

KG
11365
258

M.10

*Tables.
For apportioning Instrumental
corrections.*

Sold by T. Groom & Co., Stationers, India Building, 82 State St., Boston.

KG-11365.258



KG 11365.258



Transit circle - Reduction of Level Errors to time.

Length of bubble =

No of Div.	80	90	100	110	120	130	140	150	160	170	180	190
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
.25	.07	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
.50	.03	.03	.03	.03	.03	.03	.04	.04	.04	.04	.04	.04
.75	.04	.04	.05	.05	.05	.05	.05	.06	.06	.06	.06	.06
1.00	.06	.06	.06	.06	.07	.07	.07	.08	.08	.08	.08	.08
.25	.07	.07	.08	.08	.08	.09	.09	.09	.10	.10	.10	.11
.50	.09	.09	.09	.10	.10	.10	.11	.11	.11	.11	.12	.13
.75	.10	.10	.11	.11	.12	.12	.13	.13	.13	.14	.14	.15
2.00	.11	.12	.12	.13	.13	.14	.14	.15	.15	.16	.16	.17
.25	.13	.13	.14	.14	.15	.16	.16	.17	.17	.18	.18	.19
.50	.14	.15	.15	.16	.17	.17	.18	.19	.19	.20	.20	.21
.75	.16	.16	.17	.18	.18	.19	.20	.20	.21	.22	.22	.23
3.00	.17	.18	.19	.19	.20	.21	.22	.22	.23	.24	.25	.25
.25	.18	.19	.20	.21	.22	.22	.23	.24	.25	.26	.27	.27
.50	.20	.21	.22	.22	.23	.24	.25	.26	.27	.28	.29	.29
.75	.21	.22	.23	.24	.25	.26	.27	.28	.29	.30	.31	.32
4.00	.23	.24	.25	.26	.27	.28	.29	.30	.31	.32	.33	.34
.25	.24	.25	.26	.27	.28	.29	.30	.32	.33	.33	.34	.36
.50	.26	.27	.28	.29	.30	.31	.32	.33	.33	.36	.37	.38
.75	.27	.28	.29	.30	.32	.33	.34	.35	.36	.38	.39	.40
5.00	0.28	.30	.31	.32	.33	.35	.36	.37	.38	.40	.41	.42

$$\text{One division} = 1.00 + 0.0057(b - 120) . -$$

In June 29th 1853.

$$\text{One division} = 0.87 \quad b = 75 \quad \text{Exp. them about } 84^{\circ} .$$

Reduction of parts of a Revolution of the Micrometer
of the Transit Circle to seconds of time.

$r = 2.285$

0.01	0.023	0.25	0.571	0.50	1.142	0.75	1.714		
.02	.046	.26	.584	.51	.165	.76	.737		
.03	.069	.27	.617	.52	.188	.77	.759		
.04	.091	.28	.640	.53	.211	.78	.782		
.05	.114	.29	.663	.54	.234	.79	.815		
.06	.137	.30	.686	.55	.257	.80	.828		
.07	.160	.31	.708	.56	1.280	.81	.857	0.001	0.002
.08	.183	.32	.731	.57	.302	.82	1.874	.002	.005
.09	0.206	.33	.754	.58	.325	.83	.897	.003	.007
.10	.229	.34	.776	.59	.348	.84	.919	.004	.009
.11	.257	0.35	0.800	.60	.371	.85	.942	.005	.011
.12	.274	.36	.823	.61	.394	.86	.965	.006	.014
.13	.297	.37	.845	.62	1.417	.87	1.988	.007	.016
.14	.320	.38	.868	.63	.440	.88	2.071	.008	.018
.15	.343	.39	.891	.64	.462	.89	0.34	0.009	0.021
.16	.366	.40	.914	.64	.485	.90	.056		
.17	0.388	.41	.937	.66	.508	.91	.079		
.18	.411	.42	.960	.67	.531	.92	.102		
.19	.434	0.43	0.983	.68	1.534	.93	.125		
.20	.457	.44	1.005	.69	.577	.94	.148		
.21	.480	.45	.028	.70	.600	.95	.171		
.22	.503	.46	.057	.71	.622	.96	.194		
.23	.525	.47	.075	.72	.645	.97	.216		
.24	.548	.48	.098	.73	.668	.98	.239		
0.25	0.571	0.49	1.121	0.74	1.691	0.99	2.262		

Tables of values of the *Hyminth*, *Collimation*, and *Level Errors*.
 Latitude - $42^{\circ}23'$

	$00^{\circ}00'$			$00^{\circ}05'$			$00^{\circ}10'$			$00^{\circ}15'$			$00^{\circ}20'$			$00^{\circ}25'$			$00^{\circ}30'$			$00^{\circ}35'$			$00^{\circ}40'$			$00^{\circ}45'$			$00^{\circ}50'$		
	α Andromeda			γ Pegasi			α Capricorn			β Ceti			α Urs. Min.			θ Ceti			ζ Ceti			ζ Ceti			ζ Ceti			ζ Ceti			ζ Ceti		
ϕ hrs	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.
1.00	.28	1.14	1.10	.49	1.03	.91	.41	1.78	1.73	.93	1.05	.57	27.85	38.63	26.77	.79	1.01	.63															
0.01	.00	.01	.01	.00	.01	.01	.00	.02	.02	.01	.01	.01	.28	.39	.27	.01	.01	.01															
.02	.01	.02	.02	.01	.02	.02	.01	.03	.03	.02	.02	.01	.56	.77	.52	.02	.02	.01															
.03	.01	.03	.03	.01	.03	.03	.01	.05	.05	.03	.03	.02	.84	1.16	.80	.02	.03	.02															
.04	.01	.05	.04	.02	.04	.04	.02	.07	.07	.04	.04	.02	1.11	1.53	1.07	.03	.04	.03															
.05	.01	.06	.06	.02	.05	.05	.02	.09	.09	.05	.05	.03	1.38	1.93	1.34	.04	.05	.03															
.06	.02	.07	.07	.03	.06	.05	.02	.11	.10	.06	.06	.03	1.67	2.32	1.61	.05	.06	.04															
.07	.02	.08	.08	.03	.07	.06	.03	.12	.12	.06	.07	.04	1.95	2.70	1.87	.06	.07	.04															
.08	.02	.09	.09	.04	.08	.07	.03	.14	.14	.07	.08	.04	2.23	3.09	2.14	.06	.08	.05															
.09	.02	.10	.10	.04	.09	.08	.04	.16	.16	.08	.10	.05	2.51	3.48	2.41	.07	.09	.05															
.10	.03	.11	.11	.05	.10	.09	.04	.18	.17	.09	.11	.05	2.79	3.86	2.68	.08	.10	.06															
.11	.03	.13	.12	.05	.11	.10	.05	.29	.19	.10	.12	.06	3.06	4.25	2.94	.09	.11	.07															
.12	.03	.14	.13	.06	.12	.11	.05	.21	.21	.11	.13	.06	3.34	4.64	3.21	.09	.12	.08															
.13	.04	.15	.14	.06	.13	.12	.05	.23	.22	.12	.14	.07	3.62	5.02	3.48	.10	.13	.08															
.14	.04	.16	.15	.07	.14	.13	.06	.25	.24	.13	.15	.07	3.90	5.41	3.78	.11	.14	.09															
.15	.04	.17	.17	.07	.15	.14	.06	.27	.26	.14	.16	.08	4.18	5.79	4.02	.12	.15	.09															
.16	.04	.18	.18	.08	.16	.15	.07	.28	.28	.15	.17	.08	4.46	6.18	4.28	.13	.16	.10															
.17	.05	.19	.19	.08	.18	.16	.07	.30	.29	.16	.18	.09	4.73	6.57	4.55	.13	.17	.11															
.18	.05	.21	.20	.09	.19	.16	.07	.32	.31	.17	.19	.09	5.01	6.95	4.82	.14	.18	.11															
.19	.05	.22	.21	.09	.20	.17	.08	.34	.33	.18	.20	.10	5.29	7.34	5.09	.15	.19	.12															
.20	.06	.23	.22	.10	.21	.18	.08	.36	.35	.19	.21	.10	5.57	7.73	5.35	.16	.20	.13															
.21	.06	.24	.23	.10	.22	.19	.09	.37	.36	.19	.22	.11	5.85	8.11	5.62	.17	.21	.13															
.22	.06	.25	.24	.11	.23	.20	.09	.39	.38	.20	.23	.11	6.13	8.50	5.89	.17	.22	.14															
.23	.06	.26	.25	.11	.24	.21	.09	.41	.40	.21	.24	.12	6.41	8.88	6.16	.18	.23	.14															
.24	.07	.27	.26	.12	.25	.22	.09	.43	.42	.22	.25	.12	6.68	9.27	6.42	.19	.24	.15															
.25	.07	.29	.28	.12	.26	.23	.10	.44	.43	.23	.27	.13	6.96	9.66	6.69	.20	.25	.15															
.26	.07	.30	.29	.13	.27	.24	.10	.46	.45	.24	.28	.13	7.24	10.04	6.96	.21	.26	.16															
.27	.07	.31	.30	.13	.28	.25	.11	.48	.47	.25	.29	.14	7.52	10.43	7.23	.21	.27	.17															
.28	.08	.32	.31	.14	.29	.25	.11	.50	.48	.26	.30	.14	7.80	10.82	7.50	.22	.28	.17															
.29	.08	.33	.32	.14	.30	.26	.12	.51	.50	.27	.31	.15	8.08	11.20	7.76	.23	.29	.18															
.30	.08	.34	.33	.15	.31	.27	.12	.53	.52	.28	.32	.15	8.36	11.59	8.03	.24	.30	.19															

Tables of values of Azimuth, Collimation, and Level errors.

