.896
20 0.944	1.014	0.914

21	0.907	0.946	0.899
22	0.955	0.943	0.922
23	0.885	0.962	0.845
24	0.960	0.994	0.957
25	0.918	0.899	0.859
26	0.968	0.958	0.899
27	1.008	0.949	0.886
28	0.958	0.916	0.948
29	0.988	0.944	0.933
30	1.006	0.984	0.948
35	0.971	0.999	0.924
40	0.994	0.980	0.906
45	0.982	1.004	0.936
50	1.010	0.983	0.925

0

3

6

13

18

23

28

40

Constant of Phot ^{by SKy} I. S. obs.

Constant of Phot. I by sky. U. obs.

0	June 5th 1.195
"	1.166
"	1.164
"	1.141
"	1.139
1	0.994
2	0.952
3	1.014
4	0.942
5	0.946
6	0.940
7	0.943
8	0.964
9	0.931
10	1.032
11	0.901
12	0.931
13	0.965
14	0.935
15	0.958
16	0.904
17	0.942
18	0.941
19	0.944
20	1.014

✱

21	0.974
22	0.963
23	0.962
24	0.994
25	0.899
26	0.958
27	0.979
28	0.916
29	0.944
30	0.984
35	0.999
40	0.980
45	1.004
50	0.983

Table XXIV cont. Reading.

Constant by Sky Photos

	0.1	.2	.3	.4	.5
.3d	2.71	2.48	2.54	2.36	2.21
7d	2.58	2.65	2.33	2.25	2.21
13d	2.77	2.72	2.62	2.47	2.43
21d	2.82	2.58	2.63	2.55	2.45
	2.79	2.77	2.77	2.50	2.50
	367 2.734	320 2.640	289 2.578	213 2.426	180 2.360
1.1					
1.1		2.2	2.3	2.4	2.5
1.77		1.57	1.61	1.54	1.49
1.72		1.64	1.56	1.49	1.40
1.71		1.70	1.69	1.55	1.38
1.85		1.79	1.69	1.63	1.58
1.87		1.77	1.67	1.55	1.49
1.82 39.4		341 1.682	322 1.644	276 1.552	234 1.468
1.484 1.788					
2.1		2.2	2.3	2.4	2.5
1.08		1.09	.96	1.00	.91
1.07		1.05	.95	.99	.85
1.04		1.07	.94	.91	.88
1.17		1.11	1.06	.96	.93
1.22		1.14	1.02	.99	.96
.58		.46	.493	.485	.453
1.116		1.092	0.986	0.970	0.906
3.5		4.0	4.5	5.0	
.61		.50	.39	.32	
.58		.45	.37	.29	
.55		.39	.35	.25	
.64		.50	.39	.32	
.65		.50	.40	.32	
302 0.6016 X		234 0.468	190 0.380	150 0.340	

6	7	8	9	10
2.25	2.07	2.18	1.97	1.82
2.15	2.03	2.03	1.90	1.75
2.33	2.18	1.97	1.95	1.77
2.28	2.23	2.09	1.97	1.88
2.33	2.03	2.08	2.02	1.91
134 2.268	.54 2.108	35 2.070	481 1.962	413 1.826
1.6	1.7	1.8	1.9	2.0
1.48	1.37	1.31	1.23	1.18
1.32	1.28	1.24	1.17	1.14
1.32	1.27	1.26	1.18	1.11
1.57	1.42	1.29	1.24	1.22
1.46	1.37	1.39	1.22	1.26
209 1.418	171 1.342	149 1.298	114 1.238	71 1.182
2.6	2.7	2.8	2.9	3.0
.92	.92	.83	.82	.80
.85	.80	.82	.77	.74
.84	.81	.73	.77	.71
.92	.91	.85	.87	.81
.88	.97	.85	.84	.77
141 0.882	141 0.882	408 0.816	407 0.814	383 0.766
C 0.0	C 0.0	C 0.0	C 0.0	C 0.0
3.43	3.35	3.58	3.40	4.07
3.77	3.48	3.64	3.60	3.46
3.64	3.64	3.80	3.69	3.75
3.59	3.66	3.67	3.70	3.71
3.47	3.58	3.84	3.75	3.86
3.580	3.538	3.706	3.628	3.850

Companions Stars for Xanthi

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Scho

0.1	0.2	0.3	0.4	0.5
287	2.40	2.80	2.77	2.64
324	3.08	2.70	2.79	2.59
2.69	3.19	2.58	2.26	2.19
3.45	2.92	2.72	2.69	2.41
2.93	2.86	2.67	2.61	2.58
1518 3.036	1445 2.890	347 2.694	312 2.624	241 2.482
1.1	1.2	1.3	1.4	1.5
191	1.80	1.61	1.75	1.45
228	1.98	1.67	1.57	1.61
1.79	1.98	1.60	1.46	1.58
1.95	1.94	1.83	1.72	1.61
1.98	1.98	1.84	1.50	1.57
491 1.982	468 1.936	355 1.710	300 1.600	282 1.564
2.1	2.2	2.3	2.4	2.5
1.26	1.03	1.10	.93	.92
1.28	1.19	1.14	1.01	1.05
1.21	1.25	1.09	1.09	1.11
1.18	1.24	1.18	1.06	1.02
1.22	1.24	1.08	1.04	.95
115 1.230	95 1.190	59 1.118	13 1.026	50.5 1.010
3.5	4.0	4.5	5.0	
.65	.46	.36	.28	
.59	.47	.41	.32	
.72	.52	.44	.37	
.65	.50	.41	.34	
.64	.47	.38	.28	
325 0.650	2412 0.484	200 0.400	159 0.318	

