

Chart

Calendar + Astronomical Features
around 1844.

71
33
72
73
74
76
77

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σq		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σq		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σq		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σq		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

71
33
72
73
74
76
77

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$		
Tab. 24		
" Parallax		

71
33
72
73
74
76
77

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$ Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$ Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$ Tab. 24		
" Parallax		

V Tab.	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
q (Const.)		
Σg		
$\Sigma q = \text{sum}$ Tab. 24		
" Parallax		

Moon Tables (Brown)

Date =

Tab	Arg.	D	1	2	3	4	5	6	7	12	16	17	18	19
2														
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	⊙		
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

- 1295000 -1294800

Moon Tables (Brown)

Date =

Tab	Arg.	D	1	2	3	4	5	6	7	12	16	17	18	19
2														
2	S.V.													
3														
3														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2								
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2								
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2								
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2								
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2								
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2								
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	⊖		
2								
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Moon Tables (Brown)

Date = _____

Tab	Arg.	D	1	2	3	4	5	6	7	12	16	17	18	19
2														
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	⊖		
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Moon Tables (Brown)

Date =

Tab	Arg.	D	1	2	3	4	5	6	7	12	16	17	18	19
2														
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	⊖		
2								
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Moon's place at -515,
Date = -600^y+85^y

Moon Tables (Brown)
G.M.T. = -600^y+85^y = -600^y+85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
4								
3								
3	-Per. Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
4								
3								
3	-Per. Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
4								
3								
3	-Per. Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
4								
3								
3	-Per. Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
4								
3								
3	-Per. Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
4								
3								
3	-Per. Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	∅
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
4						
3						
3	-Per. Adj.					
	Sums					

Moon's place at -515,
Date = -600^y+85^y

Moon Tables (Brown)
G.M.T. = -600^y+85^y = -600^y+85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	∅
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
4						
3	-Per.					
3	Adj.					
	Sums					

Moon's place at - 515,
Date = - 600^y + 85^y

Moon Tables (Brown)
G.M.T. = - 600^y + 85^y = - 600^y + 85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	⊙
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
4						
3						
3	-Per.					
3	Adj.					
	Sums					

Moon's place at -515,
Date = -600^y+85^y

Moon Tables (Brown)
G.M.T. = -600^y+85^y = -600^y+85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	∅
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
3	-Per.					
3	Adj.					
	Sums					

Moon's place at -515,
Date = -600^y+85^y

Moon Tables (Brown)
G.M.T. = -600^y+85^y = -600^y+85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	∞
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
4						
3						
3	-Per.					
3	Adj.					
	Sums					

Moon's place at -515,
Date = -600^y+85^y

Moon Tables (Brown)
G.M.T. = -600^y+85^y = -600^y+85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
4								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	∅
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
4						
3	-Per.					
3	Adj.					
	Sums					

Moon's place at -515,
Date = -600^y+85^y

Moon Tables (Brown)
G.M.T. = -600^y+85^y = -600^y+85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	Ω
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
4						
3						
3	-Per.					
3	Adj.					
	Sums					

Moon's place at -515,
Date = -600^y+85^y

Moon Tables (Brown)
G.M.T. = -600^y+85^y = -600^y+85^y

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	-600	3.4009	12.994	101.68	61.77	26.21	3.47	98.20	62.47	23.13	140.467	15.90	33.11	57.17
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	-600	1.5 578.0	4.5 69.7	20.0 38.1	17.0 94.47	15.5 17.7	8.0 5.9	18.5 200.5
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	-600	18.5 211.929	3.0 235.55	17.0 274.32	3.0 78.52	27.5 12.82	8.5 155.55	1.5 0.9
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	-600	7.5 270.7	4.0 150.0	0.5 20.9	7.5 89.01	57.0 18.3	23.5 35.8	2.0 86.8
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	-600	5.5 38.9	1.0 10.4	6.0 47.8	37.0 3.21	12.0 25.1	16.0 32.0	14.5 2.15
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	-600	6.5 61.9	15.5 105.3	214.3	43.5 4.62	1.5 160.7	16.0 35.1	7.5 154
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	-600	18.5 141.29	17.0 89.25	8.5 155.5	1.5 68.6	4.0 29.6	7.5 44.4	4644
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	∅
2	-600	4530	4539	126766"	885175"	537627
2	S.V.					
3						
4						
3						
3	-Per.					
3	Adj.					
	Sums					

Moon Tables (Brown)

Date =

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	0	6.8709	9.425	125.76	38.00	67.63	52.70	115.23	39.44	14.34	185.565	40.36	20.16	3.95
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23		24		25		26		27		28		29	
2	0	5.5	410.1	7.5	106.7	1.5	152.7	26.5	116.95	13.5	65.1	3.5	48.7	16.0	188.9
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	30		31		32		33		34		35		36	
2	0	27.0	159.631	6.5	218.10	15.0	110.15	6.5	72.70	105.0	11.47	4.0	201.97	15.0	38.5
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	37		38		39		40		41		42		43	
2	0	9.5	0.1	3.0	92.6	5.0	21.9	4.0	19.43	144.0	0.4	8.0	81.6	2.5	36.0
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	44		45		46		47		53		54		55	
2	0	5.0	140.7	7.0	97.5	1.5	50.7	31.0	14.37	8.0	15.5	11.5	42.2	10.0	62.27
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	56		57		58		59		60		61		62	
2	0	7.5	68.5	12.5	49.3	349.4		126.0	3.67	4.5	16.0	23.0	14.7	2.5	14.1
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	71		72		73		74		76		77		82	
2	0	27.0	106.42	15.0	358.4	4.0	202.0	5.5	48.6	3.0	18.3	9.5	0.0	6257	
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	83		84		L	-Ω	⊙
2	0	6178		6185		295401	1192540	310177
2	S.V.							
3								
4								
3								
3	-Per.					-1296000	-1296000	
3	Adj.							
	Sums							

Moon Tables (Brown)

