Det Kgl. Danske Videnskabernes Selskab.
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BESTIMMUNG DER BAHN DES PERIODISCHEN KOMETEN COMAS SOLÁ (1926 f).

VON

JULIE M. VINTER HANSEN

KØBENHAVN
HOVEDKOMMISSIONÆR: ANDR. FRED. HØST & SØN, KGL. HOF-BOGHANDEL
BIANCO LUNOS BOGTRYKKERI A/S
1931

Der Komet 1926 f wurde den 4. November 1926 von Professor COMAS SOLÁ in Barcelona entdeckt. Der Komet war bei der Entdeckung von der 12ten Grössenklasse. Es liegen 199 Beobachtungen innerhalb des Zeitraumes 1926 November 4 bis 1927 Mai 31 vor.

Es sind verschiedene vorläufige Bahnen gerechnet worden: von EBELL, CROMMELIN, MERTON, BRIGHAM und PRESCOTT, SMILEY und HOLBROOK, CUNNINGHAM, MELLO E SIMAS. Der Bahnverbesserung ist das von Mello e Simas berechnete Elementensystem (A.N. *230*, 109) zu Grunde gelegt.

Dr. CROMMELIN hat die Vermutung ausgesprochen, dass dieser Komet mit dem Kometen SPITALER (1890 VII) identisch sein sollte. Mit Hilfe des Tisserandschen Kriteriums kommt *Mello e Simas* (A.N. *230*, 110) zu dem Resultat, dass diese Identität nicht sehr wahrscheinlich ist.

Die Elemente von *Mello e Simas* lauten:

Epoche und Oskulation 1926 Nov. 30.0 Weltzeit.

$$
\begin{aligned}
M &= 347^\circ\ 2'\ 11''.4 \\
\omega &= 38\ 27\ 13.0 \\
\Omega &= 65\ 37\ 6.8 \quad \Big\} \ 1927.0 \\
i &= 13\ 45\ 43.4 \\
\varphi &= 35\ 7\ 20.3 \\
\log a &= 0.620\ 551 \\
\log q &= 0.248\ 610 \\
\mu &= 416''.0830 \\
U &= 8.^{a}\,52776 \text{ (jul. Jahre).} \\
T &= 1927 \text{ März } 22.1618 \text{ Weltzeit.}
\end{aligned}
$$

Mit diesen Elementen habe ich die in Tafel I gegebene Ephemeride berechnet.

Tafel I.

0^h Weltzeit.

1926—27	α vera	δ vera	log Δ	Aberr.-Zeit
Nov. 1	$3^h\ 0^m\ 22^s.45$	$+\ 6°\ 22'\ 3''.8$	0.092 416	$10^m\ 17^s$
5	2 56 40.30	6 32 36.1	83 812	10 5
9	52 45.55	6 45 23.3	76 546	9 55
13	48 43.70	7 0 39.4	70 688	9 47
17	44 40.55	7 18 35.3	66 281	9 41
21	40 41.89	7 39 17.1	63 335	9 37
25	36 53.36	8 2 48.9	61 836	9 35
29	33 20.67	8 29 12.5	61 747	9 35
Dez. 3	30 9.03	8 58 27.0	62 996	9 37
7	27 23.31	9 30 29.9	65 492	9 40
11	25 7.47	10 5 16.7	69 114	9 45
15	23 24.72	10 42 39.6	73 728	9 51
19	22 17.02	11 22 28.3	79 201	9 58
23	21 45.78	12 4 31.8	85 407	10 7
27	21 51.77	12 48 38.3	92 233	10 16
31	22 35.39	13 34 37.2	99 562	10 27
Jan. 4	23 56.80	14 22 17.2	107 298	10 38
8	25 55.58	15 11 28.6	115 334	10 50
12	28 31.03	16 1 59.3	123 587	11 3
16	31 41.95	16 53 34.1	131 982	11 16
20	35 27.19	17 46 1.2	140 460	11 29
24	39 45.69	18 39 6.7	148 985	11 43
28	44 36.38	19 32 38.4	157 517	11 56
Febr. 1	49 58.48	20 26 23.4	166 027	12 11
5	2 55 50.87	21 20 9.6	174 486	12 25
9	3 2 12.51	22 13 42.2	182 868	12 40
13	9 2.22	23 6 47.6	191 156	12 54
17	16 18.90	23 59 9.9	199 345	13 9
21	3 24 1.58	$+\ 24\ 50\ 34.1$	0.207 434	13 24

1927	α vera	δ vera	log Δ	Aberr.-Zeit
Febr. 25	$3^h\ 32^m\ 9^s.35$	$+25°\ 40'\ 45''.2$	0.215 427	$13^m\ 39^s$
März 1	40 41.46	26 29 28.9	223 324	13 54
5	49 37.12	27 16 30.9	231 124	14 9
9	3 58 55.30	28 1 36.3	238 825	14 24
13	4 8 34.87	28 44 29.9	246 431	14 39
17	18 34.53	29 24 56.0	253 947	14 55
21	28 53.10	30 2 40.0	261 384	15 10
25	39 29.43	30 37 28.0	268 753	15 26
29	4 50 22.36	31 9 8.1	276 062	15 41
April 2	5 1 30.59	31 37 28.9	283 314	15 57
6	12 52.57	32 2 20.0	290 509	16 13
10	24 26.56	32 23 31.3	297 653	16 29
14	36 10.72	32 40 55.1	304 750	16 46
18	5 48 3.24	32 54 23.9	311 808	17 2
22	6 0 2.30	33 3 54.0	318 833	17 19
26	12 6.25	33 9 22.7	325 832	17 36
30	24 13.40	33 10 48.4	332 805	17 53
Mai 4	36 21.98	33 8 12.9	339 747	18 10
8	6 48 30.06	33 1 37.8	346 659	18 27
12	7 0 35.88	32 51 7.7	353 538	18 45
16	12 37.79	32 36 48.9	360 387	19 3
20	24 34.36	32 18 48.0	367 209	19 21
24	36 24.35	31 57 13.3	374 002	19 39
28	48 6.68	31 32 14.9	380 763	19 58
Juni 1	7 59 40.40	31 4 2.8	387 483	20 17
5	8 11 4.66	$+30$ 32 48.9	0. 394 157	20 35

Tafel II enthält das gesamte zur Verfügung stehende Beobachtungsmaterial, ferner die aus der Ephemeride interpolierten Positionen, die Werte für Beobachtung minus Rechnung ($\Delta\alpha \cos\delta$ und $\Delta\delta$) und die angewandten Gewichte, die mit Hilfe eines graphischen Vergleichs zwischen Beobachtung und Rechnung geschätzt sind.

Tafel II.