0.6	0.7	0.8	0.9	1.0
2.57	2.59	2.09	2.22	2.14
2.43	2.38	2.31	2.22	2.04
2.27	2.15	2.19	2.01	1.71
2.44	2.46	2.11	2.10	2.14
2.22	2.39	2.31	2.34	1.98
193	194	101	89	1001
2.386	2.394	2.202	2.178	2.002
1.6	1.7	1.8	1.9	2.0
1.46	1.65	1.38	1.29	1.13
1.65	1.57	1.5-1	1.40	1.36
1.37	1.31	1.31	1.20	1.19
1.60	1.53	1.41	1.44	1.28
1.42	1.43	1.38	1.34	1.16
250	249	199	167	112
1.500	1.498	1.398	1.334	1.224
2.6	2.7	2.8	2.9	3.0
.86	.97	.89	.80	.88
.91	.83	.92	.85	.81
.94	.79	.84	.76	.70
1.05	1.01	.91	.85	0.86 x
.91	.98	.85	.85	.74
467	458	441	411	399
0.934	0.916	0.882	0.822	0.798
Jan 15th	22d.	30th	July 6th	9th
0.0	0.0	0.0	0.0	0.0
3.86	4.02	3.89	3.62	3.49
4.05	3.60	3.87	3.81	3.80
3.88	3.85	3.61	3.87	3.82
5.31	3.83	3.86	3.88	4.27
3.81	3.97	3.76	4.11	3.84
2091	4217	399	429	422
4.182	3.854	3.798	3.858	3.844

U. obs.

0.1	0.2	0.3	0.4	0.5
3.00	2.73	2.80	2.46	2.36
2.83	2.98	2.68	2.75	2.45
2.81	3.05	2.65	2.53	2.52
3.29	2.97	2.59	2.62	2.52
3.08	2.86	2.58	2.62	2.44
1501	1459	330	298	229
3.002	2.918	2.660	2.596	2.458
1.1	1.2	1.3	1.4	1.5
1.70	1.68	1.67	1.54	1.51
1.87	1.70	1.76	1.54	1.58
2.00	1.72	1.74	1.65	1.68
1.99	1.92	1.65	1.63	1.62
1.89	1.88	1.70	1.58	1.57
945	390	352	294	296
1.890	1.780	1.704	1.588	1.592
2.1	2.2	2.3	2.4	2.5
1.17	1.10	1.05	1.04	.89
1.25	1.16	1.03	1.13	.95
1.22	1.16	1.03	1.00	1.02
1.28	1.14	1.03	.99	.95
1.20	1.13	1.07	.94	1.03
112	19	21	570	484
1.224	1.138	1.042	1.020	.968
3.5	4.0	4.5	5.0	
.63	.49	.40	.31	
.66	.44	.36	.34	
.62	.54	.40	.32	
.63	.52	.40	.34	
.65	.42	.43	.33	
19	241	199	14	
0.638	0.482	0.398	0.328	

0.6	0.7	0.8	0.9	1.0
2.24	2.22	2.10	1.93	2.07
2.29	2.34	2.15	2.16	2.02
2.38	2.22	2.17	2.06	1.94
2.40	2.24	2.26	2.15	2.01
2.40	2.38	2.03	2.10	1.88
171	140	71	40	992
2342	2280	2142	2080	1984
1.6	1.7	1.8	1.9	2.0
1.36	1.40	1.29	1.28	1.28
1.50	1.40	1.20	1.36	1.36
1.45	1.44	1.28	1.25	1.30
1.38	1.57	1.40	1.35	1.30
1.57	1.43	1.32	1.37	1.27
228	224	149	161	151
1.456	1.448	1.298	1.322	1.302
2.6	2.7	2.8	2.9	3.0
91	89	79	78	78
95	98	87	88	87
93	90	84	88	83
96	95	85	78	78
92	95	89	86	78
17	468	214	418	404
0.934	0.936	0.848	0.836	0.808
5th	13th	20th	21th	24th
0.0	0.0	0.0	0.0	0.0
396	383	418	415	410
3.41	3.78	4.00	4.22	3.76
3.82	3.73	3.77	3.91	4.08
3.85	3.49	4.28	4.08	4.34
3.71	4.11	4.00	3.96	3.96
375	394	23	203	2024
3.750	3.788	4.046	4.064	4.048