Date =

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	0	6.8709	9.425	125.76	38.00	67.63	52.70	115.23	39.44	14.34	185.565	40.36	20.16	3.95
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
3	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	0	5.5 410.1	7.5 106.7	1.5 152.7	26.5 116.95	13.5 65.1	3.5 48.7	16.0 188.9
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
3	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	0	27.0 159.631	6.5 218.10	15.0 110.15	6.5 72.70	105.0 11.47	4.0 201.97	15.0 38.5
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
3	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	0	9.5 0.1	3.0 92.6	5.0 21.9	4.0 19.43	144.0 0.4	8.0 81.6	2.5 36.0
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
3	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	0	5.0 140.7	7.0 97.5	1.5 50.7	31.0 14.37	8.0 15.5	11.5 42.2	10.0 62.27
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
3	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	0	7.5 68.5	12.5 49.3	349.4	126.0 3.67	4.5 16.0	23.0 14.7	2.5 141
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
3	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	0	27.0 106.42	15.0 35.84	4.0 202.0	5.5 48.6	3.0 18.3	9.5 0.0	62.57
2	S.V.							
3								
4								
3								
3	-Per.							
3	Adj.							
3	Sums							

Tab	Arg	83	84	L	-Ω	∅
2	0	6178	6185	295401	1192540	310177
2	S.V.					
3						
4						
3						
3	-Per.			-1296000	-1296000	
3	Adj.					
3	Sums					

Moon Tables (Brown)

Date = _____

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	0	6.8709	9.425	125.76	38.00	67.63	52.70	115.23	39.44	14.34	185.565	40.36	20.16	3.95
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23		24		25		26		27		28		29	
2	0	5.5	410.1	7.5	106.7	1.5	152.7	26.5	116.95	13.5	65.1	3.5	48.7	16.0	188.9
2	S.V.														
3															
4															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	30		31		32		33		34		35		36	
2	0	27.0	159.631	6.5	218.10	15.0	110.15	6.5	72.70	105.0	11.47	4.0	201.97	15.0	38.5
2	S.V.														
3															
4															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	37		38		39		40		41		42		43	
2	0	9.5	0.1	3.0	92.6	5.0	21.9	4.0	19.43	144.0	0.4	8.0	81.6	2.5	36.0
2	S.V.														
3															
4															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	44		45		46		47		53		54		55	
2	0	5.0	140.7	7.0	97.5	1.5	50.7	31.0	14.37	8.0	15.5	11.5	42.2	10.0	62.27
2	S.V.														
3															
4															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	56		57		58		59		60		61		62	
2	0	7.5	68.5	12.5	49.3	349.4	126.0	3.67	4.5	16.0	23.0	14.7	2.5	141	
2	S.V.														
3															
4															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	71		72		73		74		76		77		82	
2	0	27.0	106.42	15.0	35.84	4.0	202.0	5.5	48.6	3.0	18.3	9.5	0.0	6257	
2	S.V.														
3															
4															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	83		84		L	-Ω	⊖
2	0	6178	6185	295401	1192540	310177		
2	S.V.							
3								
4								
3	-Per.			-1296000	-1296000			
3	Adj.							
	Sums							

Moon Tables (Brown)

Date = _____

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	0	6.8709	9.425	125.76	38.00	67.63	52.70	115.23	39.44	14.34	185.565	40.36	20.16	3.95
2	S.V.													
3														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23	24	25	26	27	28	29
2	0	5.5 410.1	7.5 106.7	1.5 152.7	26.5 116.95	13.5 65.1	3.5 48.7	16.0 188.9
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	30	31	32	33	34	35	36
2	0	27.0 159.631	6.5 218.10	15.0 110.15	6.5 72.70	105.0 11.47	4.0 201.97	15.0 38.5
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	37	38	39	40	41	42	43
2	0	9.5 0.1	3.0 92.6	5.0 21.9	4.0 19.43	144.0 0.4	8.0 81.6	2.5 36.0
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	44	45	46	47	53	54	55
2	0	5.0 140.7	7.0 97.5	1.5 50.7	31.0 14.37	8.0 15.5	11.5 42.2	10.0 62.27
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	56	57	58	59	60	61	62
2	0	7.5 68.5	12.5 49.3	349.4	126.0 3.67	4.5 16.0	23.0 14.7	2.5 14.1
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	71	72	73	74	76	77	82
2	0	27.0 106.42	15.0 35.84	4.0 202.0	5.5 48.6	3.0 18.3	9.5 0.0	62.57
2	S.V.							
3								
3								
3	-Per.							
3	Adj.							
	Sums							

Tab	Arg	83	84	L	-Ω	⊖
2	0	6178	6185	295401	1192540	310177
2	S.V.					
3						
3						
3	-Per.			-1296000	-1296000	
3	Adj.					
	Sums					

Moon Tables (Brown)

Date =

Tab	Arg	D	1	2	3	4	5	6	7	12	16	17	18	19
2	0	6.8709	9.425	125.76	38.00	67.63	52.70	115.23	39.44	14.34	185.565	40.36	20.16	3.95
2	S.V.													
3														
4														
3	-1 Per.													
3	-Periods													
	Sums													

Tab	Arg	23		24		25		26		27		28		29	
2	0	5.5	410.1	7.5	106.7	1.5	152.7	26.5	116.95	13.5	65.1	3.5	48.7	16.0	188.9
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	30		31		32		33		34		35		36	
2	0	27.0	159.631	6.5	218.10	15.0	110.15	6.5	72.70	105.0	11.47	4.0	201.97	15.0	38.5
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	37		38		39		40		41		42		43	
2	0	9.5	0.1	3.0	92.6	5.0	21.9	4.0	19.43	144.0	0.4	8.0	81.6	2.5	36.0
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	44		45		46		47		53		54		55	
2	0	5.0	140.7	7.0	97.5	1.5	50.7	31.0	14.37	8.0	15.5	11.5	42.2	10.0	62.27
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	56		57		58		59		60		61		62	
2	0	7.5	68.5	12.5	49.3	349.4	126.0	3.67	4.5	16.0	23.0	14.7	2.5	141	
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	71		72		73		74		76		77		82	
2	0	27.0	106.42	15.0	35.84	4.0	202.0	5.5	48.6	3.0	18.3	9.5	0.0	6257	
2	S.V.														
3															
4															
3															
3	-Per.														
3	Adj.														
	Sums														