Nr.	Beobacht.-Ort	Weltzeit—Aberr.-Z.	Beobachtung	
			α app. geoz.	δ app. geoz.
1	Simeïs	1926 Nov. 4.9152	2^h 56^m $46^s.0$ -	+6° 32′ 26″. -
2	Barcelona	4.9930	56 39. -	31 -
3	»	5.9930	55 43.3 -	35 54. -
4	Wien	7.01903	54 44.74	38 49.7
5	»	8.88767	52 53.91	45 5.8
6	Bergedorf	9.9987	51 45.59	49 4.2
7	Yerkes	10.07450	51 42.55	49 18.4
8	Greenwich	10.1325	51 38.59	49 33.7
9	Barcelona	10.82181	50 57.4 -	52 8. -
10	Heidelberg	10.86911	50 54.33	52 15.6
11	Uccle	10.89636	50 52.0 -	52 27.1
12	Bergedorf	10.90941	50 51.85	52 26.0
13	»	10.94514	50 49.72	52 32.9
14	Besançon	10.99216	50 47.06	52 44.5
15	Yerkes	11.19648	50 34.39	6 53 31.8
16	Lisboa	12.90909	48 50.41	7 0 21.3
17	Greenwich	12.92277	48 49.44	0 23.9
18	Barcelona	13.98378	47 43.9 -	4 53. -
19	Kingswood	14.93244	46 46.46	9 7.5
20	Lisboa	14.93692	46 46.78	9 4.7
21	Greenwich	14.9905	46 43.64	9 16.2
22	Yerkes	21.19145	40 32.23	40 24.5
23	Barcelona	21.74471	39 59.4 -	43 33. -
24	Yerkes	22.01165	39 44.21	45 2.1
25	Barcelona	22.77640	39 0.2 -	49 28. -
26	Santiago	23.07112	38 42.96	51 13.0
27	Nice	23.78784	38 2.68	55 27.3
28	Santiago	24.08559	37 46.06	7 57 13.4
29	Nice	24.78362	37 6.93	8 1 35.4
30	Torino	24.82655	37 3.76	1 27.8
31	Santiago	25.08554	36 49.71	3 24.0
32	Barcelona	25.79195	36 10.2 -	7 51. -
33	Besançon	25.81195	2 36 9.85	+8 8 2.7

Tafel II.

Beobachtung		Rechnung		B—R		Gew.	Nr.
geoz.	δ app. geoz.	α vera	δ vera	$\Delta\alpha \cos\delta$	$\Delta\delta$		
$46^s.0$ -	$+6°\,32'\,26''.-$	$2^h\,56^m\,45^s.16$	$+6°\,32'\,21''.4$	$+0^s.8$ -	$+\ 5''.-$	1	1
39.-	31 -	56 40.75	32 34.8	$-2.-$	—	0	2
43.3 -	35 54.-	55 43.00	35 33.4	$+0.3$ -	$+21.-$	0	3
44.74	38 49.7	54 43.04	38 45.6	$+1.69$	$+\ 4.1$	2	4
53.91	45 5.8	52 52.27	44 59.8	$+1.63$	$+\ 6.0$	2	5
45.59	49 4.2	51 45.60	48 57.7	$+0.2$ -	$+\ 6.5$	0	6
42.55	49 18.4	51 41.04	49 14.3	$+1.50$	$+\ 4.1$	2	7
38.59	49 33.7	51 37.55	49 27.1	$+1.03$	$+\ 6.6$	2	8
57.4 -	52 8.-	50 55.93	52 1.4	$+1.5$ -	$+\ 7.-$	2	9
54.33	52 15.6	50 53.07	52 12.2	$+1.25$	$+\ 3.4$	2	10
52.0 -	52 27.1	50 51.42	52 18.4	$+0.6$ -	$+\ 8.7$	1	11
51.85	52 26.0	50 50.63	52 21.4	$+1.21$	$+\ 4.6$	2	12
49.72	52 32.9	50 48.47	52 29.5	$+1.24$	$+\ 3.4$	2	13
47.06	52 44.5	50 45.63	52 40.3	$+1.42$	$+\ 4.2$	2	14
34.39	6 53 31.8	50 33.25	6 53 27.2	$+1.13$	$+\ 4.6$	2	15
50.41	7 0 21.3	48 49.24	7 0 16.8	$+1.16$	$+\ 4.5$	2	16
49.44	0 23.9	48 48.40	0 20.2	$+1.03$	$+\ 3.7$	2	17
43.9 -	4 53.-	47 43.80	4 49.0	$+0.1$ -	$+\ 4.-$	0	18
46.46	9 7.5	46 46.04	8 58.8	$+0.42$	$+\ 8.7$	0	19
46.78	9 4.7	46 45.76	9 0.0	$+1.01$	$+\ 4.7$	2	20
43.64	9 16.2	46 42.51	9 14.4	$+1.12$	$+\ 1.8$	1	21
32.23	40 24.5	40 30.68	40 20.8	$+1.54$	$+\ 3.7$	1	22
59.4 -	43 33.-	39 58.40	43 27.0	$+1.0$ -	$+\ 6.-$	2	23
44.21	45 2.1	39 42.91	44 58.0	$+1.29$	$+\ 4.1$	2	24
0.2 -	49 28.-	38 58.82	49 23.0	$+1.4$ -	$+\ 5.-$	2	25
42.96	51 13.0	38 41.94	51 6.8	$+1.01$	$+\ 6.2$	2	26
2.68	55 27.3	38 1.20	55 23.0	$+1.47$	$+\ 4.3$	1	27
46.06	7 57 13.4	37 44.41	7 57 11.1	$+1.63$	$+\ 2.3$	1	28
6.93	8 1 35.4	37 5.37	8 1 28.1	$+1.54$	$+\ 7.3$	1	29
3.76	1 27.8	37 2.98	1 44.1	$+0.77$	-16.3	0	30
49.71	3 24.0	36 48.63	3 21.0	$+1.07$	$+\ 3.0$	2	31
10.2 -	7 51.-	36 9.82	7 48.8	$+0.4$ -	$+\ 2.-$	0	32
9.85	$+8\ 8\ 2.7$	2 36 8.74	$+8\ 7\ 56.5$	$+1.10$	$+\ 6.2$	2	33

Nr.	Beobacht.-Ort	Weltzeit—Aberr.-Z.	Beobachtung		Rec
			α app. geoz.	δ app. geoz.	α vera
34	Padova	1926 Nov. 25.81297	$2^h\ 36^m\ 9^s.38$	$+8°\ 8'\ 3''.5$	$2^h\ 36^m\ 8.^s68$
35	Torino	25.83960	36 8.56	8 12.6	36 7.23
36	Alger	25.86110	36 6.95	8 17.3	36 6.06
37	Nice	25.86165	36 7.33	8 15.5	36 6.03
38	Padova	25.90769	36 3.54	8 29.6	36 3.52
39	Lisboa	25.95821	36 1.53	8 57.5	36 0.77
40	Santiago	26.05949	35 56.56	9 37.4	35 55.27
41	Padova	26.78252	35 15.80	14 24.8	35 16.31
42	Wien	26.83582	35 15.06	14 38.4	35 13.46
43	Alger	26.87395	35 12.30	14 51.5	35 11.43
44	Athen	26.88088	35 12.17	14 58.3	35 11.06
45	Lisboa	26.90002	35 11.20	15 5.3	35 10.04
46	Padova	26.91410	35 9.40	15 16.7	35 9.28
47	Lisboa	26.92120	35 9.87	15 12.3	35 8.90
48	Santiago	27.06948	35 1.74	16 17.7	35 1.02
49	Yerkes	27.13391	34 58.54	16 35.4	34 57.59
50	Wien	27.84372	34 21.38	21 21.5	34 19.90
51	Triest	27.89515	34 17.75	21 10.6	34 17.54
52	Lisboa	27.90150	34 18.35	21 43.4	34 17.20
53	Kingswood	27.9943	34 13.07	22 23.9	34 12.36
54	Santiago	28.09513	34 8.09	23 7.0	34 7.13
55	»	28.10190	34 7.63	23 8.7	34 6.77
56	Padova	29.82417	32 40.17	—	32 39.30
57	»	29.82623	—	35 2.3	—
58	Athen	29.88139	32 37.23	35 28.2	32 36.44
59	Lisboa	29.93138	32 35.01	35 49.8	32 33.99
60	Triest	29.93430	32 35.42	36 1.6	32 33.82
61	Santiago	30.10775	32 26.38	37 7.1	32 25.28
62	Yerkes	30.12506	32 25.48	37 11.9	32 24.43
63	Athen	Dez. 1.87438	31 1.34	8 49 59.9	31 0.55
64	Barcelona	3.77513	29 35.4 -	9 4 29. -	29 34.77
65	Kingswood	3.8843	29 30.82	5 19.1	29 30.02
66	Lisboa	3.91551	2 29 29.75	$+9$ 5 36.8	2 29 28.67 +

