REVOLUTION 9

TIME	THETA	ALTITUDE	GAMMA	CCONT	QFM	VELOCITY	P/T
1204194.3	-180.00	12321665.83	.08103	0.00	0.000	18169.23	0.00000
1204823.7	-160.00	11760886.46	5.46471	0.00	0.000	18565.30	0.00000
1205415.3	-140.00	10246948.04	9.72907	0.00	0.000	19661.24	0.00000
1205941.4	-120.00	8181461.17	12.17180	0.00	0.000	21230.87	0.00000
1206394.9	-100.00	5993485.46	12.78061	0.00	0.000	23010.54	0.00000
1206782.7	-80.00	3999612.72	11.86184	0.00	0.000	24764.35	0.00000
1207117.8	-60.00	2377654.13	9.79759	0.00	0.000	26306.05	0.00000
1207415.1	-40.00	1203736.44	6.93991	.08	.000	27498.98	.00002
1207688.1	-20.00	499277.61	3.58866	1.03	.046	28250.45	.00256
1207714.6	-18.00	454736.73	3.23661	1.55	.106	28298.93	.00583
1207741.0	-16.00	414894.98	2.88249	2.66	.309	28342.40	.01697
1207767.2	-14.00	379749.18	2.52653	5.23	1.190	28380.82	.06521
1207793.4	-12.00	349296.31	2.16901	10.52	4.800	28414.18	.26267
1207819.6	-10.00	323533.60	1.81018	20.50	18.162	28442.44	.99279
1207845.6	-8.00	302458.58	1.45034	37.13	59.415	28465.58	3.24516
1207871.6	-6.00	286069.16	1.08988	59.66	153.075	28483.61	8.35545
1207897.6	-4.00	274363.66	.72948	82.98	295.650	28496.49	16.13050
1207923.6	-2.00	267340.85	.37154	100.92	436.968	28504.22	23.83426
1207948.2	0.00	265000.00	.08103	107.60	496.533	28506.80	27.08075
1207972.9	2.00	267340.85	.37154	100.92	436.968	28504.22	23.83426
1207998.8	4.00	274363.66	.72948	82.98	295.650	28496.49	16.13050
1208024.8	6.00	286069.16	1.08988	59.66	153.075	28483.61	8.35545
1208050.8	8.00	302458.58	1.45034	37.13	59.415	28465.58	3.24516
1208076.9	10.00	323533.60	1.81018	20.50	18.162	28442.44	.99279
1208103.0	12.00	349296.31	2.16901	10.52	4.800	28414.18	.26267
1208129.2	14.00	379749.18	2.52653	5.23	1.190	28380.82	.06521
1208155.5	16.00	414894.98	2.88249	2.66	.309	28342.40	.01697
1208181.8	18.00	454736.73	3.23661	1.55	.106	28298.93	.00583
1208208.3	20.00	499277.61	3.58866	1.03	.046	28250.45	.00256
1208481.4	40.00	1203736.44	6.93991	.08	.000	27498.98	.00002
1208778.6	60.00	2377654.13	9.79759	0.00	0.000	26306.05	0.00000
1209113.8	80.00	3999612.72	11.86184	0.00	0.000	24764.35	0.00000
1209501.5	100.00	5993485.46	12.78061	0.00	0.000	23010.54	0.00000
1209955.0	120.00	8181461.17	12.17180	0.00	0.000	21230.87	0.00000
1210481.1	140.00	10246948.04	9.72907	0.00	0.000	19661.24	0.00000
1211072.7	160.00	11760886.46	5.46471	0.00	0.000	18565.30	0.00000
1211702.2	180.00	12321665.83	.08103	0.00	0.000	18169.23	0.00000

REVOLUTION 10

TIME	THETA	ALTITUDE	GAMMA	GCONT	QFM	VELOCITY	P_T
1211702.2	-180.00	2374951.55	.08103	0.00	0.000	24007.37	0.00000
1212039.0	-160.00	2305203.22	.97595	0.00	0.000	24082.92	0.00000
1212373.2	-140.00	2106683.19	1.81362	.01	.000	24299.14	.00000
1212700.1	-120.00	1809029.01	2.41025	.01	.000	24626.73	.00000
1213017.7	-100.00	1454245.07	2.69735	.03	.000	25022.73	.00000
1213325.2	-80.00	1088655.05	2.65339	.08	.000	25437.37	.00003
1213622.9	-60.00	755833.75	2.29884	.24	.003	25820.93	.00020
1213912.5	-40.00	491870.47	1.68681	.85	.041	26129.45	.00245
1214196.3	-20.00	323019.99	.89330	16.30	14.808	26328.87	.87443
1214224.4	-18.00	312062.83	.80744	22.05	27.073	26341.87	1.59789
1214252.6	-16.00	302232.54	.72084	29.32	47.771	26353.54	2.81830
1214280.7	-14.00	293537.97	.63361	37.79	79.275	26363.86	4.67507
1214308.8	-12.00	285986.92	.54592	46.92	122.065	26372.83	7.19609
1214336.8	-10.00	279586.15	.45800	56.20	174.944	26380.44	10.31048
1214364.9	-8.00	274341.36	.37017	65.16	235.018	26386.67	13.84771
1214392.9	-6.00	270257.24	.28307	73.12	295.755	26391.53	17.42323
1214420.9	-4.00	267337.42	.19829	79.22	347.031	26395.00	20.44127
1214449.0	-2.00	265584.48	.12150	83.12	381.894	26397.08	22.49302
1214475.8	0.00	265000.00	.08103	84.46	394.280	26397.78	23.22194
1214502.7	2.00	265584.48	.12150	83.12	381.894	26397.08	22.49302
1214530.7	4.00	267337.42	.19829	79.22	347.031	26395.00	20.44127
1214558.7	6.00	270257.24	.28307	73.12	295.755	26391.53	17.42323
1214586.7	8.00	274341.36	.37017	65.16	235.018	26386.67	13.84771
1214614.8	10.00	279586.15	.45800	56.20	174.944	26380.44	10.31048
1214642.9	12.00	285986.92	.54592	46.92	122.065	26372.83	7.19609
1214670.9	14.00	293537.97	.63361	37.79	79.275	26363.86	4.67507
1214699.1	16.00	302232.54	.72084	29.32	47.771	26353.54	2.81830
1214727.2	18.00	312062.83	.80744	22.05	27.073	26341.87	1.59789
1214755.3	20.00	323019.99	.89330	16.30	14.808	26328.87	.87443
1215039.1	40.00	491870.47	1.68681	.85	.041	26129.45	.00245
1215328.7	60.00	755833.75	2.29884	.24	.003	25820.93	.00020
1215626.4	80.00	1088655.05	2.65339	.08	.000	25437.37	.00003
1215933.9	100.00	1454245.07	2.69735	.03	.000	25022.73	.00000
1216251.5	120.00	1809029.01	2.41025	.01	.000	24626.73	.00000
1216578.5	140.00	2106683.19	1.81362	.01	.000	24299.14	.00000
1216912.6	160.00	2305203.22	.97595	0.00	0.000	24082.92	0.00000
1217249.4	180.00	2374951.55	.08103	0.00	0.000	24007.37	0.00000

Part 2

Listing of Punched Card CMA Input

REVOLUTION 1

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	25353.051	0.0000	.0000001	.000000	GLFC CONT.
21.5784	25501.542	0.0000	.0000003	.000000	GLFC CONT.
42.9206	25634.892	0.0000	.0000006	.000000	GLFC CONT.
64.0539	25752.938	0.0000	.0000015	.000001	GLFC CONT.
85.0037	25855.538	0.0000	.0000040	.000002	GLFC CONT.
105.7932	25942.565	0.0000	.0000182	.000010	GLFC CONT.
126.4414	26013.915	0.0000	.0001662	.000088	GLFC CONT.
146.9573	26069.499	0.0000	.0015310	.000812	GLFC CONT.
167.3173	26109.250	0.0000	.0042863	.004982	GLFC CONT.
187.3119	26133.121	0.0000	.0073239	.014545	GLFC CONT.
202.3370	26141.081	0.0000	.0087178	.020607	GLFC CONT.
217.3622	26133.121	0.0000	.0073239	.014545	GLFC CONT.
237.3568	26109.250	0.0000	.0042863	.004982	GLFC CONT.
257.7167	26069.499	0.0000	.0015310	.000812	GLFC CONT.
278.2327	26013.915	0.0000	.0001662	.000088	GLFC CONT.
298.8809	25942.565	0.0000	.0000182	.000010	GLFC CONT.
319.6704	25855.538	0.0000	.0000040	.000002	GLFC CONT.
340.6201	25752.938	0.0000	.0000015	.000001	GLFC CONT.
361.7534	25634.892	0.0000	.0000006	.000000	GLFC CONT.
383.0956	25501.542	0.0000	.0000003	.000000	GLFC CONT.
404.6740	25353.051	0.0000	.0000001	.000000	GLFC CONT.