Tab	Arg	83		84		L	-Ω	⊙
2	0	6178		6185		295401	1192540	310177
2	S.V.							
3								
4								
3								
3	-Per.					-1296000	-1296000	
3	Adj.							
	Sums							

Drop last two digits from III

Drop one digit from IV & V

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F.		
$k \times \text{1st sum}$		
$\Sigma_1 = \text{sum}$		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10}		
$\Sigma_3 \left\{ \begin{array}{l} \text{Sum} \\ \text{Tab. 47} \times k \end{array} \right.$		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
$\Sigma_2 \left\{ \begin{array}{l} \text{Sum} \\ k \times \text{1st sum} \end{array} \right.$		
Σ_3		
Longitude = sum		
" Tab. 5, II		

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
12		
13		
14		
15		
Sum		
I.F.		
$k \times \text{1st sum} =$		
$\Sigma_4 = \text{sum}$		
Σ_2		
$P_{34} \div 10$		
$P_{35} (P_{34} - 10^3)$		
$\div 10$		
$19 + 9k$		
$- \Omega$		
S = sum		

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F.		
- Consts.		
$P_{36} \div 10 =$		
$P_{36} \times 37 \div 10 =$		
Sum = C		
$= \Sigma_6$		

VI Tab.	Arg.	Value
$P_{22} \div 100$		
$P_{23} \div 100$		
$P_{24} \div 100$		
$24 + 9k =$		
$\Sigma_{10} = \text{sum}$		

I.F. =
 For Tab. P 23 VI
 Date =
 Per. = $\times 270.95 =$
 Arg. =
 k =

For Tab. P 24 VI
 Dropping of digits from VI indicated by divisors 10 & 100
 Date =
 Per. = $\times 257.14 =$
 Arg. =
 Interpolating Factor
 If D = 16.353, I.F. = $2 \times (16.5 - 16.353) = -.29$
 If D = 16.653, I.F. = $2 \times (16.653 - 16.5) = +.31$
 If D = 17.022, I.F. = $2 \times (.022) = +.04$

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts.		
k (1st two lines - 340)		
$\Sigma_5 = \text{sum}$		
Tab. 33, Arg. S =		
$\Sigma_7 = \text{sum}$		
$\Sigma_7 \times C \div 10^5 =$		
Latitude = sum		
" Tab. 5, II		

V Tab	Arg	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
10		
11		
12		
13		
Sum		
I.F.		
k (1st sum - 595) =		
$\Sigma_8 = \text{sum}$		

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19 - 200)		
9 (Const.)		
Σ_8		
$\Sigma_9 = \text{sum}$		
Tab. 24, Tab. Arg.		
" Parallax		

Drop 1 digit from figures in Table 24, V

Drop last two digits from III

Drop one digit from IV & V

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F.		
k x 1st sum		
$\Sigma_1 = \text{sum}$		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10}		
$\Sigma_3 \left\{ \begin{array}{l} \text{Sum} \\ \text{Tab. 47} \times k \end{array} \right.$		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
$\Sigma_2 \left\{ \begin{array}{l} \text{Sum} \\ k \times \text{1st sum} \end{array} \right.$		
Σ_3		
Longitude = sum " Tab. 5, II		

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
12		
13		
14		
15		
Sum		
I.F.		
k x 1st sum =		
$\Sigma_4 = \text{sum}$		
Σ_2		
$P_{34} \div 10$		
$P_{35} (P_{34} - 10^3) \div 10$		
$19 + 9k - \Omega$		
S = sum		

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F.		
- Consts.		
$P_{36} \div 10 =$		
$P_{36} \times 37 \div 10 =$		
Sum = C		$= \Sigma_6$

VI Tab.	Arg.	Value
$P_{22} \div 100$		
$P_{23} \div 100$		
$P_{24} \div 100$		
$24 + 9k =$		
$\Sigma_{10} = \text{sum}$		

I.F. = _____
 For Tab. P 23 VI
 Date = _____
 Per. = $\times 270.95 =$ _____
 Arg. = _____
 k = _____

Dropping of digits from VI indicated by divisors 10 & 100

For Tab. P 24 VI
 Date = _____
 Per. = $\times 257.14 =$ _____
 Arg. = _____

Interpolating Factor

If D = 16.353, I.F. = $2 \times (16.5 - 16.353) = -.29$
 If D = 16.653, I.F. = $2 \times (16.653 - 16.5) = +.31$
 If D = 17.022, I.F. = $2 \times (.022) = +.04$

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts.		
k (1st two lines - 340)		
$\Sigma_5 = \text{sum}$ Tab. 33, Arg. S =		
$\Sigma_7 = \text{sum}$ $\Sigma_7 \times C \div 10^5 =$		
Latitude = sum " Tab. 5, II		

V Tab	Arg	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
10		
11		
12		
13		
Sum		
I.F.		
k (1st sum - 595) =		
$\Sigma_8 = \text{sum}$		

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19 - 200)		
9 (Const.)		
Σ_8		
$\Sigma_9 = \text{sum}$ Tab. 24, Tab. Arg. " Parallax		

Drop 1 digit from figures in Table 24, V

Drop last two digits from III

Drop one digit from IV & V

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F.		
k x 1st sum		
$\Sigma_1 = \text{sum}$		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10}		
$\Sigma_3 \left\{ \begin{array}{l} \text{Sum} \\ \text{Tab. 47} \times k \end{array} \right.$		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
$\Sigma_2 \left\{ \begin{array}{l} \text{Sum} \\ k \times \text{1st sum} \end{array} \right.$		
Σ_3		
Longitude = sum " Tab. 5, II		