Beobachtung		Rechnung		B—R		Gew.	Nr.
oz.	δ app. geoz.	α vera	δ vera	$\Delta\alpha \cos\delta$	$\Delta\delta$		
.38	+8° 8′ 3″.5	2h 36m 8.s68	+8° 7′56″.9	+0.s69	+ 6″.6	2	34
.56	8 12.6	36 7.23	8 7.1	+1.32	+ 5.5	2	35
.95	8 17.3	36 6.06	8 15.3	+0.88	+ 2.0	2	36
.33	8 15.5	36 6.03	8 15.5	+1.29	0.0	1	37
.54	8 29.6	36 3.52	8 33.2	+0.02	— 3.6	0	38
.53	8 57.5	36 0.77	8 52.6	+0.75	+ 4.9	2	39
.56	9 37.4	35 55.27	9 31.7	+1.28	+ 5.7	2	40
.80	14 24.8	35 16.31	14 13.4	−0.50	+11.4	0	41
.06	14 38.4	35 13.46	14 34.4	+1.58	+ 4.0	1	42
.30	14 51.5	35 11.43	14 49.5	+0.86	+ 2.0	2	43
.17	14 58.3	35 11.06	14 52.2	+1.10	+ 6.1	2	44
.20	15 5.3	35 10.04	14 59.7	+1.15	+ 5.6	2	45
.40	15 16.7	35 9.28	15 5.3	+0.12	+11.4	0	46
.87	15 12.3	35 8.90	15 8.1	+0.96	+ 4.2	2	47
.74	16 17.7	35 1.02	16 6.8	+0.71	+10.9	0	48
.54	16 35.4	34 57.59	16 32.4	+0.94	+ 3.0	2	49
.38	21 21.5	34 19.90	21 17.1	+1.46	+ 4.4	1	50
.75	21 10.6	34 17.54	21 38.0	+0.21	−27.4	0	51
.35	21 43.4	34 17.20	21 40.6	+1.14	+ 2.8	2	52
.07	22 23.9	34 12.36	22 18.3	+0.70	+ 5.6	2	53
.09	23 7.0	34 7.13	22 59.3	+0.95	+ 7.7	2	54
.63	23 8.7	34 6.77	25 2.0	+0.85	+ 6.7	2	55
.17	—	32 39.30	—	+0.86	—	2	56
	35 2.3	—	35 1.0	—	+ 1.3	2	57
.23	35 28.2	32 36.44	35 24.7	+0.78	+ 3.5	2	58
.01	35 49.8	32 33.99	35 45.8	+1.01	+ 4.0	2	59
.42	36 1.6	32 33.82	35 47.4	+1.58	+14.2	0	60
.38	37 7.1	32 25.28	37 1.4	+0.99	+ 5.7	2	61
.48	37 11.9	32 24.43	37 8.8	+1.04	+ 3.1	2	62
.34	8 49 59.9	31 0.55	8 49 56.1	+0.78	+ 3.8	2	63
.4-	9 4 29.-	29 34.77	9 4 26.6	+0.6-	+ 2.-	2	64
.82	5 19.1	29 30.02	5 17.8	+0.79	+ 1.3	2	65
.75	+9 5 36.8	2 29 28.67	+9 5 32.4	+1.07	+ 4.4	2	66

Nr.	Beobacht.-Ort	Weltzeit—Aberr.-Z.	Beobachtung		Rech
			α app. geoz.	δ app. geoz.	α vera
67	Santiago	1926 Dez. 4.08108	$2^h\ 29^m\ 22^s.60$	$+\ 9°\ 6'\ 52.''2$	$2^h\ 29^m\ 21^s.52$
68	»	4.08469	29 22.72	6 53.6	29 21.36
69	»	4.08640	29 22.44	6 53.1	29 21.29
70	Athen	4.81467	28 51.28	12 43.2	28 50.40
71	Lisboa	4.89104	28 48.34	13 19.9	28 47.21
72	»	5.89381	28 7.18	21 26.0	28 6.32
73	Barcelona	5.9093	28 6.4 -	21 29. -	28 5.70
74	Lisboa	6.91827	27 27.11	29 50.4	27 26.41
75	Padova	7.76616	26 56.17	36 59.7	26 54.88
76	Torino	7.86286	26 52.46	37 40.1	26 51.29
77	Lisboa	7.87522	26 51.35	38 0.9	26 50.92
78	Padova	7.92914	26 51.75	38 2.5	26 48.97
79	Santiago	8.10550	26 43.44	39 52.0	26 42.64
80	Athen	8.81625	26 19.27	46 7.3	26 17.73
81	Padova	8.82473	26 18.47	46 6.9	26 17.44
82	Lisboa	8.87842	26 16.37	46 39.8	26 15.60
83	Besançon	9.79404	25 46.56	54 42.7	25 45.08
84	Alger	9.81475	25 45.16	54 43.6	25 44.42
85	Padova	9.82000	25 45.54	54 51.5	25 44.25
86	Barcelona	9.82404	25 44.8 -	54 50. -	25 44.11
87	Torino	9.85940	25 44.65	55 1.9	25 42.97
88	Lisboa	9.89634	25 42.57	9 55 28.3	25 41.78
89	Madrid	10.83177	25 12.4 -	10 3 43. -	25 12.54
90	»	10.92865	25 9.0 -	4 32. -	25 9.61
91	Lisboa	10.95412	25 9.78	4 54.1	25 8.84
92	Santiago	11.11639	25 5.25	6 24.9	25 4.00
93	»	11.11869	25 5.27	6 23.2	25 3.94
94	Lisboa	11.91021	24 41.79	13 41.5	24 41.11
95	Yerkes	14.30881	23 40.56	10 36 6.3	23 40.02
96	Madrid	18.78718	22 20.4 -	11 19 53. -	22 19.72
97	»	19.83542	22 8.2 -	30 53. -	22 7.46
98	»	20.81025	21 58.9 -	41 18. -	21 58.32
99	Yerkes	21.00918	2 21 57.24	+11 43 22.7	2 21 56.72 +