REVOLUTION 3

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	23594.351	0.0000	.0000002	.000000	GLFC CONT.
22.2852	23731.354	0.0000	.0000004	.000000	GLFC CONT.
44.3480	23854.388	0.0000	.0000008	.000000	GLFC CONT.
66.2148	23963.302	0.0000	.0000018	.000001	GLFC CONT.
87.9113	24057.964	0.0000	.0000052	.000003	GLFC CONT.
109.4621	24138.259	0.0000	.0000260	.000013	GLFC CONT.
130.8908	24204.089	0.0000	.0002332	.000119	GLFC CONT.
152.2185	24255.373	0.0000	.0018728	.000962	GLFC CONT.
173.4600	24292.049	0.0000	.0043472	.005181	GLFC CONT.
194.5926	24314.073	0.0000	.0071239	.013911	GLFC CONT.
213.1620	24321.417	0.0000	.0083635	.019172	GLFC CONT.
231.7314	24314.073	0.0000	.0071239	.013911	GLFC CONT.
252.8640	24292.049	0.0000	.0043472	.005181	GLFC CONT.
274.1055	24255.373	0.0000	.0018728	.000962	GLFC CONT.
295.4332	24204.089	0.0000	.0002332	.000119	GLFC CONT.
316.8619	24138.259	0.0000	.0000260	.000013	GLFC CONT.
338.4127	24057.964	0.0000	.0000052	.000003	GLFC CONT.
360.1092	23963.302	0.0000	.0000018	.000001	GLFC CONT.
381.9760	23854.388	0.0000	.0000008	.000000	GLFC CONT.
404.0388	23731.354	0.0000	.0000004	.000000	GLFC CONT.
426.3240	23594.351	0.0000	.0000002	.000000	GLFC CONT.

REVOLUTION 5

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	21593.356	0.0000	.0000002	.000000	GLFC CONT.
23.1739	21714.902	0.0000	.0000005	.000000	GLFC CONT.
46.1431	21824.054	0.0000	.0000011	.000001	GLFC CONT.
68.9319	21920.679	0.0000	.0000025	.000001	GLFC CONT.
91.5640	22004.661	0.0000	.0000081	.000004	GLFC CONT.
114.0622	22075.896	0.0000	.0000467	.000023	GLFC CONT.
136.4486	22134.298	0.0000	.0003659	.000179	GLFC CONT.
158.7441	22179.796	0.0000	.0020992	.001225	GLFC CONT.
180.9664	22212.334	0.0000	.0044474	.005496	GLFC CONT.
203.1142	22231.873	0.0000	.0068932	.013200	GLFC CONT.
223.3465	22238.388	0.0000	.0079438	.017530	GLFC CONT.
243.5789	22231.873	0.0000	.0068932	.013200	GLFC CONT.
265.7266	22212.334	0.0000	.0044474	.005496	GLFC CONT.
287.9489	22179.796	0.0000	.0020992	.001225	GLFC CONT.
310.2445	22134.298	0.0000	.0003659	.000179	GLFC CONT.
332.6309	22075.896	0.0000	.0000467	.000023	GLFC CONT.
355.1291	22004.661	0.0000	.0000081	.000004	GLFC CONT.
377.7611	21920.679	0.0000	.0000025	.000001	GLFC CONT.
400.5500	21824.054	0.0000	.0000011	.000001	GLFC CONT.
423.5192	21714.902	0.0000	.0000005	.000000	GLFC CONT.
446.6931	21593.356	0.0000	.0000002	.000000	GLFC CONT.

REVOLUTION 7

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	19100.900	0.0000	.0000005	.000000	GLFC CONT.
24.4553	19198.337	0.0000	.0000010	.000000	GLFC CONT.
48.7382	19285.839	0.0000	.0000021	.000001	GLFC CONT.
72.8686	19363.300	0.0000	.0000053	.000002	GLFC CONT.
96.8663	19430.624	0.0000	.0000208	.000010	GLFC CONT.
120.7506	19487.731	0.0000	.0001278	.000059	GLFC CONT.
144.5402	19534.549	0.0000	.0007981	.000366	GLFC CONT.
168.2534	19571.023	0.0000	.0025545	.001848	GLFC CONT.
191.9061	19597.107	0.0000	.0046462	.006112	GLFC CONT.
215.5035	19612.770	0.0000	.0065975	.012322	GLFC CONT.
237.5587	19617.994	0.0000	.0073913	.015465	GLFC CONT.
259.6138	19612.770	0.0000	.0065975	.012322	GLFC CONT.
283.2112	19597.107	0.0000	.0046462	.006112	GLFC CONT.
306.8640	19571.023	0.0000	.0025545	.001848	GLFC CONT.
330.5771	19534.549	0.0000	.0007981	.000366	GLFC CONT.
354.3668	19487.731	0.0000	.0001278	.000059	GLFC CONT.
378.2510	19430.624	0.0000	.0000208	.000010	GLFC CONT.
402.2487	19363.300	0.0000	.0000053	.000002	GLFC CONT.
426.3792	19285.839	0.0000	.0000021	.000001	GLFC CONT.
450.6620	19198.337	0.0000	.0000010	.000000	GLFC CONT.
475.1173	19100.900	0.0000	.0000005	.000000	GLFC CONT.

REVOLUTION 9

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	15941.669	0.0000	.0000029	.000001	GLFC CONT.
26.4685	15996.433	0.0000	.0000066	.000003	GLFC CONT.
52.8326	16045.612	0.0000	.0000193	.000008	GLFC CONT.
79.1041	16089.148	0.0000	.0000740	.000031	GLFC CONT.
105.2947	16126.987	0.0000	.0002977	.000124	GLFC CONT.
131.4158	16159.083	0.0000	.0011240	.000469	GLFC CONT.
157.4789	16185.397	0.0000	.0022941	.001533	GLFC CONT.
183.4949	16205.897	0.0000	.0036814	.003948	GLFC CONT.
209.4737	16220.557	0.0000	.0051154	.007622	GLFC CONT.
235.4184	16229.360	0.0000	.0062184	.011262	GLFC CONT.
260.0849	16232.296	0.0000	.0066285	.012796	GLFC CONT.
284.7514	16229.360	0.0000	.0062184	.011262	GLFC CONT.
310.6961	16220.557	0.0000	.0051154	.007622	GLFC CONT.
336.6749	16205.897	0.0000	.0036814	.003948	GLFC CONT.
362.6909	16185.397	0.0000	.0022941	.001533	GLFC CONT.
388.7539	16159.083	0.0000	.0011240	.000469	GLFC CONT.
414.8750	16126.987	0.0000	.0002977	.000124	GLFC CONT.
441.0656	16089.148	0.0000	.0000740	.000031	GLFC CONT.
467.3371	16045.612	0.0000	.0000193	.000008	GLFC CONT.
493.7013	15996.433	0.0000	.0000066	.000003	GLFC CONT.
520.1697	15941.669	0.0000	.0000029	.000001	GLFC CONT.