1855phae.proj..2585

Hour	1 ^h 59 ^m			2 ^h 36 ^m			2 ^h 58 ^m			3 ^h 14 ^m			3 ^h 39 ^m			3 ^h 57 ^m		
	α Arietis			γ beti			α beti			α Persei			γ Tauri			γ Eridani		
	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.
1.00	.36	1.08	1.02	.64	1.00	.77	.63	1.00	.78	.16	1.54	1.52	.35	1.09	1.03	.86	1.03	.57
0.01	.00	.01	.01	.01	.01	.01	.01	.01	.01	.00	.02	.02	.00	.01	.01	.01	.01	.01
.02	.01	.02	.02	.01	.02	.02	.02	.02	.02	.01	.03	.05	.01	.02	.02	.02	.02	.01
.03	.01	.03	.03	.02	.03	.02	.02	.03	.02	.01	.03	.05	.01	.03	.03	.03	.03	.02
.04	.01	.04	.04	.03	.04	.03	.02	.04	.03	.01	.06	.06	.01	.04	.04	.03	.04	.02
.05	.02	.05	.05	.03	.05	.04	.03	.05	.04	.01	.08	.08	.02	.05	.05	.04	.05	.03
.06	.02	.06	.06	.04	.06	.05	.04	.06	.05	.01	.09	.09	.02	.07	.06	.05	.06	.03
.07	.03	.08	.07	.04	.07	.05	.04	.07	.05	.01	.11	.11	.02	.08	.07	.06	.07	.04
.08	.03	.09	.08	.05	.08	.06	.05	.08	.06	.01	.12	.12	.03	.09	.08	.08	.07	.05
.09	.03	.10	.09	.06	.09	.07	.06	.09	.07	.02	.14	.14	.03	.10	.09	.08	.09	.05
.10	.04	.11	.10	.06	.10	.07	.06	.08	.10	.02	.15	.15	.04	.11	.10	.09	.10	.06
.11	.04	.12	.11	.07	.11	.08	.07	.11	.09	.02	.17	.17	.04	.12	.11	.09	.11	.06
.12	.04	.13	.12	.08	.12	.09	.08	.12	.09	.02	.18	.18	.04	.13	.12	.10	.12	.07
.13	.05	.13	.14	.08	.13	.10	.08	.13	.10	.02	.20	.20	.05	.14	.13	.11	.13	.07
.14	.05	.15	.14	.09	.14	.11	.09	.14	.11	.03	.21	.21	.05	.15	.14	.12	.14	.08
.15	.05	.16	.15	.10	.15	.12	.09	.15	.12	.03	.23	.23	.05	.16	.15	.13	.15	.09
.16	.06	.17	.16	.10	.16	.12	.10	.16	.13	.03	.24	.24	.06	.17	.16	.14	.16	.09
.17	.06	.17	.18	.11	.17	.13	.11	.17	.13	.03	.26	.26	.06	.09	.17	.15	.17	.10
.18	.06	.19	.18	.11	.18	.14	.18	.18	.14	.03	.28	.28	.06	.20	.18	.15	.19	.10
.19	.07	.21	.19	.12	.19	.15	.12	.19	.15	.04	.29	.29	.07	.21	.20	.16	.20	.11
.20	.07	.22	.20	.13	.20	.15	.30	.20	.16	.04	.31	.31	.07	.22	.21	.17	.21	.11
.21	.08	.23	.21	.13	.21	.16	.13	.21	.16	.04	.32	.32	.07	.23	.22	.18	.22	.12
.22	.08	.24	.22	.14	.22	.17	.14	.22	.17	.04	.34	.34	.08	.24	.23	.19	.23	.13
.23	.08	.25	.23	.15	.23	.18	.14	.23	.18	.04	.35	.35	.08	.25	.24	.20	.24	.13
.24	.09	.26	.24	.15	.24	.18	.15	.24	.19	.04	.37	.37	.08	.26	.25	.21	.25	.14
.25	.09	.27	.25	.16	.25	.19	.16	.25	.20	.05	.38	.38	.09	.27	.26	.21	.26	.14
.26	.09	.28	.27	.17	.26	.20	.16	.26	.20	.05	.40	.40	.09	.28	.27	.22	.27	.15
.27	.10	.29	.28	.17	.27	.21	.17	.27	.21	.05	.41	.41	.09	.29	.28	.23	.28	.15
.28	.10	.30	.29	.18	.28	.22	.18	.28	.22	.05	.43	.43	.10	.31	.29	.24	.29	.16
.29	.10	.31	.30	.19	.29	.22	.18	.29	.23	.05	.44	.44	.10	.32	.30	.25	.30	.17
.30	.11	.32	.31	.19	.30	.23	.19	.30	.23	.06	.46	.46	.11	.33	.31	.26	.31	.17

Tables of values of Azimuthal, Collimation, and Level errors.

$4^h 27^m$ α Tauri				$5^h 06^m$ α Auriga				$6^h 07^m$ β Orionis				$5^h 24^m$ δ Orionis				$5^h 26^m$ α Leporis				$5^h 17^m$ β Tauri			
az.	coll.	Ine.		az.	coll.	Ine.		az.	coll.	Ine.		az.	coll.	Ine.		az.	coll.	Ine.		az.	coll.	Ine.	
1.00	0.46	1.04	.93	.09	1.44	1.43	.78	1.01	.63	.68	1.00	.73	.91	1.05	.52	.27	1.14	1.10					
0.01	.00	.01	.01	.00	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.00	.01	.01					
.02	.01	.02	.02	.00	.03	.03	.02	.02	.01	.01	.02	.01	.02	.02	.01	.01	.02	.02					
.03	.01	.03	.03	.00	.04	.04	.02	.03	.02	.02	.03	.02	.03	.03	.02	.01	.03	.03					
.04	.02	.04	.04	.00	.06	.06	.03	.04	.03	.03	.04	.03	.04	.04	.02	.01	.04	.04					
.05	.02	.05	.05	.00	.07	.07	.04	.05	.03	.03	.05	.04	.05	.05	.03	.01	.06	.06					
.06	.03	.06	.06	.00	.09	.09	.05	.06	.04	.04	.06	.04	.05	.06	.03	.02	.07	.07					
.07	.03	.07	.07	.01	.10	.10	.05	.07	.04	.05	.07	.05	.06	.07	.04	.02	.08	.08					
.08	.04	.08	.07	.01	.11	.11	.06	.08	.05	.05	.08	.06	.08	.07	.04	.02	.09	.09					
.09	.04	.09	.08	.01	.13	.13	.07	.09	.06	.06	.09	.07	.08	.09	.05	.02	.10	.10					
.10	.05	.10	.09	.01	.14	.14	.08	.10	.06	.07	.10	.07	.09	.11	.05	.03	.11	.11					
.11	.05	.11	.10	.01	.16	.16	.09	.11	.07	.07	.11	.08	.10	.11	.06	.03	.13	.12					
.12	.06	.12	.11	.01	.17	.17	.09	.12	.08	.08	.12	.09	.11	.13	.06	.03	.13	.13					
.13	.06	.14	.12	.01	.19	.19	.10	.13	.08	.09	.13	.09	.12	.13	.06	.03	.15	.14					
.14	.06	.15	.13	.01	.20	.20	.11	.14	.09	.10	.14	.10	.13	.15	.07	.04	.16	.15					
.15	.07	.18	.14	.01	.22	.22	.12	.15	.09	.10	.15	.11	.14	.16	.08	.04	.17	.16					
.16	.07	.17	.15	.01	.23	.23	.13	.16	.10	.11	.16	.12	.15	.17	.08	.04	.18	.18					
.17	.08	.18	.16	.01	.24	.24	.13	.17	.11	.12	.17	.12	.16	.18	.09	.05	.19	.19					
.18	.08	.19	.17	.02	.26	.26	.14	.18	.11	.12	.18	.13	.16	.19	.09	.05	.21	.20					
.19	.09	.20	.18	.02	.27	.27	.15	.19	.12	.13	.19	.14	.17	.20	.10	.05	.22	.21					
.20	.09	.21	.19	.02	.29	.28	.16	.20	.13	.14	.20	.15	.18	.21	.10	.05	.23	.22					
.21	.10	.22	.20	.02	.30	.29	.16	.21	.13	.14	.21	.15	.19	.22	.11	.06	.24	.23					
.22	.10	.23	.20	.02	.32	.32	.17	.22	.14	.15	.22	.16	.20	.23	.11	.06	.25	.24					
.23	.11	.24	.21	.07	.33	.33	.18	.23	.14	.16	.23	.17	.21	.24	.12	.06	.26	.25					
.24	.11	.25	.22	.07	.34	.34	.19	.24	.15	.16	.24	.18	.22	.25	.12	.06	.27	.26					
.25	.11	.26	.23	.02	.36	.36	.20	.25	.16	.17	.25	.18	.23	.26	.13	.07	.28	.27					
.26	.12	.27	.24	.02	.37	.37	.20	.26	.16	.18	.26	.19	.24	.27	.14	.07	.29	.29					
.27	.12	.28	.25	.02	.39	.39	.21	.27	.17	.18	.27	.20	.25	.28	.14	.07	.31	.30					
.28	.13	.29	.26	.02	.40	.40	.22	.28	.18	.19	.28	.20	.26	.29	.15	.08	.32	.31					
.29	.13	.30	.27	.02	.42	.41	.23	.29	.18	.20	.29	.21	.26	.30	.15	.03	.33	.32					
.30	.14	.31	.28	.03	.43	.42	.23	.30	.19	.20	.30	.22	.27	.32	.16	.08	.34	.33					

Tables of Azimuthal, Collimation and Level errors.