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
12		
13		
14		
15		
Sum		
I.F.		
k x 1st sum =		
$\Sigma_4 = \text{sum}$		
Σ_2		
$P_{34} \div 10$		
$P_{35} (P_{34} - 10^3)$		
$\div 10$		
$19 + 9k$		
$- \Omega$		
S = sum		

16
17
18
19

1
2
3
4
5
16

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F.		
- Consts.		
$P_{36} \div 10 =$		
$P_{36} \times 37 \div 10 =$		
Sum = C		$= \Sigma_6$

VI Tab.	Arg.	Value
$P_{22} \div 100$		
$P_{23} \div 100$		
$P_{24} \div 100$		
$24 + 9k =$		
$\Sigma_{10} = \text{sum}$		

I.F. =
For Tab. P23 VI
Date =
Per. = $\times 270.95 =$
Arg. =
k =

Dropping of digits from VI indicated by divisors 10 & 100

For Tab. P24 VI
Date =
Per. = $\times 257.14 =$
Arg. =

Interpolating Factor

If D = 16.353, I.F. = $2 \times (16.5 - 16.353) = -.29$

If D = 16.653, I.F. = $2 \times (16.653 - 16.5) = +.31$

If D = 17.022, I.F. = $2 \times (.022) = +.04$

53
54
55
56
57
58
59
60
61
62

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts.		
k (1st two lines - 340)		
$\Sigma_5 = \text{sum}$ Tab. 33, Arg. S =		
$\Sigma_7 = \text{sum}$ $\Sigma_7 \times C \div 10^5 =$		
Latitude = sum " Tab. 5, II		

16
17
18
19

V Tab	Arg	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
10		
11		
12		
13		
Sum		
I.F.		
k (1st sum - 595) =		
$\Sigma_8 = \text{sum}$		

71
33
72
73
74
76
77

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19 - 200)		
9 (Const.)		
Σ_8		
$\Sigma_9 = \text{sum}$ Tab. 24, Tab. Arg. " Parallax		

Drop 1 digit from figures in Table 24, V

Drop last two digits from III

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F. _____		
k x 1st sum _____		
$\Sigma_1 = \text{sum}$ _____		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10} _____		
$\Sigma_3 \left\{ \begin{array}{l} \text{Sum} \\ \text{Tab. 47} \times k \end{array} \right.$ _____		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
$\Sigma_2 \left\{ \begin{array}{l} \text{Sum} \\ k \times \text{1st sum} \end{array} \right.$ _____		
Σ_3 _____		
Longitude = sum _____		
" Tab. 5, II _____		

Drop one digit from IV & V

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
12		
13		
14		
15		
Sum		
I.F. _____		
k x 1st sum = _____		
$\Sigma_4 = \text{sum}$ _____		
Σ_2 _____		
P34 ÷ 10 _____		
P35 (P34 - 10 ³) ÷ 10 _____		
19 + 9k _____		
- Ω _____		
S = sum _____		

1
2
3
4
5
16

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F. _____		
- Consts. _____		
P36 ÷ 10 = _____		
P36 x 37 ÷ 10 = _____		
Sum = C _____ = Σ_6		

VI Tab.	Arg.	Value
P22 ÷ 100		
P23 ÷ 100		
P24 ÷ 100		
24 + 9k =		
$\Sigma_{10} = \text{sum}$ _____		

I.F. =
For Tab. P23 VI
Date =
Per. = x 270.95 =
Arg. =
k =

Dropping of digits from VI indicated by divisors 10 & 100

For Tab. P24 VI
Date =
Per. = x 257.14 =
Arg. =

Interpolating Factor
If D = 16.353, I.F. = 2 x (16.5 - 16.353) = -.29
If D = 16.653, I.F. = 2 x (16.653 - 16.5) = +.31
If D = 17.022, I.F. = 2 x (.022) = +.04

53
54
55
56
57
58
59
60
61
62

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts. _____		
k (1st two lines - 340) _____		
$\Sigma_5 = \text{sum}$ _____		
Tab. 33, Arg. S = _____		
$\Sigma_7 = \text{sum}$ _____		
$\Sigma_7 \times C \div 10^5 =$ _____		
Latitude = sum _____		
" Tab. 5, II _____		

16
17
18
19

V Tab	Arg	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
10		
11		
12		
13		
Sum		
I.F. _____ = _____		
k (1st sum - 595) = _____		
$\Sigma_8 = \text{sum}$ _____		

71
72
73
74
76
77

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19 - 200) _____		
9 (Const.) _____		
Σ_8 _____		
$\Sigma_9 = \text{sum}$ _____		
Tab. 24, Tab. Arg. _____		
" Parallax _____		

Drop 1 digit from figures in Table 24, V

Drop last two digits from III

Drop one digit from IV & V

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F.		
k x 1st sum		
$\Sigma_1 = \text{sum}$		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10}		
$\Sigma_3 \left\{ \begin{array}{l} \text{Sum} \\ \text{Tab. 47} \times k \end{array} \right.$		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
$\Sigma_2 \left\{ \begin{array}{l} \text{Sum} \\ k \times \text{1st sum} \end{array} \right.$		
Σ_3		
Longitude = sum " Tab. 5, II		

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
12		
13		
14		
15		
Sum		
I.F.		
k x 1st sum =		
$\Sigma_4 = \text{sum}$		
Σ_2		
$P_{34} \div 10$		
$P_{35} (P_{34} - 10^3)$		
$\div 10$		
$19 + 9k$		
$- \Omega$		
S = sum		

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F.		
- Consts.		
$P_{36} \div 10 =$		
$P_{36} \times 37 \div 10 =$		
Sum = C = Σ_6		

VI Tab.	Arg.	Value
$P_{22} \div 100$		
$P_{23} \div 100$		
$P_{24} \div 100$		
$24 + 9k =$		
$\Sigma_{10} = \text{sum}$		