APPENDIX E

Trajectory and Reentry Environment
Output From Computer Code HRS017 (Version 3)
for a Perigee Altitude of 270,000 Feet
(Fourteen Revolutions)

Part 1. Trajectory and Reentry Environment Tabulated Data (85)

Part 2. Listing of Punched Card CMA Input (99)

Part 1

Trajectory and Reentry Environment Tabulated Data

REVOLUTION 1

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P T
0.0	-180.00	1246374303.00	.08103	0.00	0.000	604.97	0.00000
385012.2	-160.00	436129763.02	74.58157	0.00	0.000	6309.33	0.00000
422283.0	-140.00	139956849.17	67.36903	0.00	0.000	12384.48	0.00000
428401.9	-120.00	59806338.69	58.34072	0.00	0.000	18093.40	0.00000
430262.8	-100.00	29183447.31	48.85817	0.00	0.000	23255.30	0.00000
431077.3	-80.00	14773251.19	39.19603	0.00	0.000	27711.81	0.00000
431531.9	-60.00	7178550.24	29.44686	0.00	0.000	31327.01	0.00000
431835.9	-40.00	3024819.92	19.65138	0.00	0.000	33990.85	0.00000
432071.9	-20.00	917641.13	9.83136	.38	.003	35622.26	.00013
432093.5	-18.00	792595.31	8.84859	.58	.007	35726.43	.00030
432114.8	-16.00	681513.67	7.86574	.88	.016	35819.71	.00067
432136.0	-14.00	584123.69	6.88281	1.34	.036	35902.09	.00156
432156.9	-12.00	500188.09	5.89984	2.18	.095	35973.54	.00409
432177.7	-10.00	429503.65	4.91683	4.54	.407	36034.03	.01757
432198.4	-8.00	371900.10	3.93382	13.20	3.433	36083.55	.14793
432218.9	-6.00	327239.29	2.95089	39.42	30.513	36122.08	1.31332
432239.3	-4.00	295414.49	1.96820	96.73	183.265	36149.61	7.88201
432259.3	-2.00	276349.85	.98661	166.26	540.601	36166.13	23.23999
432274.3	0.00	270000.00	.08103	198.80	772.531	36171.63	33.20540
432289.3	2.00	276349.85	.98661	166.26	540.601	36166.13	23.23999
432309.3	4.00	295414.49	1.96820	96.73	183.265	36149.61	7.88201
432329.7	6.00	327239.29	2.95089	39.42	30.513	36122.08	1.31332
432350.2	8.00	371900.10	3.93382	13.20	3.433	36083.55	.14793
432370.9	10.00	429503.65	4.91683	4.54	.407	36034.03	.01757
432391.7	12.00	500188.09	5.89984	2.18	.095	35973.54	.00409
432412.6	14.00	584123.69	6.88281	1.34	.036	35902.09	.00156
432433.8	16.00	681513.67	7.86574	.88	.016	35819.71	.00067
432455.1	18.00	792595.31	8.84859	.58	.007	35726.43	.00030
432476.7	20.00	917641.13	9.83136	.38	.003	35622.26	.00013
432712.6	40.00	3024819.92	19.65138	0.00	0.000	33990.85	0.00000
433016.7	60.00	7178550.24	29.44686	0.00	0.000	31327.01	0.00000
433471.2	80.00	14773251.19	39.19603	0.00	0.000	27711.81	0.00000
434285.8	100.00	29183447.31	48.85817	0.00	0.000	23255.30	0.00000
436146.7	120.00	59806338.69	58.34072	0.00	0.000	18093.40	0.00000
442265.6	140.00	139956849.17	67.36903	0.00	0.000	12384.48	0.00000
479536.4	160.00	436129763.02	74.58157	0.00	0.000	6309.33	0.00000
864548.6	180.00	1246374303.00	.08103	0.00	0.000	604.97	0.00000

REVOLUTION 2

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
864548.6	-180.00	584221805.52	.08103	0.00	0.000	1255.69	0.00000
978400.4	-160.00	309620711.10	68.76501	0.00	0.000	6346.99	0.00000
1002116.1	-140.00	122379267.02	64.50325	0.00	0.000	12318.21	0.00000
1007325.4	-120.00	55795458.94	56.52837	0.00	0.000	17958.17	0.00000
1009064.6	-100.00	27942736.21	47.60980	0.00	0.000	23064.28	0.00000
1009856.0	-80.00	14324332.96	38.31663	0.00	0.000	27474.88	0.00000
1010306.1	-60.00	7009087.34	28.84162	0.00	0.000	31053.73	0.00000
1010610.4	-40.00	2967023.46	19.26978	0.00	0.000	33691.12	0.00000
1010847.8	-20.00	905226.07	9.64648	.39	.003	35306.45	.00014
1010869.6	-18.00	782633.59	8.68253	.58	.007	35409.59	.00031
1010891.1	-16.00	673708.75	7.71838	.88	.016	35501.96	.00070
1010912.5	-14.00	578192.25	6.75408	1.34	.037	35583.53	.00162
1010933.6	-12.00	495858.21	5.78964	2.19	.098	35654.28	.00429
1010954.6	-10.00	426513.07	4.82511	4.61	.433	35714.17	.01883
1010975.5	-8.00	369994.60	3.86052	13.37	3.629	35763.20	.15777
1010996.2	-6.00	326171.13	2.89596	39.44	31.454	35801.36	1.36597
1011016.9	-4.00	294940.92	1.93162	95.35	183.403	35828.62	7.95860
1011037.3	-2.00	276231.63	.96837	162.19	529.832	35844.97	22.98112
1011053.9	0.00	270000.00	.08103	193.29	752.133	35850.43	32.61829
1011070.6	2.00	276231.63	.96837	162.19	529.832	35844.97	22.98112
1011091.0	4.00	294940.92	1.93162	95.35	183.403	35828.62	7.95860
1011111.7	6.00	326171.13	2.89596	39.44	31.454	35801.36	1.36597
1011132.4	8.00	369994.60	3.86052	13.37	3.629	35763.20	.15777
1011153.3	10.00	426513.07	4.82511	4.61	.433	35714.17	.01883
1011174.3	12.00	495858.21	5.78964	2.19	.098	35654.28	.00429
1011195.4	14.00	578192.25	6.75408	1.34	.037	35583.53	.00162
1011216.7	16.00	673708.75	7.71838	.88	.016	35501.96	.00070
1011238.3	18.00	782633.59	8.68253	.58	.007	35409.59	.00031
1011260.0	20.00	905226.07	9.64648	.39	.003	35306.45	.00014
1011497.4	40.00	2967023.46	19.26978	0.00	0.000	33691.12	0.00000
1011801.7	60.00	7009087.34	28.84162	0.00	0.000	31053.73	0.00000
1012251.9	80.00	14324332.96	38.31663	0.00	0.000	27474.88	0.00000
1013043.3	100.00	27942736.21	47.60980	0.00	0.000	23064.28	0.00000
1014782.4	120.00	55795458.94	56.52837	0.00	0.000	17958.17	0.00000
1019991.7	140.00	122379267.02	64.50325	0.00	0.000	12318.21	0.00000
1043707.5	160.00	309620711.10	68.76501	0.00	0.000	6346.99	0.00000
1157559.3	180.00	584221805.52	.08103	0.00	0.000	1255.69	0.00000