eobachtung		Rechnung		B—R		Gew.	Nr.
	δ app. geoz.	α vera	δ vera	$\Delta\alpha \cos\delta$	$\Delta\delta$		
0	+ 9° 6′ 52.″2	2h 29m 21s.52	+ 9° 6′ 50″.3	+ 1s.07	+ 1″.9	2	67
2	6 53.6	29 21.36	6 52.0	+ 1.34	+ 1.6	1	68
4	6 53.1	29 21.29	6 52.8	+ 1.14	+ 0.3	2	69
3	12 43.2	28 50.40	12 38.8	+ 0.87	+ 4.4	2	70
4	13 19.9	28 47.21	13 15.3	+ 1.12	+ 4.6	2	71
8	21 26.0	28 6.32	21 21.5	+ 0.85	+ 4.5	2	72
-	21 29.-	28 5.70	21 29.1	+ 0.7 -	0.-	2	73
1	29 50.4	27 26.41	29 48.9	+ 0.69	+ 1.5	2	74
7	36 59.7	26 54.88	36 57.2	+ 1.27	+ 2.5	1	75
3	37 40.1	26 51.29	37 46.5	+ 1.15	− 6.4	0	76
5	38 0.9	26 50.92	37 52.8	+ 0.42	+ 8.1	1	77
5	38 2.5	26 48.97	38 20.3	+ 2.74	− 17.8	0	78
4	39 52.0	26 42.64	39 50.6	+ 0.79	+ 1.4	2	79
7	46 7.3	26 17.73	45 57.6	+ 1.52	+ 9.7	0	80
7	46 6.9	26 17.44	46 2.0	+ 1.02	+ 4.9	2	81
7	46 39.8	26 15.60	46 29.9	+ 0.76	+ 9.9	0	82
3	54 42.7	25 45.08	54 30.8	+ 1.46	+ 11.9	0	83
6	54 43.6	25 44.42	54 41.7	+ 0.73	+ 1.9	2	84
4	54 51.5	25 44.25	54 44.5	+ 1.27	+ 7.0	1	85
-	54 50.-	25 44.11	54 46.6	+ 0.7 -	+ 3.-	2	86
5	55 1.9	25 42.97	55 5.4	+ 1.65	− 3.5	0	87
7	9 55 28.3	25 41.78	9 55 25.0	+ 0.78	+ 3.3	2	88
-	10 3 43.-	25 12.54	10 3 45.7	− 0.1 -	− 3.-	0	89
-	4 32.-	25 9.61	4 38.1	− 0.6 -	− 6.-	0	90
8	4 54.1	25 8.84	4 51.9	+ 0.93	+ 2.2	2	91
5	6 24.9	25 4.00	6 19.8	+ 1.23	+ 5.1	1	92
7	6 23.2	25 3.94	6 21.0	+ 1.31	+ 2.2	1	93
9	13 41.5	24 41.11	13 33.7	+ 0.67	+ 7.8	1	94
6	10 36 6.3	23 40.02	10 36 1.3	+ 0.53	+ 5.0	2	95
-	11 19 53.-	22 19.72	11 20 17.7	+ 0.7 -	− 25.-	0	96
-	30 53.-	22 7.46	31 4.6	+ 0.7 -	− 12.-	0	97
-	41 18.-	21 58.32	41 14.4	+ 0.6 -	+ 4.-	2	98
4	+ 11 43 22.7	2 21 56.72	+ 11 43 19.7	+ 0.51	+ 3.0	2	99

Nr.	Beobacht.-Ort	Weltzeit—Aberr.-Z.	Beobachtung		Rechn	
			α app. geoz.	δ app. geoz.	α vera	
100	Lisboa	1926 Dez. 21.79519	$2^h\ 21^m\ 52^s.14$	$+\ 11°\ 51'\ 42''.3$	$2^h\ 21^m 51^s.31$	
101	Madrid	21.84579	21 51.4 -	11 52 10.-	21 51.01	
102	Barcelona	22.79687	21 46.3 -	12 2 22:-	21 46.48	
103	Lisboa	22.80571	21 46.80	2 24.7	21 46.44	
104	»	23.85426	21 44.31	13 47.0	21 43.92	
105	Barcelona	24.79652	21 43.8 -	24 6.-	21 43.84	
106	Kingswood	24.8186	21 44.42	24 19.4	21 43.86	
107	Lisboa	24.87333	21 44.50	24 57.2	21 43.93	
108	Greenwich	24.9062	21 44.58	25 16.3	21 43.97	
109	Santiago	25.05687	21 44.66	26 58.3	21 44.19	
110	»	25.05833	21 44.25	26 55.7	21 44.19	
111	Yerkes	25.17794	21 44.92	28 18.1	21 44.40	
112	Lisboa	25.90678	21 47.00	36 21.9	21 46.41	
113	»	25.91833	21 46.97	36 38.2	21 46.46	
114	»	27.79259	21 57.86	12 57 40.7	21 57.42	
115	Santiago	28.11028	22 0.67	13 1 12.2	22 0.10	
116	Yerkes	29.07522	22 10.04	12 18.1	22 9.69	
117	Triest	29.85366	22 18.54	—	22 19.04	
118	Santiago	30.08623	22 22.55	24 0.2	22 22.10	
119	Barcelona	30.76763	22 31.7 -	31 55.-	22 31.82	
120	Madrid	30.81012	22 33.5 -	32 27.-	22 32.47	
121	Triest	30.85622	22 34.03	32 54.2	22 33.17	
122	Wien	31.74493	22 48.13	43 22.3	22 47.70	
123	»	31.82030	22 49.48	13 44 18.0	22 49.02	1
124	Lisboa	1927 Jan. 4.79907	24 17.97	14 32 0.3	24 17.56	1
125	»	5.81368	24 45.91	44 26.9	24 46.07	
126	Santiago	6.09076	24 54.84	47 48.5	24 54.27	
127	Torino	6.76325	25 15.34	55 51.4	25 14.90	
128	Lisboa	6.87027	25 18.55	57 24.8	25 18.29	
129	»	6.88419	25 19.00	14 57 32.4	25 18.73	14
130	Yerkes	7.10969	25 26.05	15 0 30.2	25 25.94	15
131	Lisboa	7.90917	25 52.47	10 25.9	25 52.47	
132	»	7.92799	2 25 53.58	$+\ 15\ 10\ 32.3$	2 25 53.12	+15

Beobachtung		Rechnung		B—R		Gew.	Nr.
geoz.	δ app. geoz.	α vera	δ vera	$\Delta\alpha \cos\delta$	$\Delta\delta$		
$52^s.14$	$+ 11^\circ 51' 42''.3$	$2^h 21^m 51^s.31$	$+ 11^\circ 51' 35''.6$	$+ 0^s.81$	$+ 6''.7$	1	100
51.4 -	11 52 10.-	21 51.01	11 52 10.5	+ 0.4 -	0.-	2	101
46.3 -	12 2 22.-	21 46.48	12 2 20.6	− 0.2 -	+ 1.-	0	102
46.80	2 24.7	21 46.44	2 26.3	+ 0.35	− 1.6	2	103
44.31	13 47.0	21 43.92	13 47.0	+ 0.38	0.0	2	104
43.8 -	24 6.-	21 43.84	24 5.8	0.0	0.-	1	105
44.42	24 19.4	21 43.86	24 20.3	+ 0.55	− 0.9	2	106
44.50	24 57.2	21 43.93	24 56.6	+ 0.56	+ 0.6	2	107
44.58	25 16.3	21 43.97	25 18.4	+ 0.60	− 2.1	2	108
44.66	26 58.3	21 44.19	26 58.0	+ 0.46	+ 0.3	2	109
44.25	26 55.7	21 44.19	26 59.0	+ 0.06	− 3.3	1	110
44.92	28 18.1	21 44.40	28 18.2	+ 0.51	− 0.1	2	111
47.00	36 21.9	21 46.41	36 23.4	+ 0.58	− 1.5	2	112
46.97	36 38.2	21 46.46	36 31.1	+ 0.50	+ 7.1	0	113
57.86	12 57 40.7	21 57.42	12 57 36.4	+ 0.43	+ 4.3	1	114
0.67	13 1 12.2	22 0.10	13 1 13.3	+ 0.56	− 1.1	2	115
10.04	12 18.1	22 9.69	12 16.3	+ 0.34	+ 1.8	2	116
18.54	—	22 19.04	—	− 0.49	—	0	117
22.55	24 0.2	22 22.10	23 57.7	+ 0.44	+ 2.5	2	118
31.7 -	31 55.-	22 31.82	31 54.0	− 0.1 -	+ 1.-	0	119
33.5 -	32 27.-	22 32.47	32 23.9	+ 1.0 -	+ 3.-	1	120
34.03	32 54.2	22 33.17	32 56.2	+ 0.84	− 2.0	2	121
48.13	43 22.3	22 47.70	43 22.4	+ 0.42	− 0.1	2	122
49.48	13 44 18.0	22 49.02	13 44 15.8	+ 0.45	+ 2.2	2	123
17.97	14 32 0.3	24 17.56	14 31 59.9	+ 0.40	+ 0.4	2	124
45.91	44 26.9	24 46.07	44 24.8	− 0.15	+ 2.1	1	125
54.84	47 48.5	24 54.27	47 49.2	+ 0.55	− 0.7	2	126
15.34	55 51.4	25 14.90	56 7.0	+ 0.43	− 15.6	0	127
18.55	57 24.8	25 18.29	57 26.4	+ 0.25	− 1.6	2	128
19.00	14 57 32.4	25 18.73	14 57 36.8	+ 0.26	− 4.4	1	129
26.05	15 0 30.2	25 25.94	15 0 24.4	+ 0.11	+ 5.8	0	130
52.47	10 25.9	25 52.47	10 20.6	0.00	+ 5.3	0	131
53.58	$+ 15 10 32.3$	$2 25 53.12$	$+ 15 10 34.7$	+ 0.44	− 2.4	2	132