5 ^h 28 ^m				5 ^h 34 ^m				5 ^h 47 ^m				6 ^h 14 ^m				6 ^h 32 ^m				6 ^h 39 ^m			
ϵ Orionis				α Columba				α Orionis				μ Geminorum				δ Cephei				α Can. Maj.			
az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.	
1.00	0.69	1.00	0.72	1.18	1.21	0.28		0.58	1.07	0.83		0.37	1.00	1.02		14.71	20.84	14.78		0.89	1.04	0.54	
0.01	.07	.01	.01	.02	.02	.07		.07	.02	.02		.07	.02	.02		.15	.20	.15		.07	.07	.07	
.02	.01	.02	.01	.02	.02	.01		.01	.02	.02		.01	.02	.02		.26	.42	.30		.02	.02	.01	
.03	.02	.03	.02	.04	.04	.01		.02	.03	.02		.07	.03	.03		.44	.62	.44		.03	.03	.02	
.04	.03	.04	.03	.05	.05	.07		.02	.04	.03		.01	.04	.04		.59	.83	.59		.04	.04	.03	
.05	.04	.05	.04	.06	.06	.01		.03	.05	.04		.02	.05	.05		.74	1.04	.74		.05	.05	.05	
.06	.04	.06	.04	.07	.07	.02		.03	.06	.05		.02	.06	.06		.88	1.25	.89		.05	.06	.03	
.07	.05	.07	.05	.08	.08	.02		.04	.07	.06		.03	.08	.07		1.03	1.46	1.03		.06	.07	.04	
.08	.06	.08	.06	.09	.10	.02		.05	.08	.07		.03	.09	.08		1.18	1.66	1.18		.07	.08	.04	
.09	.06	.09	.06	.11	.11	.02		.05	.09	.07		.03	.10	.09		1.32	1.87	1.33		.08	.09	.05	
.10	.07	.10	.07	.12	.12	.03		.06	.10	.08		.04	.11	.10		1.47	2.08	1.48		.09	.10	.05	
.11	.08	.11	.08	.13	.13	.03		.06	.11	.09		.04	.12	.11		1.62	2.29	1.63		.10	.11	.06	
.12	.08	.12	.09	.14	.14	.03		.07	.12	.10		.04	.13	.12		1.77	2.50	1.77		.11	.12	.06	
.13	.09	.13	.09	.15	.16	.04		.08	.13	.11		.05	.14	.13		1.91	2.71	1.92		.12	.14	.07	
.14	.10	.14	.10	.16	.17	.04		.08	.14	.12		.05	.15	.14		2.06	2.92	2.07		.12	.15	.08	
.15	.10	.15	.11	.18	.18	.04		.09	.15	.12		.06	.16	.15		2.21	3.31	2.22		.13	.16	.08	
.16	.16	.16	.12	.19	.19	.04		.09	.16	.13		.06	.17	.16		2.35	3.33	2.37		.14	.17	.09	
.17	.12	.17	.12	.20	.20	.05		.10	.17	.14		.06	.18	.17		2.50	3.54	2.57		.15	.18	.09	
.18	.12	.18	.13	.21	.22	.05		.10	.18	.15		.07	.19	.18		2.65	3.75	2.66		.16	.19	.10	
.19	.13	.19	.14	.22	.23	.05		.11	.19	.16		.07	.21	.19		2.79	3.96	2.87		.17	.20	.10	
.20	.14	.20	.14	.24	.24	.06		.12	.20	.17		.07	.22	.20		2.94	4.17	2.96		.18	.21	.11	
.21	.15	.21	.15	.25	.25	.06		.12	.21	.17		.08	.23	.21		3.09	4.38	3.10		.19	.22	.11	
.22	.15	.22	.16	.26	.27	.06		.13	.22	.18		.08	.24	.22		3.24	4.58	3.25		.20	.23	.12	
.23	.16	.23	.17	.27	.28	.07		.13	.23	.19		.09	.25	.23		3.38	4.79	3.40		.20	.24	.12	
.24	.17	.24	.17	.28	.29	.07		.14	.24	.20		.09	.26	.24		3.53	5.00	3.55		.21	.25	.13	
.25	.17	.25	.18	.29	.30	.07		.14	.25	.21		.09	.27	.25		3.68	5.21	3.70		.22	.26	.13	
.26	.18	.26	.19	.31	.31	.07		.15	.26	.22		.10	.28	.26		3.82	5.42	3.84		.23	.27	.14	
.27	.19	.27	.19	.32	.33	.08		.16	.27	.22		.10	.29	.28		3.97	5.63	3.99		.24	.28	.15	
.28	.19	.28	.20	.33	.34	.08		.16	.28	.23		.10	.30	.29		4.11	5.83	4.14		.25	.29	.15	
.29	.20	.29	.21	.34	.35	.08		.17	.29	.24		.11	.31	.30		4.27	6.04	4.29		.26	.30	.16	
.30	.21	.30	.22	.35	.37	.08		.17	.30	.25		.11	.32	.31		4.41	6.25	4.43		.27	.31	.16	

Table of values of Azimuthal, collimation, and level errors.

$\gamma^h 11^m$				$\gamma^h 25^m$			$\gamma^h 32^m$			$\delta^h 52^m$			$\gamma^h 36^m$			$\delta^h 07^m$		
δ Geminosum				α Luminorum			α Can. Min.			ϵ Can. Maj.			β Geminosum			15 Argus.		
as.	coll.	inc.		as.	coll.	inc.	as.	coll.	inc.	as.	coll.	inc.	as.	coll.	inc.	as.	coll.	inc.
1.00	0.37	1.08	1.07	0.21	1.18	1.16	0.60	1.00	0.80	1.08	1.14	0.37	0.27	1.14	1.10	1.00	1.06	0.44
0.07	.00	.07	.07	.00	.07	.07	.07	.07	.07	.07	.07	.00	.00	.07	.07	.07	.07	.00
.02	.07	.02	.02	.00	.02	.02	.07	.02	.02	.02	.02	.07	.07	.02	.02	.02	.02	.07
.03	.07	.03	.03	.01	.07	.03	.02	.03	.02	.03	.03	.07	.07	.03	.03	.03	.03	.07
.04	.07	.04	.04	.07	.05	.04	.02	.04	.03	.04	.05	.07	.07	.05	.04	.04	.04	.02
.05	.02	.05	.05	.07	.06	.06	.03	.05	.04	.05	.06	.02	.07	.06	.06	.05	.05	.02
.06	.02	.06	.06	.07	.07	.07	.04	.06	.05	.06	.07	.02	.02	.07	.07	.06	.07	.03
.07	.03	.08	.07	.07	.08	.08	.04	.07	.06	.08	.08	.03	.02	.08	.08	.07	.08	.03
.08	.03	.09	.08	.02	.09	.09	.05	.08	.06	.09	.09	.03	.02	.09	.09	.08	.09	.03
.09	.03	.10	.09	.02	.11	.10	.06	.09	.07	.10	.10	.03	.02	.10	.10	.09	.10	.04
.10	.04	.11	.10	.02	.12	.12	.06	.10	.08	.11	.11	.04	.03	.11	.11	.10	.11	.04
.11	.04	.12	.11	.02	.13	.13	.07	.11	.09	.12	.13	.04	.03	.13	.12	.11	.12	.03
.12	.04	.13	.12	.03	.14	.14	.07	.12	.10	.13	.14	.04	.03	.14	.13	.12	.13	.05
.13	.05	.14	.13	.03	.15	.15	.08	.13	.11	.14	.15	.05	.03	.15	.14	.13	.14	.06
.14	.05	.15	.14	.03	.17	.16	.08	.14	.11	.15	.16	.05	.04	.16	.15	.14	.15	.06
.15	.06	.16	.15	.03	.18	.18	.09	.15	.12	.16	.17	.06	.04	.17	.17	.15	.16	.07
.16	.06	.17	.16	.03	.19	.19	.10	.16	.13	.17	.18	.06	.04	.18	.18	.16	.18	.07
.17	.06	.18	.17	.04	.20	.20	.10	.17	.14	.18	.19	.06	.05	.19	.19	.17	.19	.08
.18	.07	.19	.18	.04	.21	.21	.11	.18	.15	.19	.21	.07	.05	.21	.20	.18	.20	.08
.19	.07	.21	.19	.04	.23	.22	.11	.19	.15	.21	.22	.07	.05	.22	.21	.19	.21	.09
.20	.07	.22	.20	.04	.24	.23	.12	.20	.16	.22	.23	.07	.06	.23	.22	.20	.22	.09
.21	.08	.23	.21	.04	.25	.24	.12	.21	.17	.23	.24	.08	.06	.24	.23	.21	.23	.09
.22	.08	.24	.22	.05	.26	.26	.13	.22	.18	.24	.25	.08	.06	.25	.24	.22	.24	.10
.23	.08	.25	.23	.05	.27	.27	.14	.23	.19	.25	.26	.08	.06	.26	.25	.23	.25	.10
.24	.09	.26	.24	.05	.28	.28	.14	.24	.19	.26	.27	.09	.07	.27	.27	.24	.26	.11
.25	.09	.27	.25	.05	.30	.29	.15	.25	.20	.27	.28	.09	.07	.28	.28	.25	.27	.11
.26	.10	.28	.26	.05	.31	.30	.16	.26	.21	.28	.30	.10	.07	.30	.29	.26	.28	.12
.27	.10	.29	.27	.06	.32	.31	.16	.27	.22	.29	.31	.10	.07	.31	.30	.27	.30	.12
.28	.10	.30	.28	.06	.33	.32	.17	.28	.23	.30	.32	.10	.08	.32	.31	.28	.31	.12
.29	.11	.31	.29	.06	.34	.33	.17	.29	.23	.31	.33	.11	.08	.33	.32	.29	.32	.13
.30	.11	.32	.30	.06	.35	.35	.18	.30	.24	.32	.34	.11	.08	.34	.33	.30	.33	.13

Tables of values of azimuthal, collimation and level errors.