REVOLUTION 3

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1157559.3	-180.00	359700312.85	.08103	0.00	0.000	1976.75	0.00000
1208851.4	-160.00	230921456.59	62.47322	0.00	0.000	6464.24	0.00000
1224837.8	-140.00	106643855.37	61.30139	0.00	0.000	12282.27	0.00000
1229258.9	-120.00	51720817.55	54.49081	0.00	0.000	17831.31	0.00000
1230875.9	-100.00	26613844.64	46.20322	0.00	0.000	22867.79	0.00000
1231642.5	-80.00	13830898.00	37.32479	0.00	0.000	27222.62	0.00000
1232087.8	-60.00	6820208.88	28.15865	0.00	0.000	30757.95	0.00000
1232392.2	-40.00	2902107.54	18.83904	0.00	0.000	33363.95	0.00000
1232631.3	-20.00	891226.83	9.43777	.39	.003	34960.27	.00015
1232653.2	-18.00	771398.13	8.49506	.59	.007	35062.21	.00033
1232675.0	-16.00	664904.04	7.55203	.88	.017	35153.49	.00074
1232696.5	-14.00	571499.78	6.60874	1.34	.038	35234.11	.00169
1232717.8	-12.00	490972.02	5.66524	2.20	.103	35304.02	.00453
1232739.0	-10.00	423137.81	4.72155	4.69	.464	35363.22	.02038
1232760.1	-8.00	367843.76	3.77776	13.64	3.902	35411.68	.17132
1232781.1	-6.00	324965.35	2.83395	39.48	32.570	35449.38	1.42849
1232801.9	-4.00	294406.31	1.89032	93.88	183.662	35476.32	8.04899
1232822.7	-2.00	276098.17	.94778	157.81	518.224	35492.49	22.70085
1232840.2	0.00	270000.00	.08103	187.37	730.161	35497.88	31.97992
1232857.8	2.00	276098.17	.94778	157.81	518.224	35492.49	22.70085
1232878.5	4.00	294406.31	1.89032	93.88	183.662	35476.32	8.04899
1232899.4	6.00	324965.35	2.83395	39.48	32.570	35449.38	1.42849
1232920.4	8.00	367843.76	3.77776	13.64	3.902	35411.68	.17132
1232941.4	10.00	423137.81	4.72155	4.69	.464	35363.22	.02038
1232962.6	12.00	490972.02	5.66524	2.20	.103	35304.02	.00453
1232984.0	14.00	571499.78	6.60874	1.34	.038	35234.11	.00169
1233005.5	16.00	664904.04	7.55203	.88	.017	35153.49	.00074
1233027.2	18.00	771398.13	8.49506	.59	.007	35062.21	.00033
1233049.2	20.00	891226.83	9.43777	.39	.003	34960.27	.00015
1233288.2	40.00	2902107.54	18.83904	0.00	0.000	33363.95	0.00000
1233592.7	60.00	6820208.88	28.15865	0.00	0.000	30757.95	0.00000
1234038.0	80.00	13830898.00	37.32479	0.00	0.000	27222.62	0.00000
1234804.6	100.00	26613844.64	46.20322	0.00	0.000	22867.79	0.00000
1236421.6	120.00	51720817.55	54.49081	0.00	0.000	17831.31	0.00000
1240842.7	140.00	106643855.37	61.30139	0.00	0.000	12282.27	0.00000
1256829.1	160.00	230921456.59	62.47322	0.00	0.000	6464.24	0.00000
1308121.2	180.00	359700312.85	.08103	0.00	0.000	1976.75	0.00000

REVOLUTION 4

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1308121.2	-180.00	244222827.58	.08103	0.00	0.000	2805.62	0.00000
1335212.9	-160.00	175909968.15	55.61257	0.00	0.000	6691.60	0.00000
1346263.1	-140.00	92078446.81	57.61281	0.00	0.000	12290.00	0.00000
1349980.4	-120.00	47457616.42	52.11709	0.00	0.000	17715.92	0.00000
1351471.3	-100.00	25143289.81	44.55805	0.00	0.000	22662.08	0.00000
1352210.6	-80.00	13269021.48	36.16261	0.00	0.000	26946.30	0.00000
1352650.2	-60.00	6601727.65	27.35763	0.00	0.000	30427.27	0.00000
1352954.8	-40.00	2826354.84	18.33360	0.00	0.000	32994.37	0.00000
1353195.7	-20.00	874816.77	9.19280	.40	.004	34567.25	.00016
1353217.9	-18.00	758224.24	8.27501	.59	.008	34667.70	.00036
1353239.9	-16.00	654577.80	7.35677	.89	.018	34757.66	.00079
1353261.6	-14.00	563649.17	6.43815	1.34	.040	34837.09	.00178
1353283.2	-12.00	485239.23	5.51921	2.23	.110	34905.99	.00489
1353304.6	-10.00	419177.13	4.60001	4.80	.504	34964.32	.02243
1353325.9	-8.00	365319.57	3.68062	13.98	4.252	35012.08	.18881
1353347.1	-6.00	323550.13	2.76115	39.57	33.956	35049.23	1.50625
1353368.3	-4.00	293778.78	1.84184	92.25	184.101	35075.78	8.16037
1353389.3	-2.00	275941.51	.92361	152.94	505.291	35091.71	22.38713
1353407.5	0.00	270000.00	.08103	180.78	705.704	35097.02	31.26173
1353425.8	2.00	275941.51	.92361	152.94	505.291	35091.71	22.38713
1353446.8	4.00	293778.78	1.84184	92.25	184.101	35075.78	8.16037
1353467.9	6.00	323550.13	2.76115	39.57	33.956	35049.23	1.50625
1353489.2	8.00	365319.57	3.68062	13.98	4.252	35012.08	.18881
1353510.5	10.00	419177.13	4.60001	4.80	.504	34964.32	.02243
1353531.9	12.00	485239.23	5.51921	2.23	.110	34905.99	.00489
1353553.5	14.00	563649.17	6.43815	1.34	.040	34837.09	.00178
1353575.2	16.00	654577.80	7.35677	.89	.018	34757.66	.00079
1353597.2	18.00	758224.24	8.27501	.59	.008	34667.70	.00036
1353619.4	20.00	874816.77	9.19280	.40	.004	34567.25	.00016
1353860.2	40.00	2826354.84	18.33360	0.00	0.000	32994.37	0.00000
1354164.9	60.00	6601727.65	27.35763	0.00	0.000	30427.27	0.00000
1354604.5	80.00	13269021.48	36.16261	0.00	0.000	26946.30	0.00000
1355343.8	100.00	25143289.81	44.55805	0.00	0.000	22662.08	0.00000
1356834.7	120.00	47457616.42	52.11709	0.00	0.000	17715.92	0.00000
1360552.0	140.00	92078446.81	57.61281	0.00	0.000	12290.00	0.00000
1371602.1	160.00	175909968.15	55.61257	0.00	0.000	6691.60	0.00000
1398693.9	180.00	244222827.58	.08103	0.00	0.000	2805.62	0.00000