Nr.	Beobacht.-Ort	Weltzeit—Aberr.-Z.	Beobachtung		
			α app. geoz.	δ app. geoz.	α vera
133	Santiago	1927 Jan. 8.08988	$2^h\ 25^m\ 59^s.20$	$+\ 15°\ 12'\ 38''.0$	$2^h\ 25^m\ 58^s.68$
134	»	8.09202	25 59.18	12 38.4	25 58.75
135	Barcelona	8.8563	26 25.8—	22 10.—	26 25.82
136	Lisboa	8.94705	26 29.36	15 23 27.0	26 29.11
137	»	19.78286	35 14.23	17 43 11.7	35 14.10
138	»	21.81341	37 20.22	18 10 5.4	37 20.32
139	Santiago	22.08632	37 38.42	13 39.5	37 37.94
140	Lisboa	22.86700	38 29.25	24 2.2	38 29.16
141	»	22.89023	38 30.97	24 20.9	38 30.70
142	Santiago	23.06692	38 42.93	26 37.2	38 42.48
143	Besançon	24.76645	40 38.60	49 22.5	40 38.92
144	Santiago	25.06914	41 0.55	53 20.3	41 0.27
145	Yerkes	25.10967	41 3.31	18 53 52.2	41 3.14
146	Besançon	25.77845	41 51.45	19 2 49.7	41 51.00
147	Washington	26.05003	42 10.33	6 27.5	42 10.70
148	Santiago	26.05861	42 11.83	6 35.8	42 11.32
149	»	27.05045	43 25.19	19 49.1	43 24.50
150	»	27.05240	43 25.21	19 52.0	43 24.65
151	Besançon	27.77551	44 19.69	29 34.5	44 19.23
152	Greenwich	27.8559	44 25.79	30 42.7	45 25.86
153	Besançon	28.79524	45 38.27	43 16.6	45 38.28
154	Yerkes	29.20353	46 9.98	19 48 46.5	46 10.04
155	Lisboa	31.82209	49 43.54	20 23 56.2	49 43.50
156	Washington	Febr. 1.04934	50 2.67	26 58.2	50 2.64
157	Santiago	1.06230	50 4.20	27 12.9	50 3.74
158	Yerkes	2.13142	51 35.02	41 32.8	51 35.13
159	Besançon	2.76655	52 30.64	20 50 9.7	52 30.44
160	»	3.76458	53 59.06	21 3 32.7	53 58.86
161	Lisboa	3.87208	54 8.53	4 58.3	54 8.50
162	»	3.89119	54 10.59	5 15.0	54 10.21
163	Yerkes	4.02541	54 22.01	7 0.5	54 22.28
164	Santiago	4.05389	54 25.18	7 18.4	54 24.84
165	Lisboa	4.89669	2 55 41.54	$+\ 21\ 18\ 47.9$	55 41.39

Beobachtung		Rechnung		B—R		Gew.	Nr.
	δ app. geoz.	α vera	δ vera	$\Delta\alpha\cos\delta$	$\Delta\delta$		
)	+ 15° 12′ 38″.0	$2^h\ 25^m\ 58^s.68$	+ 15° 12′ 35″.9	+ 0^s.50	+ 2.″1	2	133
;	12 38.4	25 58.75	12 37.5	+ 0.41	+ 0.9	2	134
—	22 10.—	26 25.82	22 11.3	0.0 -	— 1.-	1	135
;	15 23 27.0	26 29.11	15 23 19.6	+ 0.24	+ 7.4	0	136
;	17 43 11.7	35 14.10	17 43 9.3	+ 0.12	+ 2.4	1	137
:	18 10 5.4	37 20.32	18 10 1.3	— 0.10	+ 4.1	1	138
:	13 39.5	37 37.94	13 38.7	+ 0.46	+ 0.8	2	139
;	24 2.2	38 29.16	24 1.2	+ 0.09	+ 1.0	2	140
'	24 20.9	38 30.70	24 19.8	+ 0.26	+ 1.1	2	141
;	26 37.2	38 42.48	26 40.8	+ 0.43	— 3.6	2	142
)	49 22.5	40 38.92	49 20.5	— 0.30	+ 2.0	1	143
;	53 20.3	41 0.27	53 23.1	+ 0.26	— 2.8	2	144
	18 53 52.2	41 3.14	18 53 55.6	+ 0.16	— 3.4	2	145
;	19 2 49.7	41 51.00	19 2 52.2	+ 0.43	— 2.5	2	146
;	6 27.5	42 10.70	6 30.2	— 0.35	— 2.7	1	147
;	6 35.8	42 11.32	6 37.1	+ 0.48	— 1.3	2	148
)	19 49.1	43 24.50	19 54.3	+ 0.65	— 5.2	1	149
	19 52.0	43 24.65	19 55.9	+ 0.53	— 3.9	1	150
)	29 34.5	44 19.23	29 37.7	+ 0.43	— 3.2	2	151
)	30 42.7	45 25.86	30 42.8	— 0.07	— 0.1	2	152
	43 16.6	45 38.28	43 18.9	— 0.01	— 2.3	2	153
;	19 48 46.5	46 10.04	19 48 47.9	— 0.06	— 1.4	2	154
:	20 23 56.2	49 43.50	20 23 59.8	+ 0.04	— 3.6	2	155
	26 58.2	50 2.64	27 3.2	+ 0.03	— 5.0	2	156
)	27 12.9	50 3.74	27 13.7	+ 0.43	— 0.8	2	157
:	41 32.8	51 35.13	41 36.5	— 0.10	— 3.7	2	158
.	20 50 9.7	52 30.44	20 50 8.9	+ 0.19	+ 0.8	1	159
;	21 3 32.7	53 58.86	21 3 34.0	+ 0.19	— 1.3	2	160
;	4 58.3	54 8.50	5 0.6	+ 0.03	— 2.3	2	161
)	5 15.0	54 10.21	5 16.0	+ 0.35	— 1.0	2	162
	7 0.5	54 22.28	7 4.2	— 0.25	— 3.7	2	163
:	7 18.4	54 24.84	7 27.2	+ 0.32	— 8.8	1	164
.	+ 21 18 47.9	2 55 41.39	+ 21 18 46.4	+ 0.14	+ 1.5	1	165