	8 ^h 39 ^m			8 ^h 46 ^m			9 ^h 20 ^m			9 ^h 23 ^m			9 ^h 37 ^m			10 ^h 00 ^m		
	E Hydra			Urs. Maj.			α Hydra			θ Urs. Maj.			ε Leonis			α Leonis		
	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.
1.00	0.58	1.07	0.82	0.16	1.37	1.50	0.78	1.07	0.64	0.28	1.64	1.61	0.34	1.10	1.05	0.57	1.02	0.89
0.01	.07	.07	.07	.00	.02	.02	.07	.07	.07	.00	.02	.02	.00	.07	.07	.07	.07	.07
.02	.07	.02	.02	.00	.03	.03	.02	.02	.07	.07	.03	.03	.07	.02	.02	.07	.02	.02
.03	.02	.03	.02	.00	.05	.05	.02	.03	.02	.07	.05	.05	.07	.03	.03	.02	.03	.03
.04	.02	.04	.03	.07	.06	.06	.03	.04	.03	.07	.07	.06	.02	.04	.04	.02	.04	.04
.05	.03	.05	.04	.07	.08	.08	.04	.05	.03	.07	.08	.08	.02	.05	.05	.03	.05	.05
.06	.04	.06	.05	.07	.09	.09	.05	.06	.04	.02	.10	.10	.02	.06	.06	.03	.06	.05
.07	.04	.07	.06	.07	.11	.11	.05	.07	.04	.02	.11	.11	.02	.07	.07	.04	.07	.06
.08	.05	.08	.06	.07	.12	.12	.06	.08	.05	.02	.13	.13	.03	.08	.08	.04	.08	.07
.09	.05	.09	.07	.07	.14	.14	.07	.09	.06	.03	.15	.14	.03	.09	.09	.05	.09	.08
.10	.06	.10	.08	.07	.15	.15	.08	.10	.06	.03	.16	.16	.03	.10	.10	.05	.10	.09
.11	.06	.11	.09	.02	.17	.17	.09	.11	.07	.03	.18	.18	.04	.12	.12	.06	.11	.10
.12	.07	.12	.10	.02	.18	.18	.09	.12	.08	.03	.20	.19	.04	.13	.13	.06	.12	.11
.13	.08	.13	.11	.02	.20	.20	.10	.13	.08	.04	.21	.21	.04	.14	.14	.07	.13	.12
.14	.08	.14	.11	.02	.21	.21	.11	.14	.09	.04	.23	.23	.05	.15	.15	.07	.14	.12
.15	.09	.15	.12	.02	.23	.23	.12	.15	.10	.04	.25	.24	.05	.16	.16	.08	.15	.13
.16	.09	.16	.13	.03	.24	.24	.12	.16	.10	.05	.26	.26	.05	.17	.17	.08	.16	.14
.17	.10	.17	.14	.03	.26	.26	.13	.17	.11	.05	.28	.27	.06	.18	.18	.09	.17	.15
.18	.11	.18	.15	.03	.27	.27	.14	.18	.12	.05	.29	.29	.06	.19	.19	.09	.18	.16
.19	.11	.19	.15	.03	.29	.29	.15	.19	.12	.05	.31	.31	.06	.20	.20	.10	.19	.17
.20	.12	.10	.16	.03	.30	.30	.16	.20	.13	.05	.33	.32	.07	.21	.21	.10	.20	.18
.21	.12	.21	.17	.03	.32	.32	.16	.21	.13	.06	.34	.34	.07	.23	.22	.11	.21	.19
.22	.13	.22	.18	.04	.33	.33	.17	.22	.14	.06	.36	.35	.07	.24	.23	.11	.22	.22
.23	.13	.23	.19	.04	.35	.35	.18	.23	.15	.07	.37	.37	.08	.25	.24	.12	.23	.21
.24	.14	.24	.20	.04	.36	.36	.19	.24	.15	.07	.39	.39	.08	.26	.25	.12	.24	.21
.25	.14	.25	.20	.04	.38	.38	.20	.25	.16	.07	.41	.40	.08	.27	.26	.13	.26	.22
.26	.15	.26	.21	.04	.39	.39	.20	.26	.17	.07	.42	.42	.09	.28	.27	.13	.27	.23
.27	.16	.27	.22	.04	.41	.41	.21	.27	.17	.08	.44	.43	.09	.29	.28	.14	.28	.24
.28	.16	.28	.23	.04	.42	.42	.22	.28	.18	.08	.46	.45	.09	.30	.29	.14	.29	.25
.29	.17	.29	.24	.05	.44	.44	.23	.29	.19	.08	.47	.47	.10	.31	.30	.15	.30	.26
.30	.17	.30	.25	.05	.45	.45	.23	.30	.19	.08	.49	.48	.10	.33	.31	.15	.31	.27

Table of values of Azimuth, Collimation and Level errors.

	10 ^h 54 ^m			11 ^h 06 ^m			11 ^h 12 ^m			11 ^h 41 ^m			11 ^h 46 ^m			12 ^h 26 ^m		
	α Urs. Maj.			δ Leonis			δ Hyd. & Crat.			β Leonis			γ Urs. Maj.			β Corvi		
	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.
1.00	0.75	2.17	2.02	.36	1.07	1.00	0.86	1.03	0.57	0.47	1.04	0.62	0.36	1.72	1.69	0.68	1.08	0.46
0.01	.07	.02	.02	.00	.07	.07	.07	.07	.07	.00	.07	.07	.00	.02	.02	.07	.07	.00
.02	.07	.04	.04	.07	.02	.02	.02	.02	.07	.07	.02	.02	.07	.03	.03	.02	.02	.07
.03	.02	.06	.06	.07	.03	.03	.03	.03	.02	.07	.03	.03	.07	.05	.05	.03	.03	.07
.04	.03	.09	.08	.02	.04	.04	.03	.04	.02	.02	.04	.04	.07	.07	.07	.04	.04	.02
.05	.04	.11	.10	.02	.05	.05	.04	.05	.03	.02	.05	.05	.02	.09	.08	.05	.05	.02
.06	.04	.13	.12	.02	.06	.06	.05	.06	.03	.03	.06	.06	.02	.10	.10	.06	.06	.03
.07	.05	.15	.14	.03	.07	.07	.06	.07	.04	.03	.07	.07	.03	.12	.12	.07	.07	.03
.08	.06	.17	.16	.03	.08	.08	.07	.08	.04	.04	.08	.07	.03	.14	.14	.08	.08	.04
.09	.07	.20	.18	.03	.09	.08	.08	.09	.05	.04	.09	.08	.03	.15	.15	.09	.09	.04
.10	.08	.22	.20	.04	.11	.10	.09	.10	.06	.05	.10	.09	.04	.17	.17	.10	.11	.05
.11	.08	.24	.22	.04	.12	.11	.09	.11	.06	.05	.11	.10	.04	.19	.19	.11	.12	.05
.12	.09	.26	.24	.05	.13	.12	.10	.12	.07	.06	.12	.11	.04	.21	.20	.12	.13	.05
.13	.10	.28	.16	.05	.14	.13	.11	.13	.07	.06	.13	.12	.05	.22	.22	.13	.14	.06
.14	.10	.30	.28	.05	.15	.14	.12	.14	.08	.07	.14	.13	.05	.24	.24	.14	.15	.06
.15	.11	.32	.30	.06	.16	.15	.13	.15	.09	.07	.15	.14	.05	.26	.25	.15	.16	.07
.16	.12	.35	.32	.06	.17	.16	.14	.16	.09	.08	.16	.15	.06	.28	.27	.16	.17	.07
.17	.13	.37	.35	.07	.18	.17	.15	.17	.10	.08	.18	.16	.06	.29	.29	.17	.18	.08
.18	.14	.39	.37	.07	.20	.18	.15	.18	.10	.08	.19	.17	.07	.31	.30	.18	.20	.08
.19	.14	.41	.39	.07	.21	.19	.16	.20	.11	.09	.20	.18	.07	.33	.32	.19	.21	.09
.20	.15	.43	.41	.07	.22	.20	.17	.21	.11	.09	.21	.18	.07	.34	.34	.20	.22	.09
.21	.16	.46	.43	.08	.23	.21	.18	.22	.12	.10	.22	.19	.08	.36	.35	.21	.23	.10
.22	.16	.48	.45	.09	.24	.22	.19	.23	.13	.10	.23	.20	.08	.38	.37	.22	.24	.10
.23	.17	.50	.47	.09	.25	.23	.20	.24	.13	.11	.24	.21	.08	.40	.39	.23	.25	.11
.24	.18	.52	.49	.09	.26	.24	.21	.25	.14	.11	.25	.22	.08	.41	.40	.24	.26	.11
.25	.19	.54	.51	.10	.27	.25	.21	.26	.14	.12	.26	.23	.09	.43	.42	.25	.27	.11
.26	.19	.56	.53	.10	.28	.26	.22	.27	.15	.12	.27	.24	.09	.45	.44	.26	.28	.12
.27	.20	.59	.55	.10	.29	.27	.23	.28	.16	.13	.28	.25	.10	.46	.45	.27	.29	.12
.28	.21	.61	.57	.11	.30	.28	.24	.29	.16	.13	.29	.26	.10	.48	.47	.28	.30	.13
.29	.22	.63	.59	.11	.31	.29	.25	.30	.17	.14	.30	.27	.11	.50	.49	.29	.31	.13
.30	.22	.65	.61	.12	.32	.30	.26	.31	.17	.14	.31	.28	.11	.52	.51	.29	.32	.14

Tables of values of *azimuth*, *collimation* and *level* errors.

18555

12 ^h 49 ^m				13 ^h 17 ^m				13 ^h 42 ^m				13 ^h 47 ^m				14 ^h 09 ^m				14 ^h 39 ^m			
12 Can. Penat.				α Virginis				γ Hrs. Maj.				γ Bootis				α Bootis				ε Bootis			
az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.	
1.00	0.07	129	129	0.81	1.07	0.62		0.21	1.56	1.54		0.42	1.06	0.97		0.41	1.06	0.98		0.29	1.13	1.09	
0.01	.00	.01	.01	.01	.01	.01		.00	.02	.02		.00	.01	.01		.00	.01	.01		.00	.01	.01	
.02	.00	.02	.02	.02	.02	.01		.00	.03	.03		.01	.02	.02		.01	.02	.02		.01	.02	.02	
.03	.00	.02	.02	.02	.03	.02		.01	.05	.05		.01	.03	.03		.01	.03	.03		.01	.03	.03	
.04	.00	.05	.05	.03	.04	.02		.01	.06	.06		.02	.04	.04		.02	.04	.04		.01	.05	.04	
.05	.00	.06	.06	.02	.05	.03		.01	.08	.08		.02	.05	.05		.02	.05	.05		.01	.06	.05	
.06	.00	.08	.08	.05	.06	.02		.01	.09	.09		.03	.06	.06		.02	.06	.06		.02	.07	.07	
.07	.01	.09	.09	.06	.07	.04		.02	.11	.11		.03	.07	.07		.03	.07	.07		.02	.08	.08	
.08	.01	.10	.10	.06	.08	.05		.02	.12	.12		.03	.08	.08		.03	.08	.08		.02	.09	.09	
.09	.01	.11	.11	.07	.09	.05		.02	.14	.14		.04	.10	.09		.04	.10	.09		.03	.10	.10	
.10	.01	.13	.13	.08	.10	.06		.02	.16	.15		.04	.11	.10		.04	.11	.10		.03	.11	.11	
.11	.01	.14	.14	.09	.11	.07		.03	.17	.17		.05	.12	.11		.04	.12	.11		.03	.12	.12	
.12	.01	.16	.16	.09	.12	.07		.03	.19	.19		.05	.13	.12		.05	.13	.12		.03	.13	.13	
.13	.01	.17	.17	.10	.13	.08		.03	.20	.20		.05	.14	.13		.05	.14	.13		.04	.15	.14	
.14	.01	.18	.18	.11	.14	.09		.03	.22	.22		.06	.15	.14		.06	.15	.14		.04	.16	.15	
.15	.01	.19	.19	.11	.15	.09		.03	.23	.23		.06	.16	.15		.06	.16	.15		.04	.17	.16	
.16	.01	.21	.21	.12	.16	.10		.04	.25	.25		.07	.17	.16		.06	.17	.16		.04	.18	.17	
.17	.01	.22	.22	.13	.17	.10		.04	.26	.26		.07	.18	.17		.07	.18	.17		.05	.19	.18	
.18	.01	.23	.23	.14	.18	.11		.04	.28	.28		.08	.19	.17		.07	.19	.18		.05	.20	.20	
.19	.01	.24	.24	.15	.19	.12		.04	.30	.29		.08	.20	.18		.08	.20	.19		.05	.21	.21	
.20	.01	.26	.26	.15	.20	.12		.04	.31	.31		.08	.21	.19		.08	.21	.20		.06	.23	.22	
.21	.02	.27	.27	.16	.21	.13		.05	.33	.32		.09	.22	.20		.09	.22	.21		.06	.24	.23	
.22	.02	.28	.28	.17	.22	.13		.05	.34	.34		.09	.23	.21		.09	.23	.22		.06	.25	.24	
.23	.02	.30	.30	.18	.23	.14		.05	.36	.36		.10	.24	.22		.09	.24	.23		.07	.26	.25	
.24	.02	.31	.31	.19	.24	.15		.05	.37	.37		.10	.25	.23		.10	.25	.24		.07	.27	.26	
.25	.02	.32	.32	.19	.25	.15		.06	.39	.39		.10	.26	.24		.10	.26	.25		.07	.28	.27	
.26	.02	.33	.33	.20	.26	.16		.06	.40	.40		.11	.28	.25		.11	.28	.26		.07	.29	.28	
.27	.02	.35	.35	.21	.27	.16		.06	.42	.42		.11	.29	.26		.11	.29	.27		.08	.30	.29	
.28	.02	.36	.36	.22	.28	.17		.06	.44	.43		.12	.30	.27		.11	.30	.28		.08	.31	.31	
.29	.02	.37	.37	.23	.29	.18		.06	.45	.45		.12	.31	.28		.12	.31	.28		.08	.33	.32	
.30	.02	.39	.39	.24	.30	.18		.06	.47	.46		.13	.32	.29		.12	.32	.29		.09	.34	.33	

Tables of values of Gyimthal. Collimation and level errors.