REVOLUTION 5

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1398693.9	-180.00	174640729.12	.08103	0.00	0.000	3754.73	0.00000
1414378.4	-160.00	135769943.85	48.42269	0.00	0.000	7061.38	0.00000
1422154.8	-140.00	78734027.25	53.41785	0.00	0.000	12363.04	0.00000
1425253.1	-120.00	43054397.45	49.36813	0.00	0.000	17624.46	0.00000
1426615.9	-100.00	23530553.28	42.64029	0.00	0.000	22453.58	0.00000
1427325.1	-80.00	12632796.83	34.80375	0.00	0.000	26648.20	0.00000
1427758.4	-60.00	6349848.03	26.41957	0.00	0.000	30061.08	0.00000
1428063.1	-40.00	2738127.44	17.74118	0.00	0.000	32579.83	0.00000
1428306.1	-20.00	855603.33	8.90555	.41	.004	34123.70	.00018
1428328.5	-18.00	742794.97	8.01697	.60	.009	34222.30	.00039
1428350.7	-16.00	642480.32	7.12780	.90	.019	34310.61	.00085
1428372.7	-14.00	554449.69	6.23810	1.35	.042	34388.60	.00191
1428394.6	-12.00	478520.02	5.34797	2.28	.119	34456.24	.00536
1428416.3	-10.00	414534.13	4.45747	4.98	.565	34513.51	.02546
1428437.9	-8.00	362360.09	3.56670	14.39	4.707	34560.39	.21173
1428459.4	-6.00	321890.66	2.67579	39.70	35.690	34596.87	1.60388
1428480.8	-4.00	293042.90	1.78499	90.46	184.795	34622.93	8.29827
1428502.1	-2.00	275757.79	.89528	147.56	491.008	34638.57	22.03887
1428521.0	0.00	270000.00	.08103	173.53	678.715	34643.79	30.45953
1428539.9	2.00	275757.79	.89528	147.56	491.008	34638.57	22.03887
1428561.2	4.00	293042.90	1.78499	90.46	184.795	34622.93	8.29827
1428582.6	6.00	321890.66	2.67579	39.70	35.690	34596.87	1.60388
1428604.0	8.00	362360.09	3.56670	14.39	4.707	34560.39	.21173
1428625.6	10.00	414534.13	4.45747	4.98	.565	34513.51	.02546
1428647.3	12.00	478520.02	5.34797	2.28	.119	34456.24	.00536
1428669.2	14.00	554449.69	6.23810	1.35	.042	34388.60	.00191
1428691.2	16.00	642480.32	7.12780	.90	.019	34310.61	.00085
1428713.4	18.00	742794.97	8.01697	.60	.009	34222.30	.00039
1428735.9	20.00	855603.33	8.90555	.41	.004	34123.70	.00018
1428978.8	40.00	2738127.44	17.74118	0.00	0.000	32579.83	0.00000
1429283.5	60.00	6349848.03	26.41957	0.00	0.000	30061.08	0.00000
1429716.8	80.00	12632796.83	34.80375	0.00	0.000	26648.20	0.00000
1430426.0	100.00	23530553.28	42.64029	0.00	0.000	22453.58	0.00000
1431788.8	120.00	43054397.45	49.36813	0.00	0.000	17624.46	0.00000
1434887.1	140.00	78734027.25	53.41785	0.00	0.000	12363.04	0.00000
1442663.5	160.00	135769943.85	48.42269	0.00	0.000	7061.38	0.00000
1458348.0	180.00	174640729.12	.08103	0.00	0.000	3754.73	0.00000

REVOLUTION 6

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1458348.0	-180.00	128687745.37	.08103	0.00	0.000	4835.89	0.00000
1467995.6	-160.00	105576834.03	41.21997	0.00	0.000	7603.66	0.00000
1473544.7	-140.00	66632579.85	48.73235	0.00	0.000	12528.06	0.00000
1476106.5	-120.00	38570610.68	46.21326	0.00	0.000	17573.81	0.00000
1477341.2	-100.00	21780774.10	40.41689	0.00	0.000	22252.07	0.00000
1478017.9	-80.00	11917588.05	33.22086	0.00	0.000	26333.02	0.00000
1478443.8	-60.00	6060840.33	25.32413	0.00	0.000	29660.48	0.00000
1478748.5	-40.00	2635694.88	17.04843	0.00	0.000	32119.00	0.00000
1478993.9	-20.00	833158.88	8.56942	.42	.004	33626.88	.00020
1479016.6	-18.00	724764.40	7.71502	.61	.009	33723.21	.00043
1479039.1	-16.00	628338.62	6.85985	.91	.020	33809.48	.00093
1479061.5	-14.00	543692.60	6.00399	1.37	.045	33885.67	.00209
1479083.6	-12.00	470661.20	5.14756	2.34	.132	33951.75	.00603
1479105.6	-10.00	409102.52	4.29065	5.21	.649	34007.70	.02968
1479127.5	-8.00	358897.35	3.43337	14.90	5.299	34053.50	.24193
1479149.3	-6.00	319948.76	2.57588	39.92	37.883	34089.14	1.72780
1479171.1	-4.00	292181.69	1.71846	88.53	185.843	34114.60	8.46968
1479192.7	-2.00	275542.76	.86213	141.69	475.397	34129.89	21.65620
1479212.2	0.00	270000.00	.08103	165.63	649.248	34134.98	29.57139
1479231.7	2.00	275542.76	.86213	141.69	475.397	34129.89	21.65620
1479253.3	4.00	292181.69	1.71846	88.53	185.843	34114.60	8.46968
1479275.0	6.00	319948.76	2.57588	39.92	37.883	34089.14	1.72780
1479296.8	8.00	358897.35	3.43337	14.90	5.299	34053.50	.24193
1479318.7	10.00	409102.52	4.29065	5.21	.649	34007.70	.02968
1479340.7	12.00	470661.20	5.14756	2.34	.132	33951.75	.00603
1479362.9	14.00	543692.60	6.00399	1.37	.045	33885.67	.00209
1479385.2	16.00	628338.62	6.85985	.91	.020	33809.48	.00093
1479407.7	18.00	724764.40	7.71502	.61	.009	33723.21	.00043
1479430.5	20.00	833158.88	8.56942	.42	.004	33626.88	.00020
1479675.8	40.00	2635694.88	17.04843	0.00	0.000	32119.00	0.00000
1479980.6	60.00	6060840.33	25.32413	0.00	0.000	29660.48	0.00000
1480406.4	80.00	11917588.05	33.22086	0.00	0.000	26333.02	0.00000
1481083.2	100.00	21780774.10	40.41689	0.00	0.000	22252.07	0.00000
1482317.8	120.00	38570610.68	46.21326	0.00	0.000	17573.81	0.00000
1484879.6	140.00	66632579.85	48.73235	0.00	0.000	12528.06	0.00000
1490428.7	160.00	105576834.03	41.21997	0.00	0.000	7603.66	0.00000
1500076.4	180.00	128687745.37	.08103	0.00	0.000	4835.89	0.00000