I.F. =
For Tab. P23 VI
Date =
Per. = $\times 270.95 =$
Arg. =
k =

Dropping of digits from VI indicated by divisors 10 & 100

For Tab. P24 VI
Date =
Per. = $\times 257.14 =$
Arg. =

Interpolating Factor

If D = 16.353, I.F. = $2 \times (16.5 - 16.353) = -.29$
If D = 16.653, I.F. = $2 \times (16.653 - 16.5) = +.31$
If D = 17.022, I.F. = $2 \times (.022) = +.04$

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts.		
k (1st two lines - 340)		
$\Sigma_5 = \text{sum}$ Tab. 33, Arg. S =		
$\Sigma_7 = \text{sum}$ $\Sigma_7 \times C \div 10^5 =$		
Latitude = sum " Tab. 5, II		

V Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
10		
11		
12		
13		
Sum		
I.F. =		
k (1st sum - 595) =		
$\Sigma_8 = \text{sum}$		

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19 - 200)		
9 (Const.)		
Σ_8		
$\Sigma_9 = \text{sum}$ Tab. 24, Tab. Arg. " Parallax		

Drop 1 digit from figures in Table 24, V

Drop last two digits from III

Drop one digit from IV & V

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F.		
$k \times$ 1st sum		
$\Sigma_1 =$ sum		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10}		
Σ_3 { Sum		
Tab. 47 x k		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
Σ_2 { Sum		
$k \times$ 1st sum		
Σ_3		
Longitude = sum		
" Tab. 5, II		

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
12		
13		
14		
15		
Sum		
I.F.		
$k \times$ 1st sum =		
$\Sigma_4 =$ sum		
Σ_2		
$P_{34} \div 10$		
$P_{35} (P_{34} - 10^3)$		
$\div 10$		
$19 + 9k$		
$- \Omega$		
S = sum		

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F.		
- Consts.		
$P_{36} \div 10 =$		
$P_{36} \times 37 \div 10 =$		
Sum = C		$= \Sigma_6$

VI Tab.	Arg.	Value
$P_{22} \div 100$		
$P_{23} \div 100$		
$P_{24} \div 100$		
$24 + 9k =$		
$\Sigma_{10} =$ sum		

I.F. =
 For Tab. P23 VI
 Date =
 Per. = $\times 270.95 =$
 Arg. =
 k =

Dropping of digits from VI indicated by divisors 10 & 100

For Tab. P24 VI
 Date =
 Per. = $\times 257.14 =$
 Arg. =

Interpolating Factor
 If D = 16.353, I.F. = $2 \times (16.5 - 16.353) = -.29$
 If D = 16.653, I.F. = $2 \times (16.653 - 16.5) = +.31$
 If D = 17.022, I.F. = $2 \times (.022) = +.04$

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts.		
k (1st two lines - 340)		
$\Sigma_5 =$ sum		
Tab. 33, Arg. S =		
$\Sigma_7 =$ sum		
$\Sigma_7 \times C \div 10^5 =$		
Latitude = sum		
" Tab. 5, II		

V Tab	Arg	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
10		
11		
12		
13		
Sum		
I.F.		
k (1st sum - 595) =		
$\Sigma_8 =$ sum		

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19-200)		
9 (Const.)		
Σ_8		
$\Sigma_9 =$ sum		
Tab. 24, Tab. Arg.		
" Parallax		

Drop 1 digit from figures in Table 24, V

Drop last two digits from III

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F.		
k x 1st sum		
$\Sigma_1 = \text{sum}$		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10}		
$\Sigma_3 \left\{ \begin{array}{l} \text{Sum} \\ \text{Tab. } 47 \times k \end{array} \right.$		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
$\Sigma_2 \left\{ \begin{array}{l} \text{Sum} \\ k \times \text{1st sum} \end{array} \right.$		
Σ_3		
Longitude = sum " Tab. 5, II		

Drop one digit from IV & V

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16	12	
17	13	
18	14	
19	15	
Sum		
I.F.		
k x 1st sum =		
$\Sigma_4 = \text{sum}$		
Σ_2		
$P_{34} \div 10$		
$P_{35} (P_{34} - 10^3) \div 10$		
$19 + 9k - \rho$		
S = sum		

1
2
3
4
5
16

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F.		
- Consts.		
$P_{36} \div 10 =$		
$P_{36} \times 37 \div 10 =$		
Sum = C = Σ_6		

VI Tab.	Arg.	Value
$P_{22} \div 100$		
$P_{23} \div 100$		
$P_{24} \div 100$		
$24 + 9k =$		
$\Sigma_{10} = \text{sum}$		

I.F. =
For Tab. P23 VI
Date =
Per. = $\times 270.95 =$
Arg. =
k =

Dropping of digits from VI indicated by divisors 10 & 100

For Tab. P24 VI
Date =
Per. = $\times 257.14 =$
Arg. =

Interpolating Factor

If D = 16.353, I.F. = $2 \times (16.5 - 16.353) = -.29$
If D = 16.653, I.F. = $2 \times (16.653 - 16.5) = +.31$
If D = 17.022, I.F. = $2 \times (.022) = +.04$

53
54
55
56
57
58
59
60
61
62

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts.		
k (1st two lines - 340)		
$\Sigma_5 = \text{sum}$ Tab. 33, Arg. S =		
$\Sigma_7 = \text{sum}$ $\Sigma_7 \times C \div 10^5 =$		
Latitude = sum " Tab. 5, II		

16
17
18
19

V Tab	Arg	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16	10	
17	11	
18	12	
19	13	
Sum		
I.F. =		
k (1st sum - 595) =		
$\Sigma_8 = \text{sum}$		

71
72
73
74
76
77

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19 - 200)		
9 (Const.)		
Σ_8		
$\Sigma_9 = \text{sum}$ Tab. 24, Tab. Arg. " Parallax		

Drop 1 digit from figures in Table 24, V

Constants

Arguments (Newcomb)

	Mercury	Venus	Mars	Jupiter	Saturn	Moon	Earth	VIII	IX	k	Mean Obliquity	(a)
	I	II	III	IV	V	VI	VII				ε	
Tab. I 0												
" 1119 23												
" V												
" VI												
Total												
Per. of Arg.												