14 ^h 42 ^m				14 ^h 57 ^m				15 ^h 09 ^m				15 ^h 28 ^m				15 ^h 37 ^m				15 ^h 49 ^m			
α Libra				β Vir. Min.				β Libra				α Cor. Bor.				α Perseus				γ Vir. Min.			
az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.	
1.00	0.88	1.04	0.55	2.04	3.87	3.22		0.76	1.07	0.63		0.29	1.13	1.09		0.58	1.07	0.82		2.88	4.51	3.98	
0.01	.07	.07	.07	.02	.04	.03		.07	.07	.07		.00	.07	.07		.01	.01	.01		.03	.05	.04	
.02	.02	.02	.07	.07	.08	.06		.02	.02	.07		.07	.02	.02		.07	.02	.02		.06	.10	.06	
.03	.03	.03	.02	.06	.11	.10		.02	.03	.02		.07	.03	.03		.02	.03	.03		.09	.15	.11	
.04	.04	.04	.02	.08	.15	.13		.03	.04	.02		.07	.04	.04		.02	.04	.03		.11	.20	.15	
.05	.04	.05	.03	.10	.19	.16		.04	.05	.03		.07	.06	.05		.03	.05	.04		.14	.25	.18	
.06	.05	.06	.03	.12	.23	.19		.05	.06	.04		.02	.07	.06		.03	.06	.05		.17	.29	.22	
.07	.06	.07	.04	.14	.27	.22		.05	.07	.04		.02	.08	.07		.04	.07	.06		.20	.34	.27	
.08	.07	.08	.04	.16	.30	.26		.06	.08	.05		.02	.09	.08		.05	.08	.07		.23	.39	.31	
.09	.08	.09	.05	.18	.34	.29		.07	.09	.06		.02	.10	.10		.05	.09	.07		.26	.44	.35	
.10	.09	.10	.06	.20	.38	.32		.08	.10	.06		.03	.11	.11		.06	.10	.08		.29	.49	.40	
.11	.10	.11	.06	.22	.42	.35		.09	.11	.07		.03	.12	.12		.06	.11	.09		.32	.54	.44	
.12	.11	.12	.07	.24	.46	.39		.09	.12	.08		.04	.13	.13		.07	.12	.10		.35	.60	.48	
.13	.11	.13	.07	.27	.49	.42		.10	.13	.08		.04	.15	.14		.08	.13	.11		.37	.64	.52	
.14	.12	.15	.08	.29	.53	.45		.11	.14	.09		.04	.16	.15		.08	.14	.11		.40	.69	.56	
.15	.13	.16	.08	.31	.57	.48		.12	.15	.10		.05	.17	.16		.09	.15	.12		.43	.74	.60	
.16	.14	.17	.09	.33	.61	.51		.13	.16	.10		.05	.18	.17		.09	.16	.13		.47	.79	.64	
.17	.15	.18	.10	.35	.65	.55		.13	.17	.11		.05	.19	.18		.10	.17	.14		.50	.83	.68	
.18	.16	.19	.10	.37	.68	.58		.14	.18	.11		.05	.20	.20		.11	.18	.15		.53	.88	.72	
.19	.17	.20	.11	.39	.72	.61		.15	.19	.12		.05	.21	.21		.11	.19	.16		.56	.93	.76	
.20	.18	.21	.11	.41	.76	.64		.16	.20	.13		.06	.22	.22		.12	.20	.16		.58	.98	.80	
.21	.18	.22	.12	.43	.80	.68		.17	.21	.13		.06	.24	.23		.12	.21	.17		.60	1.03	.84	
.22	.19	.23	.12	.45	.84	.71		.18	.22	.14		.06	.25	.24		.13	.22	.18		.63	1.08	.88	
.23	.20	.24	.13	.47	.86	.74		.18	.23	.14		.07	.26	.25		.14	.23	.19		.66	1.13	.92	
.24	.21	.25	.13	.49	.91	.77		.19	.24	.15		.07	.27	.26		.14	.24	.20		.69	1.18	.96	
.25	.22	.26	.14	.51	.95	.80		.20	.25	.16		.07	.28	.27		.15	.25	.21		.72	1.23	1.00	
.26	.23	.27	.14	.53	.99	.84		.21	.26	.17		.08	.29	.28		.15	.26	.21		.75	1.28	1.04	
.27	.24	.28	.15	.55	1.03	.87		.21	.27	.17		.08	.31	.30		.16	.27	.22		.78	1.33	1.08	
.28	.25	.29	.15	.57	1.07	.90		.22	.28	.18		.08	.32	.31		.16	.28	.23		.80	1.37	1.12	
.29	.26	.30	.16	.59	1.10	.93		.23	.29	.18		.08	.33	.32		.17	.29	.24		.83	1.42	1.15	
.30	.26	.31	.17	.61	1.14	.96		.24	.30	.19		.09	.34	.33		.18	.30	.25		.86	1.47	1.19	

Tables of values of Azimuthal, collimation and Level errors.

15 ^h 54 ^m β Scorpii				16 ^h 06 ^m δ Ophiuchi				16 ^h 20 ^m α Scorpii				16 ^h 22 ^m γ Draconis				17 ^h 00 ^m ε Urs. Min.				17 ^h 08 ^m α Herculis			
az.	coll.	luc.		az.	coll.	luc.		az.	coll.	luc.		az.	coll.	luc.		az.	coll.	luc.		az.	coll.	luc.	
1.00	0.93	1.06	0.50	0.72	1.00	0.70		1.04	1.11	0.41		0.71	2.12	2.00		4.77	7.43	5.70		0.48	1.03	0.91	
0.01	.01	.01	.01	.01	.01	.01		.01	.01	.01		.01	.02	.02		.05	.07	.06		.00	.01	.01	
.02	.02	.02	.01	.01	.02	.01		.02	.02	.01		.01	.04	.04		.09	.15	.10		.01	.02	.02	
.03	.03	.03	.02	.02	.03	.02		.03	.03	.01		.02	.06	.06		.14	.22	.16		.01	.03	.03	
.04	.04	.04	.02	.03	.04	.03		.04	.04	.02		.03	.08	.08		.19	.30	.22		.02	.04	.04	
.05	.05	.05	.03	.04	.05	.04		.05	.06	.02		.04	.11	.10		.24	.37	.28		.02	.05	.05	
.06	.06	.06	.03	.04	.06	.04		.06	.07	.02		.04	.13	.12		.28	.45	.33		.03	.06	.05	
.07	.07	.07	.04	.05	.07	.05		.07	.08	.03		.05	.15	.14		.33	.52	.38		.03	.07	.06	
.08	.07	.08	.04	.06	.08	.06		.08	.09	.03		.06	.17	.16		.38	.60	.44		.04	.08	.07	
.09	.08	.10	.05	.06	.09	.06		.09	.10	.04		.06	.19	.18		.43	.67	.50		.04	.09	.08	
.10	.09	.11	.05	.07	.10	.07		.10	.11	.04		.07	.21	.20		.48	.74	.57		.05	.10	.09	
.11	.10	.12	.06	.08	.11	.08		.11	.12	.04		.08	.23	.22		.52	.81	.63		.05	.11	.10	
.12	.11	.13	.06	.09	.12	.08		.12	.13	.05		.09	.25	.24		.57	.89	.68		.06	.12	.11	
.13	.12	.14	.07	.10	.13	.09		.14	.14	.05		.09	.28	.26		.62	.97	.74		.06	.13	.12	
.14	.13	.15	.07	.10	.14	.10		.15	.16	.06		.10	.30	.28		.67	1.04	.80		.07	.14	.13	
.15	.14	.16	.08	.11	.15	.11		.16	.17	.06		.10	.32	.30		.71	1.12	.88		.07	.15	.14	
.16	.15	.17	.08	.12	.16	.11		.17	.18	.06		.11	.34	.32		.76	1.19	.90		.08	.16	.15	
.17	.16	.18	.09	.12	.17	.12		.18	.19	.07		.12	.36	.34		.81	1.26	.96		.08	.18	.16	
.18	.17	.19	.09	.13	.18	.13		.19	.20	.07		.13	.38	.36		.86	1.34	1.02		.09	.19	.16	
.19	.18	.20	.10	.14	.19	.13		.20	.21	.08		.13	.40	.38		.90	1.41	1.08		.09	.20	.17	
.20	.19	.21	.10	.14	.20	.14		.21	.22	.08		.14	.42	.40		.95	1.49	1.14		.10	.21	.18	
.21	.20	.22	.11	.15	.21	.15		.22	.23	.09		.15	.45	.42		1.00	1.56	1.20		.10	.22	.19	
.22	.21	.23	.11	.16	.22	.15		.23	.25	.09		.16	.47	.44		1.05	1.63	1.25		.11	.23	.20	
.23	.21	.24	.12	.16	.23	.16		.24	.26	.09		.16	.49	.46		1.09	1.71	1.31		.11	.24	.21	
.24	.22	.25	.12	.17	.24	.17		.25	.27	.10		.17	.51	.48		1.14	1.78	1.37		.12	.25	.22	
.25	.23	.26	.13	.18	.25	.17		.26	.28	.10		.18	.53	.50		1.19	1.86	1.43		.12	.26	.23	
.26	.24	.27	.13	.19	.26	.18		.27	.29	.11		.18	.55	.52		1.24	1.93	1.48		.13	.27	.24	
.27	.25	.28	.14	.19	.27	.19		.28	.30	.11		.19	.57	.54		1.28	2.00	1.54		.13	.28	.25	
.28	.26	.30	.14	.20	.28	.20		.29	.31	.11		.20	.59	.56		1.33	2.08	1.60		.14	.29	.25	
.29	.27	.31	.15	.21	.29	.20		.30	.32	.12		.21	.61	.58		1.38	2.15	1.66		.14	.30	.26	
.30	.28	.32	.15	.22	.30	.21		.31	.33	.12		.21	.64	.60		1.43	2.23	1.71		.14	.31	.27	

Tables of values of azimuth, collimation, and level errors.