REVOLUTION 7

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
1500076.4	-180.00	96407114.66	.08103	0.00	0.000	6063.71	0.00000
1506268.3	-160.00	82290465.89	34.30691	0.00	0.000	8344.76	0.00000
1510270.2	-140.00	55733605.79	43.60391	0.00	0.000	12816.78	0.00000
1512372.4	-120.00	34058871.24	42.62579	0.00	0.000	17585.76	0.00000
1513480.8	-100.00	19899376.82	37.85056	0.00	0.000	22070.67	0.00000
1514122.7	-80.00	11117982.37	31.38082	0.00	0.000	26007.39	0.00000
1514540.1	-60.00	5730142.43	24.04594	0.00	0.000	29227.39	0.00000
1514844.8	-40.00	2516882.52	16.23843	0.00	0.000	31610.59	0.00000
1515092.9	-20.00	806938.39	8.17599	.43	.005	33073.62	.00023
1515115.9	-18.00	703691.31	7.36157	.63	.010	33167.11	.00049
1515138.8	-16.00	611804.30	6.54618	.93	.022	33250.85	.00103
1515161.5	-14.00	531111.30	5.72993	1.40	.050	33324.80	.00233
1515184.0	-12.00	461467.00	4.91294	2.43	.151	33388.94	.00702
1515206.3	-10.00	402746.41	4.09535	5.57	.784	33443.25	.03646
1515228.6	-8.00	354844.42	3.27728	15.52	6.073	33487.71	.28197
1515250.8	-6.00	317675.51	2.45892	40.33	40.867	33522.31	1.89539
1515272.9	-4.00	291173.43	1.64057	86.47	187.380	33547.03	8.68422
1515294.9	-2.00	275291.01	.82333	135.35	458.489	33561.86	21.23948
1515314.9	0.00	270000.00	.08103	157.10	617.365	33566.81	28.59516
1515335.0	2.00	275291.01	.82333	135.35	458.489	33561.86	21.23948
1515357.0	4.00	291173.43	1.64057	86.47	187.380	33547.03	8.68422
1515379.1	6.00	317675.51	2.45892	40.33	40.867	33522.31	1.89539
1515401.3	8.00	354844.42	3.27728	15.52	6.073	33487.71	.28197
1515423.5	10.00	402746.41	4.09535	5.57	.784	33443.25	.03646
1515445.9	12.00	461467.00	4.91294	2.43	.151	33388.94	.00702
1515468.4	14.00	531111.30	5.72993	1.40	.050	33324.80	.00233
1515491.1	16.00	611804.30	6.54618	.93	.022	33250.85	.00103
1515513.9	18.00	703691.31	7.36157	.63	.010	33167.11	.00049
1515537.0	20.00	806938.39	8.17599	.43	.005	33073.62	.00023
1515785.0	40.00	2516882.52	16.23843	0.00	0.000	31610.59	0.00000
1516089.7	60.00	5730142.43	24.04594	0.00	0.000	29227.39	0.00000
1516507.2	80.00	11117982.37	31.38082	0.00	0.000	26007.39	0.00000
1517149.0	100.00	19899376.82	37.85056	0.00	0.000	22070.67	0.00000
1518257.4	120.00	34058871.24	42.62579	0.00	0.000	17585.76	0.00000
1520359.7	140.00	55733605.79	43.60391	0.00	0.000	12816.78	0.00000
1524361.6	160.00	82290465.89	34.30691	0.00	0.000	8344.76	0.00000
1530553.5	180.00	96407114.66	.08103	0.00	0.000	6063.71	0.00000

REVOLUTION 8

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P T
1530553.5	-180.00	72677761.13	.08103	0.00	0.000	7457.66	0.00000
1534649.7	-160.00	63936169.49	27.90754	0.00	0.000	9308.39	0.00000
1537557.5	-140.00	45952350.09	38.11257	0.00	0.000	13266.18	0.00000
1539269.5	-120.00	29560557.28	38.58456	0.00	0.000	17688.33	0.00000
1540254.9	-100.00	17890196.00	34.89786	0.00	0.000	21926.97	0.00000
1540859.6	-80.00	10226843.53	29.24175	0.00	0.000	25680.40	0.00000
1541267.5	-60.00	5351794.98	22.55176	0.00	0.000	28764.53	0.00000
1541572.0	-40.00	2378804.96	15.28866	0.00	0.000	31052.91	0.00000
1541823.1	-20.00	776211.02	7.71395	.45	.006	32459.65	.00027
1541846.5	-18.00	678983.66	6.94645	.66	.012	32549.59	.00057
1541869.7	-16.00	592409.54	6.17775	.95	.025	32630.15	.00119
1541892.8	-14.00	516347.61	5.40799	1.44	.057	32701.30	.00270
1541915.7	-12.00	450674.28	4.63733	2.58	.180	32763.01	.00854
1541938.5	-10.00	395283.07	3.86591	6.07	.994	32815.27	.04709
1541961.2	-8.00	350084.37	3.09390	16.31	7.143	32858.05	.33800
1541983.8	-6.00	315005.17	2.32150	40.91	44.766	32891.33	2.11606
1542006.3	-4.00	289988.89	1.54906	84.29	189.593	32915.12	8.95545
1542028.7	-2.00	274995.21	.77777	128.54	440.306	32929.39	20.78893
1542049.4	0.00	270000.00	.08103	147.96	583.111	32934.15	27.52742
1542070.0	2.00	274995.21	.77777	128.54	440.306	32929.39	20.78893
1542092.5	4.00	289988.89	1.54906	84.29	189.593	32915.12	8.95545
1542115.0	6.00	315005.17	2.32150	40.91	44.766	32891.33	2.11606
1542137.6	8.00	350084.37	3.09390	16.31	7.143	32858.05	.33800
1542160.3	10.00	395283.07	3.86591	6.07	.994	32815.27	.04709
1542183.0	12.00	450674.28	4.63733	2.58	.180	32763.01	.00854
1542206.0	14.00	516347.61	5.40799	1.44	.057	32701.30	.00270
1542229.0	16.00	592409.54	6.17775	.95	.025	32630.15	.00119
1542252.3	18.00	678983.66	6.94645	.66	.012	32549.59	.00057
1542275.7	20.00	776211.02	7.71395	.45	.006	32459.65	.00027
1542526.8	40.00	2378804.96	15.28866	0.00	0.000	31052.91	0.00000
1542831.2	60.00	5351794.98	22.55176	0.00	0.000	28764.53	0.00000
1543239.1	80.00	10226843.53	29.24175	0.00	0.000	25680.40	0.00000
1543843.8	100.00	17890196.00	34.89786	0.00	0.000	21926.97	0.00000
1544829.3	120.00	29560557.28	38.58456	0.00	0.000	17688.33	0.00000
1546541.3	140.00	45952350.09	38.11257	0.00	0.000	13266.18	0.00000
1549449.0	160.00	63936169.49	27.90754	0.00	0.000	9308.39	0.00000
1553545.3	180.00	72677761.13	.08103	0.00	0.000	7457.66	0.00000

REVOLUTION 9

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1553545.3	-180.00	54601407.12	.08103	0.00	0.000	9044.86	0.00000
1556312.8	-160.00	49182490.04	22.14170	0.00	0.000	10519.74	0.00000
1558434.5	-140.00	37178699.79	32.36630	0.00	0.000	13919.45	0.00000
1559816.9	-120.00	25104101.57	34.07674	0.00	0.000	17917.76	0.00000
1560683.8	-100.00	15753915.12	31.50758	0.00	0.000	21844.84	0.00000
1561249.1	-80.00	9234241.81	26.74937	0.00	0.000	25364.72	0.00000
1561646.1	-60.00	4917695.22	20.79674	0.00	0.000	28275.78	0.00000
1561950.1	-40.00	2217487.11	14.16806	.01	.000	30443.64	.00000
1562204.6	-20.00	739959.49	7.16755	.48	.007	31778.94	.00034
1562228.5	-18.00	649816.77	6.45547	.69	.014	31864.37	.00069
1562252.2	-16.00	569502.32	5.74194	.99	.029	31940.90	.00142
1562275.7	-14.00	498902.09	5.02714	1.52	.068	32008.50	.00330
1562299.1	-12.00	437915.95	4.31125	2.81	.230	32067.13	.01114
1562322.4	-10.00	386457.51	3.59444	6.77	1.325	32116.78	.06415
1562345.5	-8.00	344453.95	2.87691	17.50	8.827	32157.43	.42679
1562368.6	-6.00	311845.88	2.15890	41.72	49.997	32189.06	2.41490
1562391.6	-4.00	288587.24	1.44080	81.90	192.229	32211.66	9.27826
1562414.6	-2.00	274645.17	.72389	121.27	420.850	32225.22	20.30450
1562435.8	0.00	270000.00	.08103	138.22	546.490	32229.75	26.36248
1562457.1	2.00	274645.17	.72389	121.27	420.850	32225.22	20.30450
1562480.0	4.00	288587.24	1.44080	81.90	192.229	32211.66	9.27826
1562503.0	6.00	311845.88	2.15890	41.72	49.997	32189.06	2.41490
1562526.1	8.00	344453.95	2.87691	17.50	8.827	32157.43	.42679
1562549.3	10.00	386457.51	3.59444	6.77	1.325	32116.78	.06415
1562572.5	12.00	437915.95	4.31125	2.81	.230	32067.13	.01114
1562595.9	14.00	498902.09	5.02714	1.52	.068	32008.50	.00330
1562619.5	16.00	569502.32	5.74194	.99	.029	31940.90	.00142
1562643.2	18.00	649816.77	6.45547	.69	.014	31864.37	.00069
1562667.0	20.00	739959.49	7.16755	.48	.007	31778.94	.00034
1562921.5	40.00	2217487.11	14.16806	.01	.000	30443.64	.00000
1563225.5	60.00	4917695.22	20.79674	0.00	0.000	28275.78	0.00000
1563622.5	80.00	9234241.81	26.74937	0.00	0.000	25364.72	0.00000
1564187.8	100.00	15753915.12	31.50758	0.00	0.000	21844.84	0.00000
1565054.7	120.00	25104101.57	34.07674	0.00	0.000	17917.76	0.00000
1566437.1	140.00	37178699.79	32.36630	0.00	0.000	13919.45	0.00000
1568558.8	160.00	49182490.04	22.14170	0.00	0.000	10519.74	0.00000
1571326.4	180.00	54601407.12	.08103	0.00	0.000	9044.86	0.00000