Variables

	Moon's Age											
	M	A	D	U	B	N	C	D	L	τ		
Tab. I 0												
" 1119 23												
" III												
" IV												
" V												
Total												
Per. of Arg.												

Longitude

Nutation

In Long. (δψ) In Ob. (δε)

Tab. VII, Arg. I												
" VIII, " II												
" IX, " III												
" X, " IV												
" XI, " V												
Σ												
Δ'												
Δ''												
Sum for g =												
Tab. XIII, Arg. VI												
" XIV, " VII												
Σ												
Δ'												
Δ''												
Σ for D =												
L												
Tabs. VII to XI												
" XIII and XIV												
" XII, Arg. A												
" XV, " D												
" XVI, " M												
" XVII, " M												
Nut												
λ												

Tab. XXXII, Arg. N
 " XXXIII, δay + k
 " XXXIV, D and IX
 " XXXV, D and IX
 " XXXVI, D and VI
 " XXXVII, C
 Σ for Nut

Sidereal Time

ω = _____ λ_⊙ = _____ β_⊙ = _____

$$1 \quad \sin \delta = \sin \omega \sin \lambda \cos \beta + \cos \omega \sin \beta$$

$$2 \quad \cos \delta \sin a = \cos \omega \sin \lambda \cos \beta - \sin \omega \sin \beta$$

$$3 \quad \cos \delta \cos a = \cos \beta \cos \lambda$$

1. log sin ω = _____ log cos ω = _____
 log sin λ = _____ log sin β = _____
 log cos β = _____

antilog

sin δ = _____ log sin δ = _____
 ∴ δ = _____

2. log cos ω = _____ log sin ω = _____
 log sin λ = _____ log sin β = _____
 log cos β = _____

antilog

= log _____
 log cos δ = _____
 log sin a = _____
 ∴ a = _____

3. log cos δ = _____ log cos β = _____
 log cos a = _____ log cos λ = _____

a_⊙ - a_⊙ = _____

Latitude

Tab. XXVIII, Arg. II					
" XXIX, " V					
Σ					
Δ'					
Σ for g =					
Tab. XXVIII & XXIX					
" XXX, Arg. VIII & U					
" XXXI, " B					
Latitude					

Obliquity of Ecliptic

ε (Tables I and II) _____
 (a) x fraction of cent. _____
 δε _____
 ε _____

Constants

Arguments (Newcomb)

	Mercury	Venus	Mars	Jupiter	Saturn	Moon	Earth	Mean Obliquity				
	I	II	III	IV	V	VI	VII	VIII	IX	K	ϵ	(a)
Tab. I	0											
" 1119												
" V												
" VI												
Total												
Per. of Arg.												

Variables

	Moon's Age								L	τ
	M	A	D	U	B	N	C	D		
Tab. I	0									
" 1119										
" III										
" IV										
" V										
Total										
Per. of Arg.										

Longitude

Tab. VII, Arg. I				
" VIII, " II				
" IX, " III				
" X, " IV				
" XI, " V				
Σ				
Δ'				
Δ''				
Sum for g =				
Tab. XIII, Arg. VI				
" XIV, " VII				
Σ				
Δ'				
Δ''				
Σ for D =				

Nutation

	In Long. ($\delta\psi$)	In Ob. ($\delta\epsilon$)
Tab. XXXII, Arg. N		
" XXXIII, $\delta a + k$		
" XXXIV, D and IX		
" XXXV, D and IX		
" XXXVI, D and VI		
" XXXVII, C		
Σ for Nut		

Sidereal Time

L
 Tabs. VII to XI
 " XIII and XIV
 " XII, Arg. A
 " XV, " D
 " XVI, " M
 " XVII, " M
 Nut
 λ

$\omega =$ _____ $\lambda_{\odot} =$ _____ $\beta_{\odot} =$ _____

$$1 \quad \sin \delta = \sin \omega \sin \lambda \cos \beta + \cos \omega \sin \beta$$

$$2 \quad \cos \delta \sin a = \cos \omega \sin \lambda \cos \beta - \sin \omega \sin \beta$$

$$3 \quad \cos \delta \cos a = \cos \beta \cos \lambda$$

1. $\log \sin \omega =$ _____ $\log \cos \omega =$ _____
 $\log \sin \lambda =$ _____ $\log \sin \beta =$ _____
 $\log \cos \beta =$ _____

antilog
 $\sin \delta =$ _____ $\log \sin \delta =$ _____
 $\therefore \delta =$ _____

2. $\log \cos \omega =$ _____ $\log \sin \omega =$ _____
 $\log \sin \lambda =$ _____ $\log \sin \beta =$ _____
 $\log \cos \beta =$ _____

antilog
 $= \log$ _____
 $\log \cos \delta =$ _____
 $\log \sin a =$ _____
 $\therefore a =$ _____

3. $\log \cos \delta =$ _____ $\log \cos \beta =$ _____
 $\log \cos a =$ _____ $\log \cos \lambda =$ _____

$a_{\odot} - a_{\odot} =$ _____

Latitude

Tab. XXVIII, Arg. g				
" XXIX, " V				
Σ				
Δ'				
Σ for g =				
Tab. XXVIII & XXIX				
" XXX, Arg. VIII & U				
" XXXI, " B				
Latitude				

Obliquity of Ecliptic

ϵ (Tables I and II) _____
 $(a) \times$ fraction of cent. _____
 $\delta\epsilon$ _____
 ϵ _____

Constants

Arguments (Newcomb)

	Mercury	Venus	Mars	Jupiter	Saturn	Moon	Earth				Mean Obliquity	(a)
	I	II	III	IV	V	VI	VII	VIII	IX	K	ε	
Tab. I												
" 1119												
" V												
" VI												
Total												
Per. of Arg.												

Variables

	Moon's Age											
	M	A	D	U	B	N	C	D	L	τ		
Tab. I												
" 1119												
" III												
" IV												
" V												
Total												
Per. of Arg.												