Nr.	Beobacht.-Ort	Weltzeit—Aberr.-Z.	Beobachtung	
			α app. geoz.	δ app. geoz.
166	Lisboa	1927 Febr. 4.90837	$2^h\ 55^m\ 42^s.10$	$+21°\ 18'\ 56''.8$
167	Santiago	5.05181	2 55 56.26	21 20 51.6
168	Washington	8.06253	3 0 40.22	22 1 8.8
169	Yerkes	11.13482	5 47.50	42 3.3
170	»	12.08454	7 25.77	22 54 38.6
171	Lisboa	19.85164	21 46.08	24 35 51.7
172	»	19.86810	21 48.24	36 12.3
173	»	19.88417	21 49.97	36 15.5
174	Yerkes	20.10171	22 15.21	39 2.8
175	»	21.05784	24 8.13	24 51 14.2
176	Besançon	23.81983	29 42.82	25 26 3.9
177	»	24.78890	31 42.92	25 38 6.4
178	Yerkes	März 3.09131	45 18.37	26 54 12.9
179	Washington	4.05986	47 28.76	27 5 31.6
180	Besançon	4.80256	3 49 9.97	27 14 10.0
181	Yerkes	17.05640	4 18 42.60	29 25 23.3
182	Kingswood	23.8623	36 25.85	30 27 47.1
183	Yerkes	29.07966	50 35.07	31 9 41.4
184	Lisboa	30.83957	55 27.20	22 39.5
185	»	30.84984	55 29.02	22 41.1
186	»	30.86028	55 30.64	22 47.7
187	»	31.84149	58 15.15	29 44.2
188	»	31.85807	4 58 18.77	29 44.0
189	»	April 1.84264	5 1 3.50	31 36 26.5
190	Yerkes	22.13862	6 0 26.77	33 4 6.8
191	»	24.09588	6 20.88	7 13.5
192	»	30.11084	24 32.99	10 45.5
193	Greenwich	30.91099	26 58.79	10 33.8
194	»	Mai 1.90961	30 0.51	33 10 2.5
195	»	8.87139	6 51 8.06	32 59 36.9
196	Yerkes	20.11511	7 24 54.77	32 18 15.3
197	»	26.10655	42 35.07	31 44 25.7
198	»	27.10159	45 29.69	38 7.9
199	»	31.10448	7 57 5.76	$+31$ 10 35.9

Beobachtung		Rechnung		B—R		Gew.	Nr.
geoz.	δ app. geoz.	α vera	δ vera	$\Delta\alpha\cos\delta$	$\Delta\delta$		
s.10	+21° 18′ 56″.8	2h 55m 42s.46	+21° 18′ 55″.8	−0s.34	+1″.0	1	166
5.26	21 20 51.6	2 55 55.63	21 20 51.3	+0.59	+0.3	1	167
0.22	22 1 8.8	3 0 40.50	22 1 11.2	−0.26	−2.4	2	168
7.50	42 3.3	5 47.75	42 6.6	−0.23	−3.3	2	169
5.77	22 54 38.6	7 26.19	22 54 43.0	−0.39	−4.4	2	170
5.08	24 35 51.7	21 46.14	24 35 55.5	−0.05	−3.8	2	171
3.24	36 12.3	21 48.06	36 8.1	+0.16	+4.2	0	172
0.97	36 15.5	21 49.95	36 20.4	+0.02	−4.9	2	173
5.21	39 2.8	22 15.46	39 7.3	−0.23	−4.5	2	174
3.13	24 51 14.2	24 8.51	24 51 18.2	−0.34	−4.0	2	175
2.82	25 26 3.9	29 43.61	25 26 5.2	−0.71	−1.3	1	176
2.92	25 38 6.4	31 42.99	25 38 8.3	−0.07	−1.9	2	177
3.37	26 54 12.9	45 18.65	26 54 18.0	−0.25	−5.1	2	178
3.76	27 5 31.6	47 29.16	27 5 37.6	−0.36	−6.0	2	179
0.97	27 14 10.0	3 49 10.14	27 14 14.2	−0.15	−4.2	2	180
2.60	29 25 23.3	4 18 43.12	29 25 29.1	−0.45	−5.8	2	181
5.85	30 27 47.1	36 26.72	30 27 52.8	−0.75	−5.7	2	182
5.07	31 9 41.4	50 35.52	31 9 44.0	−0.39	−2.6	2	183
7.20	22 39.5	55 27.86	22 36.0	−0.56	+3.5	0	184
0.02	22 41.1	55 29.58	22 40.4	−0.48	+0.7	1	185
0.64	22 47.7	55 31.33	22 44.8	−0.59	+2.9	0	186
5.15	29 44.2	58 15.57	29 37.7	−0.36	+6.5	0	187
3.77	29 44.0	4 58 18.35	29 44.6	+0.36	−0.6	0	188
3.50	31 36 26.5	5 1 4.03	31 36 25.9	−0.45	+0.6	1	189
5.77	33 4 6.8	6 0 27.32	33 4 9.4	−0.46	−2.6	2	190
0.88	7 13.5	6 21.13	7 16.4	−0.21	−2.9	2	191
2.99	10 45.5	24 33.58	10 47.3	−0.49	−1.8	2	192
3.79	10 33.8	26 59.28	10 34.1	−0.41	−0.3	2	193
0.51	33 10 2.5	30 1.16	33 10 4.1	−0.54	−1.6	2	194
3.06	32 59 36.9	6 51 8.43	32 59 40.3	−0.31	−3.4	2	195
4.77	32 18 15.3	7 24 54.89	32 18 13.7	−0.10	+1.6	2	196
5.07	31 44 25.7	42 35.24	31 44 28.7	−0.14	−3.0	1	197
0.69	38 7.9	45 29.62	38 8.4	+0.06	−0.5	2	198
5.76	+31 10 35.9	7 57 5.88	+31 10 37.8	−0.10	−1.9	0	199

Die Störungen seitens Jupiter und Saturn sind nach der Enckeschen Methode berechnet worden. Die Beobachtungen

Tafel III.

N. O.	Beobacht.	Weltzeit—Aberr.-Z.	B—R		Störunge	
			$\Delta\alpha \cos\delta$	$\Delta\delta$	$\Delta\alpha \cos\delta$	Δ
I	1— 21	1926 Nov. 11.24089	+18″.8	+4″.7	0″.0	(
II	22— 63	26.73030	+15.8	+4.5	0.0	(
III	64— 95	Dez. 7.40212	+13.2	+3.1	0.0	(
IV	96—115	24.20689	+ 7.2	+0.3	0.0	(
V	116—136	1927 Jan. 3.93346	+ 6.4	+0.2	0.0	(
VI	137—154	25.32095	+ 3.2	− 1.3	+ 0.1	+ (
VII	155—168	Febr. 3.43649	+ 1.2	− 2.3	+ 0.2	+ (
VIII	169—175	17.35245	− 3.0	− 4.2	+ 0.4	+ 0
IX	176—180	März 1.47834	− 3.9	− 4.0	+ 0.8	+ 0
X	181—182	20.45935	− 9.0	− 5.8	+ 1.5	+ 0
XI	183—189	30.46295	− 6.4	− 1.0	+ 2.0	+ 0
XII	190—193	April 26.81408	− 5.8	− 1.9	+ 3.6	+ 0.
XIII	194—195	Mai 5.39050	− 6.3	− 2.5	+ 4.0	− 0.
XIV	196—199	24.10799	− 0.6	− 0.2	+ 4.8	− 0.