REVOLUTION 10

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1571326.4	-180.00	40414783.92	.08103	0.00	0.000	10864.80	0.00000
1573220.8	-160.00	37100815.18	17.03502	0.00	0.000	12012.32	0.00000
1574769.5	-140.00	29289313.70	26.48795	0.00	0.000	14828.54	0.00000
1575874.6	-120.00	20703359.41	29.09976	0.00	0.000	18321.99	0.00000
1576627.9	-100.00	13485799.22	27.61822	0.00	0.000	21857.66	0.00000
1577151.6	-80.00	8125676.86	23.83093	0.00	0.000	25078.61	0.00000
1577536.1	-60.00	4416323.55	18.71786	0.00	0.000	27766.86	0.00000
1577839.2	-40.00	2027207.11	12.83197	.02	.000	29779.33	.00000
1578097.6	-20.00	696703.60	6.51388	.53	.009	31022.54	.00045
1578122.0	-18.00	614989.89	5.86797	.74	.018	31102.17	.00088
1578146.2	-16.00	542132.67	5.22037	1.06	.036	31173.50	.00180
1578170.3	-14.00	478046.60	4.57127	1.68	.089	31236.51	.00445
1578194.2	-12.00	422656.56	3.92089	3.21	.326	31291.18	.01618
1578218.0	-10.00	375897.59	3.26942	7.77	1.892	31337.47	.09389
1578241.8	-8.00	337714.85	2.61711	19.19	11.505	31375.37	.57011
1578265.4	-6.00	308063.54	1.96421	42.98	57.575	31404.86	2.85036
1578289.0	-4.00	286908.86	1.31117	79.42	196.123	31425.94	9.70290
1578312.5	-2.00	274225.97	.65942	113.51	400.083	31438.59	19.78557
1578334.5	0.00	270000.00	.08103	127.86	507.429	31442.81	25.09083
1578356.5	2.00	274225.97	.65942	113.51	400.083	31438.59	19.78557
1578380.0	4.00	286908.86	1.31117	79.42	196.123	31425.94	9.70290
1578403.6	6.00	308063.54	1.96421	42.98	57.575	31404.86	2.85036
1578427.2	8.00	337714.85	2.61711	19.19	11.505	31375.37	.57011
1578450.9	10.00	375897.59	3.26942	7.77	1.892	31337.47	.09389
1578474.7	12.00	422656.56	3.92089	3.21	.326	31291.18	.01618
1578498.7	14.00	478046.60	4.57127	1.68	.089	31236.51	.00445
1578522.7	16.00	542132.67	5.22037	1.06	.036	31173.50	.00180
1578546.9	18.00	614989.89	5.86797	.74	.018	31102.17	.00088
1578571.3	20.00	696703.60	6.51388	.53	.009	31022.54	.00045
1578829.7	40.00	2027207.11	12.83197	.02	.000	29779.33	.00000
1579132.9	60.00	4416323.55	18.71786	0.00	0.000	27766.86	0.00000
1579517.4	80.00	8125676.86	23.83093	0.00	0.000	25078.61	0.00000
1580041.0	100.00	13485799.22	27.61822	0.00	0.000	21857.66	0.00000
1580794.4	120.00	20703359.41	29.09976	0.00	0.000	18321.99	0.00000
1581899.5	140.00	29289313.70	26.48795	0.00	0.000	14828.54	0.00000
1583448.2	160.00	37100815.18	17.03502	0.00	0.000	12012.32	0.00000
1585342.6	180.00	40414783.92	.08103	0.00	0.000	10864.80	0.00000

REVOLUTION 11

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1585342.6	-180.00	28976792.15	.08103	0.00	0.000	12978.58	0.00000
1586645.8	-160.00	27018777.03	12.54549	0.00	0.000	13839.03	0.00000
1587771.1	-140.00	22151953.82	20.59409	0.00	0.000	16061.15	0.00000
1588642.8	-120.00	16354131.86	23.65914	0.00	0.000	18967.22	0.00000
1589287.8	-100.00	11071434.25	23.15214	0.00	0.000	22014.22	0.00000
1589767.3	-80.00	6878597.93	20.38403	0.00	0.000	24849.74	0.00000
1590137.4	-60.00	3830264.43	16.22173	0.00	0.000	27246.64	0.00000
1590439.3	-40.00	1799213.03	11.21230	.03	.000	29054.68	.00000
1590702.1	-20.00	644153.70	5.71749	.59	.013	30176.42	.00065
1590727.1	-18.00	572644.15	5.15200	.82	.024	30248.38	.00123
1590752.0	-16.00	508828.93	4.58458	1.20	.050	30312.86	.00257
1590776.7	-14.00	452652.48	4.01544	1.99	.137	30369.82	.00703
1590801.2	-12.00	404065.68	3.44484	4.03	.562	30419.24	.02871
1590825.7	-10.00	363025.94	2.87300	9.52	3.122	30461.10	.15936
1590850.1	-8.00	329497.20	2.30019	21.77	16.271	30495.38	.82953
1590874.4	-6.00	303449.94	1.72672	44.94	69.138	30522.05	3.52178
1590898.7	-4.00	284861.17	1.15308	76.88	201.930	30541.11	10.27960
1590922.9	-2.00	273714.47	.58090	105.24	377.900	30552.55	19.23049
1590945.6	0.00	270000.00	.08103	116.85	465.711	30556.37	23.69605
1590968.4	2.00	273714.47	.58090	105.24	377.900	30552.55	19.23049
1590992.6	4.00	284861.17	1.15308	76.88	201.930	30541.11	10.27960
1591016.9	6.00	303449.94	1.72672	44.94	69.138	30522.05	3.52178
1591041.2	8.00	329497.20	2.30019	21.77	16.271	30495.38	.82953
1591065.6	10.00	363025.94	2.87300	9.52	3.122	30461.10	.15936
1591090.0	12.00	404065.68	3.44484	4.03	.562	30419.24	.02871
1591114.6	14.00	452652.48	4.01544	1.99	.137	30369.82	.00703
1591139.3	16.00	508828.93	4.58458	1.20	.050	30312.86	.00257
1591164.1	18.00	572644.15	5.15200	.82	.024	30248.38	.00123
1591189.1	20.00	644153.70	5.71749	.59	.013	30176.42	.00065
1591451.9	40.00	1799213.03	11.21230	.03	.000	29054.68	.00000
1591753.9	60.00	3830264.43	16.22173	0.00	0.000	27246.64	0.00000
1592123.9	80.00	6878597.93	20.38403	0.00	0.000	24849.74	0.00000
1592603.4	100.00	11071434.25	23.15214	0.00	0.000	22014.22	0.00000
1593248.4	120.00	16354131.86	23.65914	0.00	0.000	18967.22	0.00000
1594120.1	140.00	22151953.82	20.59409	0.00	0.000	16061.15	0.00000
1595245.4	160.00	27018777.03	12.54549	0.00	0.000	13839.03	0.00000
1596548.7	180.00	28976792.15	.08103	0.00	0.000	12978.58	0.00000