Longitude

Nutation

In Long. (δψ) In Ob. (δε)

Tab. VII, Arg. I					Tab. XXXII, Arg. N		
" VIII, " II					" XXXIII, day+k		
" IX, " III					" XXXIV, D and IX		
" X, " IV					" XXXV, D and IX		
" XI, " V					" XXXVI, D and VI		
Σ					" XXXVII, C		
Δ'					Σ for Nut		
Δ''							
Sum for g =							
Tab. XIII, Arg. VI					Sidereal Time		
" XIV, " VII							
Σ							
Δ'							
Δ''							
Σ for D =							
L							
Tabs. VII to XI							
" XIII and XIV							
" XII, Arg. A							
" XV, " D							
" XVI, " M							
" XVII, " M							
Nut							
λ							

$\omega = \dots \quad \lambda_{\odot} = \dots \quad \beta_{\odot} = \dots$
 $1 \quad \sin \delta = \sin \omega \sin \lambda \cos \beta + \cos \omega \sin \beta$
 $2 \quad \cos \delta \sin a = \cos \omega \sin \lambda \cos \beta - \sin \omega \sin \beta$
 $3 \quad \cos \delta \cos a = \cos \beta \cos \lambda$

$1. \quad \log \sin \omega = \dots \quad \log \cos \omega = \dots$
 $\log \sin \lambda = \dots \quad \log \sin \beta = \dots$
 $\log \cos \beta = \dots$

antilog
 $\sin \delta = \dots \quad \log \sin \delta = \dots$
 $\therefore \delta = \dots$

$2 \quad \log \cos \omega = \dots \quad \log \sin \omega = \dots$
 $\log \sin \lambda = \dots \quad \log \sin \beta = \dots$
 $\log \cos \beta = \dots$

antilog
 $= \log \dots$
 $\log \cos \delta = \dots$
 $\log \sin a = \dots$
 $\therefore a = \dots$

$3 \quad \log \cos \delta = \dots \quad \log \cos \beta = \dots$
 $\log \cos a = \dots \quad \log \cos \lambda = \dots$

$a_{\odot} - a_{\oplus} = \dots$

Latitude

Tab. XXVIII, Arg. g				
" XXIX, " V				
Σ				
Δ'				
Σ for g =				
Tab. XXVIII & XXIX				
" XXX, Arg. VIII & U				
" XXXI, " B				
Latitude				

Obliquity of Ecliptic

ϵ (Tables I and II) _____
 $(a) \times$ fraction of cent. _____
 $\delta \epsilon$ _____
 ϵ _____

Constants

Arguments (Newcomb)

	Mercury	Venus	Mars	Jupiter	Saturn	Moon	Earth	VIII	IX	K	Mean Obliquity	(a)
	I	II	III	IV	V	VI	VII				ε	
Tab. I	0											
" III												
" V												
" VI												
Total												
Per. of Arg.												

Variables

	Moon's Age										
	M	A	D	U	B	N	C	D	L	τ	
Tab. I	0										
" III											
" IV											
" V											
Total											
Per. of Arg.											

Longitude

Nutation

In Long.(δψ) In Ob.(δε)

Tab. VII, Arg. I				
" VIII, " II				
" IX, " III				
" X, " IV				
" XI, " V				
Σ				
Δ'				
Δ''				
Sum for g =				
Tab. XIII, Arg. VI				
" XIV, " VII				
Σ				
Δ'				
Δ''				
Σ for D =				
L				
Tabs. VII to XI				
" XIII and XIV				
" XII, Arg. A				
" XV, " D				
" XVI, " M				
" XVII, " M				
Nut				
λ				

Tab. XXXII, Arg. N
 " XXXIII, day + k
 " XXXIV, D and IX
 " XXXV, D and IX
 " XXXVI, D and VI
 " XXXVII, C
 Σ for Nut

Sidereal Time

ω = _____ λ_⊙ = _____ β_⊙ = _____

- 1 sin δ = sin ω sin λ cos β + cos ω sin β
- 2 cos δ sin a = cos ω sin λ cos β - sin ω sin β
- 3 cos δ cos a = cos β cos λ

1. log sin ω = _____ log cos ω = _____
 log sin λ = _____ log sin β = _____
 log cos β = _____

antilog

sin δ = _____ log sin δ = _____
 ∴ δ = _____

2. log cos ω = _____ log sin ω = _____
 log sin λ = _____ log sin β = _____
 log cos β = _____

antilog

= log _____
 log cos δ = _____
 log sin a = _____
 ∴ a = _____

3. log cos δ = _____ log cos β = _____
 log cos a = _____ log cos λ = _____

a_⊙ - a_⊙ = _____

Latitude

Tab. XXVIII, Arg. g				
" XXIX, " V				
Σ				
Δ'				
Σ for g =				
Tab. XXVIII & XXIX				
" XXX, Arg. VIII & U				
" XXXI, " B				
Latitude				

Obliquity of Ecliptic

ε (Tables I and II) _____
 (a) x fraction of cent. _____
 δε _____
 ε _____

Drop last two digits from III

Drop one digit from IV & V

III Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16		
19		
Sum		
I.F.		
k x 1st sum		
$\Sigma_1 = \text{sum}$		
40		
41		
42		
43		
44		
45		
46		
47		
Σ_{10}		
$\Sigma_3 \left\{ \begin{array}{l} \text{Sum} \\ \text{Tab. 47} \times k \end{array} \right.$		

III Tab	Arg. at Date	Value
23		
24		
25		
26		
27		
28		
29		
Sum		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
$\Sigma_2 \left\{ \begin{array}{l} \text{Sum} \\ k \times \text{1st sum} \end{array} \right.$		
Σ_3		
Longitude = sum		
" Tab. 5, II		

IV Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16	12	
17	13	
18	14	
19	15	
Sum		
I.F.		
k x 1st sum =		
$\Sigma_4 = \text{sum}$		
Σ_2		
$P_{34} \div 10$		
$P_{35} (P_{34} - 10^3) \div 10$		
$19 + 9k$		
$- \Omega$		
S = sum		