17 ^h 27 ^m β Draconis				17 ^h 28 ^m α Ophiuchi				17 ^h 29 ^m γ Draconis				18 ^h 05 ^m μ Sagittarii				18 ^h 18 ^m δ Urs. Min.				18 ^h 32 ^m α Lyrae			
az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.		az.	coll.	Inc.	
1.00	0.29	1.64	1.61	0.57	1.03	0.89	0.25	1.61	1.55	0.96	1.07	0.48	11.76	16.86	12.09	0.08	1.28	1.28					
0.07	.00	.02	.02	.07	.01	.07	.00	.02	.02	.01	.07	.00	.12	.17	.12	.00	.07	.07					
.02	.07	.02	.02	.07	.02	.02	.01	.03	.03	.02	.02	.01	.24	.34	.24	.00	.03	.03					
.03	.07	.05	.05	.02	.03	.03	.01	.05	.05	.03	.03	.01	.35	.57	.36	.00	.04	.04					
.04	.01	.06	.06	.02	.04	.04	.01	.06	.06	.04	.04	.02	.47	.67	.48	.00	.05	.05					
.05	.07	.08	.08	.03	.05	.05	.07	.08	.08	.05	.05	.02	.59	.84	.60	.00	.07	.07					
.06	.02	.10	.10	.03	.06	.05	.01	.10	.10	.06	.06	.03	.71	1.07	.72	.00	.08	.08					
.07	.02	.11	.11	.04	.07	.06	.02	.11	.11	.07	.07	.03	.82	1.18	.85	.07	.09	.09					
.08	.02	.13	.13	.04	.08	.07	.02	.13	.13	.08	.09	.04	.94	1.35	.97	.07	.11	.11					
.09	.03	.15	.14	.05	.09	.08	.02	.14	.14	.09	.10	.04	1.06	1.52	1.09	.07	.12	.12					
.10	.03	.16	.16	.05	.10	.09	.03	.16	.16	.10	.11	.05	1.18	1.69	1.21	.07	.13	.13					
.11	.03	.18	.18	.06	.11	.10	.03	.18	.18	.11	.12	.05	1.29	1.85	1.33	.07	.14	.14					
.12	.03	.20	.19	.06	.12	.11	.03	.19	.19	.11	.13	.06	1.41	2.02	1.45	.01	.15	.15					
.13	.04	.21	.21	.07	.13	.12	.03	.21	.21	.12	.14	.06	1.53	2.19	1.57	.07	.17	.17					
.14	.04	.23	.23	.07	.14	.13	.04	.23	.23	.13	.15	.07	1.65	2.36	1.69	.01	.18	.18					
.15	.04	.25	.24	.08	.15	.13	.04	.24	.24	.14	.16	.07	1.76	2.53	1.81	.07	.21	.21					
.16	.05	.26	.26	.08	.16	.14	.04	.26	.26	.15	.17	.08	1.88	2.70	1.94	.01	.22	.22					
.17	.05	.28	.27	.09	.17	.15	.04	.27	.27	.16	.18	.08	2.00	2.87	2.06	.07	.23	.23					
.18	.05	.29	.29	.09	.18	.16	.05	.29	.29	.17	.19	.09	2.12	3.03	2.18	.07	.23	.23					
.19	.05	.31	.31	.10	.19	.17	.05	.31	.31	.18	.20	.09	2.23	3.20	2.30	.02	.24	.24					
.20	.06	.33	.32	.10	.21	.18	.05	.32	.32	.19	.21	.10	2.35	3.37	2.42	.02	.26	.26					
.21	.06	.34	.34	.11	.22	.19	.05	.34	.34	.20	.23	.10	2.47	3.54	2.52	.02	.27	.27					
.22	.06	.36	.36	.11	.23	.20	.06	.35	.35	.21	.24	.11	2.59	3.71	2.66	.02	.28	.28					
.23	.07	.38	.37	.12	.24	.21	.06	.37	.37	.22	.25	.11	2.70	3.88	2.78	.02	.30	.30					
.24	.07	.39	.39	.12	.25	.21	.06	.39	.37	.23	.26	.11	2.82	4.05	2.90	.02	.31	.31					
.25	.07	.41	.40	.13	.26	.22	.06	.40	.40	.24	.27	.12	2.94	4.22	3.02	.02	.32	.32					
.26	.08	.43	.42	.13	.27	.23	.07	.42	.42	.25	.28	.12	3.06	4.38	3.14	.02	.33	.33					
.27	.08	.44	.44	.14	.28	.24	.07	.43	.43	.26	.29	.13	3.17	4.55	3.26	.02	.35	.35					
.28	.08	.46	.45	.14	.29	.25	.07	.45	.45	.27	.30	.13	3.29	4.72	3.38	.02	.36	.36					
.29	.08	.48	.47	.15	.30	.26	.07	.47	.47	.28	.31	.14	3.41	4.89	3.50	.02	.37	.37					
.30	.09	.49	.48	.15	.31	.27	.08	.48	.48	.29	.32	.14	3.53	5.06	3.63	.02	.38	.38					

Table of values of Azimuth, Collimation and Level errors.

	18 ^h 44 ^m			18 ^h 58 ^m			19 ^h 18 ^m			19 ^h 39 ^m			19 ^h 43 ^m			19 ^h 48 ^m		
	β Lyrae			ϵ Aquilae			δ Aquilae			γ Aquilae			α Aquila			β Aquila		
	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.
1.00	0.19	1.20	1.18	0.49	1.03	0.90	0.64	1.00	0.77	0.52	1.02	0.86	0.56	1.01	0.84	0.60	1.01	0.81
0.01	.00	.07	.07	.00	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.02	.00	.02	.02	.01	.02	.02	.01	.02	.02	.01	.02	.02	.01	.02	.02	.01	.02	.02
.03	.01	.04	.04	.02	.03	.03	.02	.03	.03	.02	.03	.03	.02	.03	.02	.02	.03	.02
.04	.01	.05	.05	.02	.04	.04	.03	.04	.03	.02	.04	.03	.02	.04	.03	.02	.04	.03
.05	.01	.06	.06	.03	.05	.05	.03	.05	.04	.03	.05	.04	.03	.05	.04	.03	.05	.04
.06	.01	.07	.07	.03	.06	.06	.04	.06	.05	.03	.06	.05	.03	.06	.05	.03	.06	.05
.07	.01	.08	.08	.04	.07	.06	.04	.07	.05	.04	.07	.06	.04	.07	.06	.04	.07	.06
.08	.02	.10	.10	.04	.08	.07	.05	.08	.06	.04	.08	.07	.05	.08	.06	.05	.08	.06
.09	.02	.11	.11	.05	.09	.08	.06	.09	.07	.05	.09	.08	.05	.09	.07	.05	.09	.07
.10	.02	.12	.12	.05	.10	.09	.06	.10	.08	.05	.10	.09	.06	.10	.08	.06	.10	.08
.11	.02	.13	.13	.05	.11	.10	.07	.11	.08	.06	.11	.10	.06	.11	.09	.07	.11	.09
.12	.02	.14	.14	.06	.12	.11	.08	.12	.09	.07	.12	.10	.07	.12	.10	.07	.12	.10
.13	.03	.16	.16	.06	.13	.12	.08	.13	.10	.07	.13	.11	.07	.13	.11	.08	.13	.11
.14	.03	.17	.17	.07	.14	.13	.09	.14	.11	.08	.14	.12	.08	.14	.12	.08	.14	.11
.15	.03	.18	.18	.07	.15	.14	.10	.15	.12	.08	.15	.13	.08	.15	.13	.09	.15	.12
.16	.03	.19	.19	.08	.16	.14	.10	.16	.12	.09	.16	.14	.09	.16	.13	.10	.16	.13
.17	.03	.20	.20	.09	.17	.15	.11	.17	.13	.09	.17	.15	.10	.17	.14	.10	.17	.14
.18	.04	.22	.22	.09	.18	.16	.12	.18	.14	.10	.18	.16	.10	.18	.15	.11	.18	.15
.19	.04	.23	.23	.10	.19	.17	.12	.19	.15	.11	.19	.17	.11	.19	.16	.11	.19	.15
.20	.04	.24	.24	.10	.20	.18	.13	.20	.15	.11	.20	.17	.11	.20	.17	.12	.20	.16
.21	.04	.25	.25	.11	.21	.19	.13	.21	.16	.12	.21	.18	.12	.21	.18	.13	.21	.17
.22	.04	.26	.26	.11	.22	.20	.14	.22	.17	.12	.22	.19	.12	.22	.18	.13	.22	.18
.23	.04	.28	.27	.12	.23	.21	.15	.23	.18	.13	.23	.20	.13	.23	.19	.14	.23	.19
.24	.05	.29	.28	.12	.24	.22	.15	.24	.19	.13	.24	.21	.13	.24	.20	.14	.24	.19
.25	.05	.30	.29	.13	.25	.23	.16	.25	.19	.14	.25	.22	.14	.25	.21	.15	.25	.20
.26	.05	.31	.31	.13	.26	.23	.17	.26	.20	.14	.26	.22	.14	.26	.22	.16	.26	.21
.27	.05	.32	.32	.13	.27	.24	.17	.27	.21	.15	.27	.23	.15	.27	.23	.16	.27	.22
.28	.05	.34	.33	.14	.28	.25	.18	.28	.22	.15	.28	.24	.16	.28	.24	.17	.28	.23
.29	.06	.35	.34	.14	.29	.26	.18	.29	.23	.16	.29	.25	.16	.29	.25	.17	.29	.23
.30	.06	.36	.35	.15	.30	.27	.19	.30	.23	.16	.30	.26	.17	.30	.25	.18	.30	.24

Tables of values of Azimuth, Correction and Level errors.