Die Bedingungsgleichungen für die

			Elementenver
$+1.7908\,\Delta\Omega'$	$-0.34926\,\Delta i'$	$+1.5857\,\Delta\omega'$	−4.726
1.7267	0.43444	1.5294	4.690
1.6152	0.47941	1.4309	4.490
1.3860	0.52297	1.2339	3.997
1.2377	0.53527	1.1116	3.639
0.9875	0.53161	0.9204	2.935
0.9037	0.51994	0.8632	2.6486
0.8007	0.49057	0.8007	2.2196
0.7328	0.45312	0.7667	1.8445
0.6608	0.37208	0.7409	1.2375
0.6370	0.31941	0.7360	−0.9059
0.6092	0.15558	0.7331	+0.0048
0.6086	0.10385	0.7314	0.2742
+0.6149	−0.00192	+0.7223	+0.7987

ind nach der
obachtungen

sind zu 14 Normalörtern zusammengezogen. Tafel III gibt die unter Rücksicht auf die Störungen erhaltenen Normalörter.

Tafel III.

Z.	B—R		Störungen		B—R von Störungen befreit		$\sqrt{p}$	α 1925.0	δ 1925.0	N. O.
	$\Delta\alpha \cos\delta$	$\Delta\delta$	$\Delta\alpha \cos\delta$	$\Delta\delta$	$\Delta\alpha \cos\delta$	$\Delta\delta$				
89	+18″.8	+4″.7	0″.0	0″.0	+18″.8	+4″.7	2.8	42° 36′ 45″.9	+ 6° 53′ 21″.3	I
30	+15.8	+4.5	0.0	0.0	+15.8	+4.5	3.8	38 48 48.5	+ 8 13 34.4	II
12	+13.2	+3.1	0.0	0.0	+13.2	+3.1	3.2	36 46 1.1	+ 9 33 31.3	III
89	+ 7.2	+0.3	0.0	0.0	+ 7.2	+0.3	2.6	35 24 42.0	+12 17 12.5	IV
46	+ 6.4	+0.2	0.0	0.0	+ 6.4	+0.2	2.6	35 57 31.1	+14 21 2.8	V
95	+ 3.2	−1.3	+0.1	+0.1	+ 3.1	−1.4	2.8	40 18 7.3	+18 56 17.8	VI
49	+ 1.2	−2.3	+0.2	+0.2	+ 1.0	−2.5	2.4	43 20 53.8	+20 58 41.8	VII
45	− 3.0	−4.2	+0.4	+0.3	− 3.4	−4.5	1.8	49 13 0.4	+24 3 16.6	VIII
34	− 3.9	−4.0	+0.8	+0.4	− 4.7	−4.4	1.5	55 24 21.4	+26 34 47.1	IX
35	− 9.0	−5.8	+1.5	+0.6	−10.5	−6.4	1.0	66 50 9.9	+29 57 23.2	X
95	− 6.4	−1.0	+2.0	+0.6	− 8.4	−1.6	1.0	73 34 19.0	+31 19 41.8	XI
08	− 5.8	−1.9	+3.6	+0.2	− 9.4	−2.1	1.4	93 36 28.3	+33 10 0.2	XII
50	− 6.3	−2.5	+4.0	−0.1	−10.3	−2.4	1.0	100 6 44.6	+33 6 26.8	XIII
99	− 0.6	−0.2	+4.8	−0.8	− 5.4	+0.6	1.1	114 8 54.0	+31 56 52.0	XIV

ngsgleichungen für die

Elementenverbesserung lauten dann:

+1.5857 $\Delta\omega'$	−4.7267 Δe	+0.46340 Δa	−0.0096376 ΔT = +18.8
1.5294	4.6903	0.46358	93806 +15.8
1.4309	4.4906	0.44551	88792 +13.2
1.2339	3.9979	0.39759	79240 + 7.2
1.1116	3.6392	0.36185	73850 + 6.4
0.9204	2.9353	0.29125	67032 + 3.1
0.8632	2.6486	0.26265	65714 + 1.0
0.8007	2.2196	0.22027	65175 − 3.4
0.7667	1.8445	0.18375	65739 − 4.7
0.7409	1.2375	0.12554	67510 −10.5
0.7360	−0.9059	0.09406	68401 − 8.4
0.7331	+0.0048	+0.00793	68732 − 9.4
0.7314	0.2742	−0.01763	67897 −10.3
+0.7223	+0.7987	−0.06783	−0.0064459 − 5.4

$+0.0050\,\Delta\Omega'$	$+0.60755\,\Delta i'$	$+0.9039\,\Delta\omega'$	$-$
0.0445	0.73814	0.8972	
0.0771	0.80476	0.8710	
0.1307	0.86849	0.8060	
0.1623	0.88812	0.7566	
0.2123	0.89958	0.6531	1
0.2276	0.89876	0.6086	1
0.2440	0.89507	0.5402	0.
0.2519	0.89064	0.4793	0.
0.2530	0.87991	0.3792	0.
0.2484	0.87045	0.3234	$-0.$
0.2192	0.81959	0.1621	$+0.$
0.2058	0.79413	0.1110	0.
$+0.1722$	$+0.72368$	$+0.0040$	$+0.$

Durch Multiplikation mit den Qudratwurzeln der Gewichte (

$$x = 6\,\Delta\Omega' \qquad u = 20\,\Delta e$$
$$y = 3\,\Delta i' \qquad v = 2\,\Delta a$$
$$z = 6\,\Delta\omega' \qquad t = \tfrac{1}{2}\tfrac{1}{5}\,\Delta T$$

Fehlereinhe

erhält man das folgende homogene (

$+0.83570\,x$	$-0.32598\,y$	$+0.74000\,z$	-0.661
1.09358	0.55029	0.96862	0.891
0.86143	0.51137	0.76315	0.718
0.60060	0.45324	0.53468	0.519
0.53635	0.46390	0.48170	0.473
0.46085	0.49617	0.42953	0.410
0.36148	0.41595	0.34527	0.317
0.24022	0.29434	0.24022	0.199
0.18320	0.22656	0.19167	0.138
0.11014	0.12403	0.12348	0.061
0.10616	0.10647	0.12266	-0.0453
0.14214	0.07260	0.17106	$+0.0003$
0.10143	0.03462	0.12190	0.0137
$+0.11274$	-0.00070	$+0.13242$	$+0.0439$

$\Delta i'$	$+0.9039\ \Delta\omega'$	$-2.8175\ \Delta e$	$+0.28038\ \Delta a$	$-0.0051951\ \Delta T$	$=+4.7$
	0.8972	2.7687	0.27406	54700	$+4.5$
	0.8710	2.6450	0.26075	55532	$+3.1$
	0.8060	2.3384	0.22902	55365	$+0.3$
	0.7566	2.0967	0.20462	54523	$+0.2$
	0.6531	1.5640	0.15189	51544	-1.4
	0.6086	1.3287	0.12895	49735	-2.5
	0.5402	0.9726	0.09454	46249	-4.5
	0.4793	0.6769	0.06618	42389	-4.4
	0.3792	0.2736	0.02765	34637	-6.4
	0.3234	-0.1069	$+0.01169$	29743	-1.6
	0.1621	$+0.1231$	-0.01084	14623	-2.1
	0.1110	0.1218	-0.01102	09823	-2.4
	$+0.0040$	$+0.0006$	$+0.00003$	-0.0000394	$+0.6$

iit den Qudratwurzeln der Gewichte ($\sqrt{p}$) und Ausführung der Substitutionen:

$x = 6\ \Delta\Omega'$ $u = 20\ \Delta e$

$y = 3\ \Delta i'$ $v = 2\ \Delta a$ Fehlereinheit = 60

$z = 6\ \Delta\omega'$ $t = \frac{1}{25}\ \Delta T$

erhält man das folgende homogene Gleichungssystem:

	$-0.66174\,u$	$+0.64876\,v$	$-0.67462\,t$	$=+0.877$
$+0.74000\,z$				
0.96862	0.89116	0.88080	0.89115	$+1.001$
0.76315	0.71850	0.71282	0.71032	$+0.704$
0.53468	0.51972	0.51686	0.51505	$+0.312$
0.48170	0.47310	0.47040	0.48002	$+0.277$
0.42953	0.41094	0.40775	0.46922	$+0.145$
0.34527	0.31783	0.31518	0.39428	$+0.040$
0.24022	0.19976	0.19824	0.29330	-0.102
0.19167	0.13834	0.13781	0.24652	-0.117
0.12348	0.06188	0.06277	0.16878	-0.175
0.12266	-0.04530	0.04703	0.17100	-0.140
0.17106	$+0.00034$	$+0\ 00555$	0.24056	-0.219
0.12190	0.01371	-0.00881	0.16974	-0.172
$+0.13242$	$+0.04393$	-0.03731	-0.17726	-0.099

$+0.00233\,x$	$+0.56705\,y$	$+0.42182\,z$	-0.39
0.02816	0.93498	0.56825	0.52
0.04112	0.85841	0.46450	0.42
0.05664	0.75269	0.34925	0.30
0.07033	0.76970	0.32785	0.27
0.09908	0.83961	0.30478	0.21
0.09104	0.71901	0.24345	0.15
0.07321	0.53704	0.16207	0.08
0.06298	0.44532	0.11984	0.05
0.04217	0.29330	0.06321	0.01
0.04140	0.29015	0.05390	-0.00
0.05115	0.38248	0.03783	$+0.00$
0.03428	0.26472	0.01846	0.00
$+0.03157$	$+0.26535$	$+0.00074$	$+0.00$

und hieraus die Normalgleich

$+3.8320\,x$	$-1.9287\,y$	$+3.5666\,z$	-3.210
-1.9287	$+6.9388$	$+0.1633$	$+0.08$
$+3.5666$	$+0.1633$	$+4.2238$	-3.75
-3.2107	$+0.0806$	-3.7573	$+3.44$
$+3.1775$	-0.0936	$+3.7161$	-3.40
-3.4770	-0.2592	-4.1378	$+3.62$

und die Eliminations- gleichungen:

$+3.8320\,x$	$-1.9287\,y$	$+3.5666\,z$	-3.2107
	$+5.9680$	$+1.9584$	-1.5354
		$+0.2617$	-0.2652
			$+0.0872$

5 y	$+0.42182\,z$	$-0.39445\,u$	$+0.39253\,v$	$-0.36365\,t$	$+0.219$
8	0.56825	0.52605	0.52072	0.51965	$+0.285$
1	0.46450	0.42318	0.41720	0.44425	$+0.165$
9	0.34925	0.30399	0.29772	0.35988	$+0.013$
0	0.32785	0.27257	0.26600	0.35440	$+0.009$
1	0.30478	0.21896	0.21264	0.36080	-0.065
1	0.24345	0.15944	0.15474	0.29840	-0.100
4	0.16207	0.08753	0.08508	0.20812	-0.135
2	0.11984	0.05077	0.04964	0.15896	-0.110
0	0.06321	0.01363	0.01382	0.08659	-0.107
5	0.05390	-0.00535	$+0.00584$	0.07436	-0.027
3	0.03783	$+0.00861$	-0.00759	0.05118	-0.049
2	0.01846	0.00600	-0.00545	0.02453	-0.040
5	$+0.00074$	$+0.00003$	$+0.00016$	-0.00108	$+0.011$

und hieraus die Normalgleichungen:

y	$+3.5666\,z$	$-3.2107\,u$	$+3.1775\,v$	$-3.4770\,t$	$=+2.686$
	$+0.1633$	$+0.0806$	-0.0936	-0.2592	-1.204
	$+4.2238$	-3.7573	$+3.7161$	-4.1378	$+2.623$
	-3.7573	$+3.4412$	-3.4016	$+3.6292$	-2.561
	$+3.7161$	-3.4016	$+3.3626$	-3.5902	$+2.528$
	-4.1378	$+3.6292$	-3.5902	$+4.1066$	-2.345

und die Eliminationsgleichungen:

y	$+3.5666\,z$	$-3.2107\,u$	$+3.1775\,v$	$-3.4770\,t$	$=+2.686$
	$+1.9584$	-1.5354	$+1.5057$	-2.0092	$+0.148$
	$+0.2617$	-0.2652	$+0.2646$	-0.2424	$+0.075$
		$+0.0872$	$-0.0836\cdot$	-0.0466	-0.196
			$+0.0001$	$+0.0003$	-0.001
				$+0.0252\cdot$	$+0.108$

Die Auflösung gab das folgende Resultat:

$$\begin{aligned} \Delta\Omega' &= +4''.37 \\ \Delta i' &= -0''.87 \\ \Delta\omega' &= +48''.85 \\ \Delta e &= -0.000214 \\ \Delta a &= -0.002235 \\ \Delta T &= +0^{d}.03110 \end{aligned}$$

Oskulation 1926 Nov. 30.0:

$T = 1927$ März 22.1929 Weltzeit.

$$\left.\begin{aligned} \omega &= 38^{\circ}\,27'\,50''.8 \\ \Omega &= 65\ 35\ 41.0 \\ i &= 13\ 45\ 43.3 \end{aligned}\right\} \ 1925.0$$

$$\begin{aligned} \varphi &= 35^{\circ}\,6'\,26''.4 \\ a &= 4.17176 \\ \mu &= 416''.416 \\ U &= 8^{a}.52094 \text{ (jul. Jahre).} \end{aligned}$$

Äqvatorelemente:

$$\left.\begin{aligned} \omega' &= 82^{\circ}\,15'\,33''.8 \\ \Omega' &= 24\ 26\ 23.8 \\ i' &= 31\ 34\ 27.1 \end{aligned}\right\} \ 1925.0$$

Äqvatoreale Konstanten:

$$\begin{aligned} x &= -0.94555\ (\cos E - e) - 3.24074\ \sin E \\ y &= +3.43871\ (\cos E - e) - 1.04261\ \sin E \\ z &= +2.16444\ (\cos E - e) + 0.24068\ \sin E. \end{aligned}$$

B—R

N. O.	Aus den Differential-gleichungen		Direkte Rechnung	
	$\Delta\alpha \cos\delta$	$\Delta\delta$	$\Delta\alpha \cos\delta$	$\Delta\delta$
I	+0″.2	−0″.6	+1″.9	+0″.1
II	+0.2	+0.4	+1.0	+0.9
III	+0.1	+0.1	+2.0	+1.1
IV	−1.8	−0.9	−1.8	−0.3
V	+0.6	+0.1	+1.1	+0.5
VI	+1.2	+0.7	+0.2	+1.4
VII	+0.8	+0.3	+0.3	+1.6
VIII	−1.0	−0.8	−1.1	−0.3
IX	+0.8	−0.3	+1.4	−0.5
X	−3.3	−2.4	−3.0	−0.9
XI	−0.1	+2.0	0.0	+2.8
XII	0.0	+0.5	+0.6	+0.1
XIII	−1.2	−1.4	0.0	−0.2
XIV	+1.9	+0.6	+3.7	+1.0

Für die Opposition 1935 wird eine Ephemeride rechtzeitig veröffentlicht werden.

Universitäts-Sternwarte, Kopenhagen.
September 1930.

Julie M. Vinter Hansen.

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sin E
sin E.

Færdig fra Trykkeriet den 12. Marts 1931.