IV Tab	Arg.	Date
34		
35		
36		
37		
38		
43		
Sum		
I.F.		
- Consts.		
$P_{36} \div 10 =$		
$P_{36} \times 37 \div 10 =$		
Sum = C = Σ_6		

VI Tab.	Arg.	Value
$P_{22} \div 100$		
$P_{23} \div 100$		
$P_{24} \div 100$		
$24 + 9k =$		
$\Sigma_{10} = \text{sum}$		

I.F. =
 For Tab. P 23 VI
 Date =
 Per. = $\times 270.95 =$
 Arg. =
 k =

For Tab. P 24 VI
 Date =
 Per. = $\times 257.14 =$
 Arg. =

Dropping of digits from VI indicated by divisors 10 & 100

Interpolating Factor
 IF D = 16.353, I.F. = $2 \times (16.5 - 16.353) = -.29$
 IF D = 16.653, I.F. = $2 \times (16.653 - 16.5) = +.31$
 IF D = 17.022, I.F. = $2 \times (.022) = +.04$

IV Tab	Arg. at Date	Value
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
Sum		
- Consts.		
k (1st two lines - 340)		
$\Sigma_5 = \text{sum}$		
Tab. 33, Arg. S =		
$\Sigma_7 = \text{sum}$		
$\Sigma_7 \times C \div 10^5 =$		
Latitude = sum		
" Tab. 5, II		

V Tab	Arg.	Date
1		
2		
3		
4		
5		
6		
7		
Sum		
16	10	
17	11	
18	12	
19	13	
Sum		
I.F. =		
k (1st sum - 595) =		
$\Sigma_8 = \text{sum}$		

V Tab	Arg. at Date	Value
15		
16		
17		
18		
19		
21		
22		
Sum		
k (Tab. 19 - 200)		
9 (Const.)		
Σ_8		
$\Sigma_9 = \text{sum}$		
Tab. 24, Tab. Arg.		
" Parallax		

Drop 1 digit from figures in Table 24, V

Constants

Arguments (Newcomb)

Mercury Venus Mars Jupiter Saturn Moon Earth Mean Obliquity

	I	II	III	IV	V	VI	VII	VIII	IX	K	ε	(a)
Tab. I	0											
" 111923												
" V												
" VI												
Total												
Per. of Arg.												

Variables

Moon's Age

	M	A	D	U	B	N	C	D	L	τ
Tab. I	0									
" 111928										
" III										
" IV										
" V										
Total										
Per. of Arg.										

Longitude

Nutation

In Long. (δψ) In Ob. (δε)

Tab. VII, Arg. I												
" VIII " II												
" IX " III												
" X " IV												
" XI " V												
Σ												
Δ'												
Δ''												
Sum for g =												
Tab. XIII, Arg. VI												
" XIV, " VII												
Σ												
Δ'												
Δ''												
Σ for D =												
L												
Tabs. VII to XI												
" XIII and XIV												
" XII, Arg. A												
" XV, " D												
" XVI, " M												
" XVII, " M												
Nut												
λ												

Tab. XXXII, Arg. N
 " XXXIII, δay + k
 " XXXIV, D and IX
 " XXXV, D and IX
 " XXXVI, D and VI
 " XXXVII, C
 Σ for Nut

Sidereal Time

ω = λ_⊙ = β_⊙ =

$$1 \quad \sin \delta = \sin \omega \sin \lambda \cos \beta + \cos \omega \sin \beta$$

$$2 \quad \cos \delta \sin \alpha = \cos \omega \sin \lambda \cos \beta - \sin \omega \sin \beta$$

$$3 \quad \cos \delta \cos \alpha = \cos \beta \cos \lambda$$

1 log sin ω = log cos ω =
 log sin λ = log sin β =
 log cos β =

antilog

sin δ = log sin δ =
 ∴ δ =

2 log cos ω = log sin ω =
 log sin λ = log sin β =
 log cos β =

antilog

= log
 log cos δ =
 log sin α =
 ∴ α =

3 log cos δ = log cos β =
 log cos α = log cos λ =

a_c - a_⊙ =

Latitude

Tab. XXVIII, Arg. g				
" XXIX, " V				
Σ				
Δ'				
Σ for g =				
Tab. XXVIII & XXIX				
" XXX, Arg. VIII & U				
" XXXI, " B				
Latitude				

Obliquity of Ecliptic

ε (Tables I and II)
 (a) x fraction of cent.
 δε
 ε

$$\begin{aligned} 1 \quad \sin \delta &= \sin w \sin \lambda \cos \beta + \cos w \sin \beta \\ 2 \quad \cos \delta \sin a &= \cos w \sin \lambda \cos \beta - \sin w \sin \beta \\ 3 \quad \cos \delta \cos a &= \cos \beta \cos \lambda \end{aligned}$$

$$\begin{aligned} 1 \quad \sin \delta &= \\ \log \sin w &= \\ \log \sin \lambda &= \\ \log \cos \beta &= \end{aligned}$$

$$\begin{aligned} \sin \delta &= \\ \log \sin \delta &= \\ \delta &= \end{aligned}$$

$$\begin{aligned} 2 \quad \cos \delta \sin a &= \\ \log \cos w &= \\ \log \sin \lambda &= \\ \log \cos \beta &= \end{aligned}$$

$$\begin{aligned} \log \sin w &= \\ \log \sin \beta &= \end{aligned}$$

$$\begin{aligned} &= \\ \log \cos \delta &= \\ \log \sin a &= \end{aligned}$$

$$\begin{aligned} \log \cos \delta &= \\ \log \cos a &= \\ \log \cos \beta &= \\ \log \cos \lambda &= \end{aligned}$$

$$\begin{aligned} w &= \\ \log &= \\ \beta &= \\ \log \sin \lambda &= \\ \log \cos \lambda &= \\ \log \sin w &= \\ \log \cos w &= \\ \log \sin \beta &= \\ \log \cos \beta &= \\ \log \sin \delta &= \\ \log \cos \delta &= \\ \log \sin a &= \\ \log \cos a &= \end{aligned}$$

leave out this page