20° 10'				20° 05'				20° 36'				21° 00'				21° 06'				21° 15'			
α^2 Capricorn				λ Urs. Min.				α Cygni				δ^1 Cygni				γ Cygni				α Cygni			
az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.		az.	coll.	inc.	
1.00	0.84	1.03	0.58	36.66	50.56	34.81		0.06	1.41	1.41		0.10	1.27	1.27		0.25	1.16	1.12		0.71	2.13	2.00	
0.01	.01	.01	.01	.37	.57	.35		.00	.07	.01		.00	.01	.07		.00	.07	.01		.07	.02	.02	
.02	.02	.02	.01	.73	1.01	.70		.00	.03	.03		.00	.03	.03		.01	.02	.02		.01	.04	.04	
.03	.03	.03	.02	1.10	1.52	1.04		.00	.04	.04		.00	.04	.04		.01	.03	.03		.02	.06	.06	
.04	.03	.04	.02	1.46	2.02	1.39		.00	.06	.06		.00	.05	.05		.01	.05	.04		.03	.09	.08	
.05	.04	.05	.03	1.83	2.53	1.74		.00	.07	.07		.00	.06	.06		.01	.06	.06		.04	.11	.10	
.06	.05	.06	.03	2.20	3.03	2.09		.00	.08	.08		.01	.08	.08		.02	.07	.07		.04	.13	.12	
.07	.06	.07	.04	2.57	3.54	2.44		.00	.10	.10		.01	.09	.09		.02	.08	.08		.05	.15	.14	
.08	.07	.08	.05	2.93	4.04	2.78		.00	.11	.11		.01	.10	.10		.02	.09	.09		.06	.17	.16	
.09	.08	.09	.05	3.30	4.55	3.13		.01	.13	.13		.01	.11	.11		.02	.10	.10		.06	.19	.18	
.10	.08	.10	.06	3.67	5.06	3.48		.01	.14	.14		.01	.13	.13		.03	.11	.11		.07	.21	.20	
.11	.09	.11	.06	4.03	5.56	3.83		.01	.16	.16		.01	.14	.14		.03	.12	.12		.08	.23	.22	
.12	.10	.12	.07	4.40	6.07	4.18		.01	.17	.17		.01	.15	.15		.03	.14	.14		.09	.25	.24	
.13	.11	.13	.08	4.77	6.57	4.53		.01	.18	.18		.01	.16	.16		.03	.15	.15		.09	.27	.26	
.14	.12	.14	.08	5.13	7.08	4.87		.01	.20	.20		.01	.18	.18		.04	.16	.16		.10	.29	.28	
.15	.13	.15	.09	5.50	7.58	5.22		.01	.21	.21		.01	.19	.19		.04	.17	.17		.11	.32	.30	
.16	.14	.16	.09	5.87	8.09	5.57		.01	.23	.23		.02	.20	.20		.04	.18	.18		.11	.34	.32	
.17	.14	.17	.10	6.23	8.59	5.92		.01	.24	.24		.02	.21	.21		.04	.19	.19		.12	.36	.34	
.18	.15	.18	.11	6.60	9.10	6.27		.01	.25	.25		.02	.23	.23		.05	.21	.20		.13	.38	.36	
.19	.16	.19	.11	6.97	9.61	6.61		.01	.27	.27		.02	.24	.24		.05	.22	.21		.14	.40	.38	
.20	.17	.21	.12	7.33	10.11	6.96		.01	.28	.28		.02	.25	.25		.05	.23	.22		.14	.43	.40	
.21	.18	.22	.12	7.70	10.62	7.31		.01	.30	.30		.02	.27	.27		.05	.24	.24		.15	.45	.42	
.22	.19	.23	.13	8.07	11.12	7.66		.01	.31	.31		.02	.28	.28		.06	.25	.25		.16	.47	.44	
.23	.19	.24	.14	8.43	11.63	8.01		.01	.32	.32		.02	.29	.29		.06	.26	.26		.16	.49	.46	
.24	.20	.25	.14	8.80	12.13	8.35		.01	.34	.34		.02	.31	.31		.06	.28	.27		.17	.51	.48	
.25	.21	.26	.15	9.16	12.64	8.70		.02	.35	.35		.02	.32	.32		.06	.29	.28		.18	.53	.50	
.26	.22	.27	.15	9.53	13.15	9.05		.02	.37	.37		.03	.33	.33		.07	.30	.29		.19	.56	.52	
.27	.23	.28	.16	9.90	13.65	9.40		.02	.38	.38		.03	.34	.34		.07	.31	.30		.19	.58	.54	
.28	.24	.29	.17	10.26	14.16	9.75		.02	.39	.39		.03	.36	.36		.07	.32	.31		.20	.60	.56	
.29	.25	.30	.17	10.63	14.66	10.09		.02	.41	.41		.03	.37	.37		.07	.33	.32		.21	.62	.58	
.30	.25	.31	.18	11.00	15.17	10.44		.02	.42	.42		.03	.38	.38		.08	.35	.34		.21	.64	.60	

Table of values of Azimuth, Collimation and Level errors.

18555

21.24 ^m				21.26 ^m			21.37 ^m			21.46 ^m			21.55 ^m			22.34 ^m		
B Aquarii				B Cephei			e Regasi			16 Regasi			a Aquarii			S Regasi		
az.	coll.	Inc.		az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.
1.00	0.75	1.01	0.67	1.35	2.91	2.58	0.55	1.07	0.85	0.34	1.10	1.05	0.69	1.00	0.73	0.52	1.02	0.88
0.07	.07	.01	.07	.01	.03	.03	.07	.01	.07	.00	.01	.01	.01	.07	.07	.01	.01	.01
.02	.02	.02	.07	.03	.06	.05	.01	.02	.02	.01	.02	.02	.07	.02	.01	.02	.02	.02
.03	.02	.03	.02	.04	.09	.08	.02	.03	.02	.01	.03	.03	.02	.03	.02	.02	.03	.03
.04	.03	.04	.03	.05	.12	.10	.02	.04	.03	.02	.04	.04	.03	.04	.03	.02	.04	.03
.05	.04	.05	.03	.07	.15	.13	.03	.05	.04	.02	.05	.05	.03	.05	.04	.03	.05	.04
.06	.05	.06	.04	.08	.17	.16	.03	.06	.05	.02	.06	.06	.04	.06	.06	.03	.06	.05
.07	.05	.07	.05	.09	.20	.18	.04	.07	.06	.02	.07	.07	.05	.07	.05	.04	.07	.06
.08	.06	.08	.05	.11	.23	.21	.04	.08	.07	.03	.08	.08	.05	.08	.06	.04	.08	.07
.09	.07	.09	.06	.12	.26	.23	.05	.09	.07	.03	.09	.09	.06	.09	.06	.05	.09	.08
.10	.08	.10	.07	.13	.29	.26	.06	.10	.08	.03	.10	.10	.07	.10	.07	.05	.10	.09
.11	.08	.11	.07	.15	.32	.28	.06	.11	.09	.04	.12	.12	.08	.11	.08	.06	.11	.09
.12	.09	.12	.08	.16	.35	.31	.07	.12	.10	.04	.13	.13	.08	.12	.09	.07	.12	.10
.13	.10	.13	.09	.17	.38	.34	.07	.13	.11	.04	.14	.14	.09	.13	.09	.07	.13	.11
.14	.11	.14	.09	.19	.41	.36	.08	.14	.12	.05	.15	.15	.10	.14	.10	.08	.14	.12
.15	.11	.15	.10	.20	.44	.39	.08	.15	.13	.05	.16	.16	.10	.15	.11	.08	.15	.13
.16	.12	.16	.11	.21	.47	.41	.09	.16	.13	.05	.17	.17	.11	.16	.12	.09	.16	.14
.17	.13	.17	.11	.23	.49	.44	.09	.17	.14	.06	.18	.18	.12	.17	.12	.09	.17	.15
.18	.14	.18	.12	.24	.52	.47	.10	.18	.15	.06	.19	.19	.12	.18	.13	.10	.18	.15
.19	.14	.19	.12	.25	.55	.49	.11	.19	.16	.06	.20	.20	.13	.19	.14	.10	.19	.16
.20	.15	.20	.13	.27	.58	.52	.11	.20	.17	.07	.21	.21	.14	.20	.15	.11	.20	.17
.21	.16	.21	.14	.28	.61	.54	.12	.21	.18	.07	.23	.22	.14	.21	.15	.11	.21	.18
.22	.17	.22	.15	.30	.64	.57	.12	.22	.19	.07	.24	.23	.15	.22	.16	.12	.22	.19
.23	.17	.23	.16	.31	.67	.59	.13	.23	.19	.08	.25	.24	.16	.23	.17	.13	.23	.20
.24	.18	.24	.16	.32	.70	.62	.13	.24	.20	.08	.26	.25	.16	.24	.17	.13	.24	.20
.25	.19	.25	.17	.34	.73	.65	.14	.25	.21	.08	.27	.26	.17	.25	.18	.14	.25	.21
.26	.20	.26	.17	.35	.76	.67	.14	.26	.22	.09	.28	.27	.18	.26	.19	.14	.26	.22
.27	.20	.27	.18	.37	.79	.70	.15	.27	.23	.09	.29	.28	.18	.27	.20	.15	.27	.23
.28	.21	.28	.19	.38	.81	.72	.16	.28	.24	.09	.30	.29	.19	.28	.20	.15	.28	.24
.29	.22	.29	.19	.39	.84	.75	.16	.29	.25	.10	.31	.30	.20	.29	.21	.16	.29	.25
.30	.23	.30	.20	.40	.87	.77	.17	.30	.26	.10	.33	.31	.21	.30	.22	.16	.30	.26

Table of values of Azimuth, Collimation and Level errors.

22 ^h 49 ^m α Psc. Aves.			22 ^h 57 ^m α Pegasi			23 ^h 32 ^m i Piscium			23 ^h 33 ^m α Cephei			23 ^h 57 ^m ω Piscium					
az.	coll.	lev.	az.	coll.	lev.	az.	coll.	lev.	az.	coll.	lev.	az.	coll.	lev.	az.	coll.	lev.
1.00	1.11	1.16	0.34	0.48	1.03	0.91	0.61	1.00	0.80	2.48	4.38	3.61	0.58	1.07	0.82		
0.01	.01	.01	.00	.00	.01	.01	.01	.01	.01	.02	.04	.024	.01	.01	.01		
.02	.02	.02	.01	.01	.02	.02	.01	.02	.02	.06	.09	.07	.01	.02	.02		
.03	.03	.03	.01	.01	.03	.03	.02	.03	.02	.07	.13	.11	.02	.03	.03		
.04	.04	.05	.01	.02	.04	.04	.02	.04	.03	.10	.18	.14	.02	.04	.04		
.05	.05	.06	.02	.02	.05	.05	.03	.05	.04	.12	.22	.18	.03	.05	.04		
.06	.07	.07	.02	.03	.06	.05	.04	.06	.05	.15	.26	.22	.03	.06	.05		
.07	.08	.08	.02	.03	.07	.06	.04	.07	.06	.17	.31	.25	.04	.07	.06		
.08	.09	.09	.03	.04	.08	.07	.05	.08	.06	.20	.35	.29	.05	.08	.07		
.09	.10	.10	.03	.04	.09	.08	.05	.09	.07	.22	.39	.32	.05	.09	.07		
.10	.11	.12	.03	.05	.10	.09	.06	.10	.08	.25	.44	.36	.06	.10	.08		
.11	.12	.13	.04	.05	.11	.10	.07	.11	.09	.27	.48	.40	.06	.11	.09		
.12	.13	.14	.04	.06	.12	.11	.07	.12	.10	.30	.53	.43	.07	.12	.10		
.13	.14	.15	.04	.06	.13	.12	.08	.13	.10	.32	.57	.47	.08	.13	.11		
.14	.16	.16	.05	.07	.14	.13	.09	.14	.11	.35	.61	.57	.08	.14	.11		
.15	.17	.17	.05	.07	.15	.14	.09	.15	.12	.37	.66	.54	.09	.15	.12		
.16	.18	.19	.05	.08	.16	.15	.10	.16	.13	.40	.70	.58	.09	.16	.13		
.17	.20	.20	.06	.08	.18	.15	.10	.17	.14	.42	.74	.61	.10	.17	.14		
.18	.20	.21	.06	.09	.19	.16	.11	.18	.14	.44	.79	.65	.11	.18	.15		
.19	.21	.22	.06	.09	.20	.17	.12	.19	.15	.47	.83	.69	.11	.19	.16		
.20	.22	.23	.07	.10	.21	.18	.12	.20	.16	.50	.88	.72	.12	.20	.16		
.21	.23	.24	.07	.10	.22	.19	.13	.21	.17	.52	.92	.76	.12	.21	.17		
.22	.24	.26	.07	.11	.23	.20	.14	.22	.18	.55	.96	.80	.13	.22	.18		
.23	.26	.27	.08	.11	.24	.21	.14	.23	.18	.57	1.01	.83	.14	.23	.19		
.24	.27	.28	.08	.12	.25	.22	.15	.24	.19	.59	1.05	.87	.14	.24	.20		
.25	.28	.29	.08	.12	.26	.23	.15	.25	.20	.62	1.10	.90	.15	.25	.21		
.26	.29	.30	.09	.13	.27	.24	.16	.26	.21	.64	1.14	.94	.15	.26	.21		
.27	.30	.31	.09	.13	.28	.25	.17	.27	.22	.67	1.18	.98	.16	.27	.22		
.28	.31	.32	.10	.14	.29	.25	.17	.28	.22	.69	1.23	1.01	.16	.28	.23		
.29	.32	.34	.10	.14	.30	.26	.18	.29	.23	.72	1.27	1.05	.17	.29	.24		
.30	.33	.35	.10	.15	.31	.27	.18	.30	.24	.74	1.31	1.08	.18	.30	.25		

Table of values of Azimuth, Collimation, and Level errors.
for stars Sub. Polo.

13 ^h .07 ^m			6 ^h .18 ^m			18 ^h .32 ^m			2 ^h .57 ^m			5 ^h .00 ^m					
Polaris S.P.			R. Urs. Min. S.P.			57 G. Phe. S.P.			B. Urs. Min. S.P.			E. Urs. Min. S.P.					
az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.	az.	coll.	Inc.
1.00	29.08	38.46	25.18	13.06	18.85	10.60	16.09	20.86	13.33	3.36	3.81	1.74	6.12	7.44	4.23		
0.07	.29	.38	.25	.13	.17	.11	.16	.21	.13	.03	.04	.02	.06	.07	.04		
.02	.58	.77	.50	.26	.34	.21	.32	.42	.27	.07	.08	.03	.12	.15	.08		
.03	.87	1.15	.76	.36	.57	.32	.48	.63	.40	.10	.11	.05	.18	.22	.13		
.04	1.16	1.52	1.01	.56	.67	.42	.64	.84	.53	.14	.15	.07	.24	.30	.17		
.05	1.45	1.92	1.26	.65	.84	.53	.80	1.04	.67	.17	.19	.09	.31	.37	.21		
.06	1.74	2.31	1.57	.79	1.01	.64	.97	1.25	.80	.20	.23	.10	.37	.45	.25		
.07	2.04	2.69	1.76	.52	1.18	.74	1.13	1.46	.93	.24	.27	.12	.43	.52	.30		
.08	2.33	3.08	2.01	1.05	1.35	.85	1.29	1.67	1.07	.27	.30	.14	.49	.60	.34		
.09	2.62	3.46	2.27	1.18	1.52	.95	1.45	1.88	1.20	.31	.34	.16	.55	.67	.38		
.10	2.91	3.85	2.52	1.31	1.68	1.06	1.61	2.09	1.33	.34	.38	.17	.67	.74	.42		
.11	3.20	4.23	2.77	1.44	1.85	1.17	1.77	2.30	1.47	.37	.42	.19	.67	.82	.47		
.12	3.49	4.62	3.02	1.57	2.02	1.27	1.93	2.57	1.60	.41	.46	.21	.73	.89	.57		
.13	3.78	5.00	3.27	1.70	2.19	1.38	2.09	2.72	1.73	.44	.50	.23	.80	.97	.58		
.14	4.07	5.38	3.53	1.83	2.36	1.48	2.25	2.92	1.87	.47	.53	.24	.86	1.04	.59		
.15	4.36	5.77	3.78	1.96	2.53	1.59	2.41	3.13	2.00	.57	.57	.26	.92	1.12	.63		
.16	4.65	6.15	4.03	2.09	2.70	1.70	2.57	3.34	2.13	.52	.61	.28	.98	1.19	.68		
.17	4.94	6.54	4.28	2.23	2.86	1.80	2.74	3.75	2.27	.58	.65	.30	1.04	1.26	.72		
.18	5.23	6.92	4.53	2.36	3.03	1.91	2.90	3.76	2.40	.61	.69	.31	1.10	1.34	.76		
.19	5.53	7.31	4.78	2.49	3.20	2.01	3.06	3.97	2.53	.64	.72	.33	1.16	1.41	.80		
.20	5.82	7.69	5.04	2.62	3.37	2.13	3.22	4.18	2.67	.68	.76	.35	1.22	1.49	.85		
.21	6.11	8.08	5.29	2.75	3.54	2.23	3.38	4.39	2.80	.71	.80	.37	1.29	1.56	.89		
.22	6.40	8.46	5.54	2.88	3.71	2.34	3.54	4.60	2.93	.75	.84	.38	1.35	1.64	.93		
.23	6.69	8.88	5.79	3.01	3.88	2.44	3.70	4.80	3.07	.78	.88	.40	1.41	1.71	.97		
.24	6.98	9.23	6.04	3.14	4.04	2.54	3.86	5.01	3.20	.81	.91	.42	1.47	1.79	1.00		
.25	7.27	9.62	6.29	3.27	4.21	2.65	4.02	5.22	3.33	.85	.95	.44	1.53	1.86	1.06		
.26	7.56	10.00	6.53	3.40	4.38	2.76	4.18	5.43	3.47	.88	.99	.45	1.59	1.93	1.10		
.27	7.85	10.38	6.80	3.53	4.53	2.86	4.34	5.64	3.60	.92	1.03	.47	1.65	2.01	1.14		
.28	8.14	10.77	7.05	3.67	4.72	2.97	4.57	5.85	3.73	.95	1.07	.49	1.71	2.08	1.18		
.29	8.43	11.15	7.30	3.80	4.89	3.07	4.67	6.06	3.87	.98	1.10	.50	1.77	2.16	1.23		
.30	8.72	11.54	7.55	3.93	5.05	3.18	4.83	6.27	4.00	1.02	1.14	.52	1.84	2.23	1.27		

Owing to the annual change in the declination of Polaris, the tabular quantities are to be multiplied in 1855, by 1.02

For 2 Urs. Min. increase by $\frac{1}{75}$

Table of values of Azimuth, Collimation and Level errors.
for stars Sub. Polo.

	22 ^h 54 ^m			3 ^h 49 ^m		
	α Hrs. Maj. S.P.			ξ Hrs. Min. S.P.		
	az.	coll.	inc.	az.	coll.	inc.
1.00	2.10	2.18	0.58	4.23	4.61	2.50
0.01	.02	.02	.01	.04	.05	.02
.02	.04	.04	.01	.09	.10	.05
.03	.06	.07	.02	.13	.16	.07
.04	.08	.09	.02	.17	.20	.10
.05	.11	.11	.03	.21	.25	.12
.06	.13	.13	.03	.25	.26	.15
.07	.15	.15	.04	.30	.34	.17
.08	.17	.17	.04	.34	.36	.20
.09	.19	.20	.05	.38	.44	.22
.10	.21	.22	.06	.42	.46	.25
.11	.23	.24	.06	.47	.52	.27
.12	.25	.26	.07	.57	.59	.30
.13	.27	.28	.07	.53	.64	.33
.14	.29	.31	.08	.59	.66	.35
.15	.32	.33	.08	.63	.74	.38
.16	.34	.35	.09	.67	.79	.40
.17	.36	.37	.10	.72	.84	.43
.18	.38	.39	.10	.76	.88	.45
.19	.40	.41	.11	.80	.93	.47
.20	.42	.44	.11	.85	.98	.50
.21	.44	.46	.12	.89	1.03	.52
.22	.46	.48	.12	.93	1.08	.53
.23	.48	.50	.13	.97	1.13	.58
.24	.50	.52	.13	1.01	1.18	.60
.25	.53	.55	.14	1.06	1.23	.62
.26	.55	.57	.15	1.10	1.28	.65
.27	.57	.59	.15	1.14	1.33	.67
.28	.59	.61	.16	1.18	1.38	.70
.29	.61	.63	.16	1.23	1.42	.73
.30	.63	.65	.17	1.27	1.47	.75

1955 phase, prof. 2585