REVOLUTION 12

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1596548.7	-180.00	19497820.82	.08103	0.00	0.000	15489.68	0.00000
1597440.7	-160.00	18421512.20	8.58731	0.00	0.000	16093.79	0.00000
1598248.3	-140.00	15619723.36	14.76660	0.00	0.000	17718.59	0.00000
1598923.1	-120.00	12024966.02	17.75493	0.00	0.000	19952.92	0.00000
1599464.5	-100.00	8477173.65	17.99953	0.00	0.000	22391.28	0.00000
1599896.9	-80.00	5454531.27	16.25194	0.00	0.000	24723.39	0.00000
1600250.0	-60.00	3130656.86	13.15770	0.00	0.000	26730.07	0.00000
1600550.0	-40.00	1518849.66	9.19570	.04	.000	28260.70	.00000
1600817.9	-20.00	578431.16	4.71841	.72	.020	29216.53	.00109
1600843.6	-18.00	519628.10	4.25340	1.00	.039	29277.99	.00207
1600869.2	-16.00	467094.28	3.78628	1.53	.091	29333.08	.00483
1600894.6	-14.00	420803.56	3.31732	2.71	.285	29381.76	.01506
1600920.0	-12.00	380732.67	2.84675	5.75	1.275	29424.00	.06738
1600945.3	-10.00	346861.29	2.37484	12.52	6.030	29459.79	.31824
1600970.4	-8.00	319172.13	1.90189	25.84	25.603	29489.09	1.34988
1600995.6	-6.00	297650.96	1.42823	47.84	87.567	29511.90	4.61321
1601020.7	-4.00	282286.65	.95445	74.31	210.849	29528.20	11.10184
1601045.7	-2.00	273071.26	.48247	96.34	354.048	29537.99	18.63553
1601069.4	0.00	270000.00	.08103	105.05	420.822	29541.25	22.14778
1601093.1	2.00	273071.26	.48247	96.34	354.048	29537.99	18.63553
1601118.1	4.00	282286.65	.95445	74.31	210.849	29528.20	11.10184
1601143.2	6.00	297650.96	1.42823	47.84	87.567	29511.90	4.61321
1601168.3	8.00	319172.13	1.90189	25.84	25.603	29489.09	1.34988
1601193.5	10.00	346861.29	2.37484	12.52	6.030	29459.79	.31824
1601218.8	12.00	380732.67	2.84675	5.75	1.275	29424.00	.06738
1601244.1	14.00	420803.56	3.31732	2.71	.285	29381.76	.01506
1601269.6	16.00	467094.28	3.78628	1.53	.091	29333.08	.00483
1601295.2	18.00	519628.10	4.25340	1.00	.039	29277.99	.00207
1601320.9	20.00	578431.16	4.71841	.72	.020	29216.53	.00109
1601588.8	40.00	1518849.66	9.19570	.04	.000	28260.70	.00000
1601888.8	60.00	3130656.86	13.15770	0.00	0.000	26730.07	0.00000
1602241.9	80.00	5454531.27	16.25194	0.00	0.000	24723.39	0.00000
1602674.3	100.00	8477173.65	17.99953	0.00	0.000	22391.28	0.00000
1603215.7	120.00	12024966.02	17.75493	0.00	0.000	19952.92	0.00000
1603890.5	140.00	15619723.36	14.76660	0.00	0.000	17718.59	0.00000
1604698.1	160.00	18421512.20	8.58731	0.00	0.000	16093.79	0.00000
1605590.1	180.00	19497820.82	.08103	0.00	0.000	15489.68	0.00000

REVOLUTION 13

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1605590.1	-180.00	11366557.16	.08103	0.00	0.000	18601.18	0.00000
1606187.8	-160.00	10864703.53	5.03753	0.00	0.000	18968.07	0.00000
1606752.5	-140.00	9503062.33	9.00957	0.00	0.000	19986.91	0.00000
1607259.0	-120.00	7629226.11	11.33546	0.00	0.000	21454.22	0.00000
1607700.2	-100.00	5623676.07	11.96660	0.00	0.000	23127.36	0.00000
1608081.3	-80.00	3777315.16	11.15605	0.00	0.000	24784.12	0.00000
1608413.8	-60.00	2261990.85	9.24585	.01	.000	26245.83	.00000
1608710.6	-40.00	1157684.91	6.56440	.09	.000	27379.74	.00002
1608984.6	-20.00	491922.61	3.39916	1.07	.051	28095.18	.00283
1609011.2	-18.00	449750.45	3.06598	1.61	.116	28141.37	.00643
1609037.7	-16.00	412019.65	2.73076	2.74	.334	28182.78	.01844
1609064.2	-14.00	378729.82	2.39374	5.25	1.223	28219.39	.06738
1609090.5	-12.00	349880.43	2.05517	10.19	4.585	28251.17	.25232
1609116.8	-10.00	325470.83	1.71531	19.11	16.092	28278.10	.88474
1609143.0	-8.00	305500.41	1.37448	33.37	48.911	28300.16	2.68707
1609169.2	-6.00	289968.57	1.03304	52.50	120.861	28317.33	6.63584
1609195.3	-4.00	278874.78	.69172	71.76	225.487	28329.60	12.37493
1609221.4	-2.00	272218.67	.35302	86.58	327.921	28336.97	17.99191
1609246.2	0.00	270000.00	.08103	92.17	371.522	28339.43	20.38237
1609271.1	2.00	272218.67	.35302	86.58	327.921	28336.97	17.99191
1609297.2	4.00	278874.78	.69172	71.76	225.487	28329.60	12.37493
1609323.3	6.00	289968.57	1.03304	52.50	120.861	28317.33	6.63584
1609349.5	8.00	305500.41	1.37448	33.37	48.911	28300.16	2.68707
1609375.7	10.00	325470.83	1.71531	19.11	16.092	28278.10	.88474
1609402.0	12.00	349880.43	2.05517	10.19	4.585	28251.17	.25232
1609428.3	14.00	378729.82	2.39374	5.25	1.223	28219.39	.06738
1609454.7	16.00	412019.65	2.73076	2.74	.334	28182.78	.01844
1609481.2	18.00	449750.45	3.06598	1.61	.116	28141.37	.00643
1609507.8	20.00	491922.61	3.39916	1.07	.051	28095.18	.00283
1609781.8	40.00	1157684.91	6.56440	.09	.000	27379.74	.00002
1610078.7	60.00	2261990.85	9.24585	.01	.000	26245.83	.00000
1610411.1	80.00	3777315.16	11.15605	0.00	0.000	24784.12	0.00000
1610792.3	100.00	5623676.07	11.96660	0.00	0.000	23127.36	0.00000
1611233.5	120.00	7629226.11	11.33546	0.00	0.000	21454.22	0.00000
1611740.0	140.00	9503062.33	9.00957	0.00	0.000	19986.91	0.00000
1612304.7	160.00	10864703.53	5.03753	0.00	0.000	18968.07	0.00000
1612902.3	180.00	11366557.16	.08103	0.00	0.000	18601.18	0.00000

REVOLUTION 14

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_I
1612902.3	-180.00	3944351.06	.08103	0.00	0.000	22839.69	0.00000
1613279.7	-160.00	3815025.07	1.69117	0.00	0.000	22969.06	0.00000
1613650.9	-140.00	3450046.96	3.12672	0.00	0.000	23337.57	0.00000
1614008.3	-120.00	2911293.80	4.11592	0.00	0.000	23891.12	0.00000
1614348.5	-100.00	2282081.27	4.55498	.01	.000	24553.12	.00000
1614670.4	-80.00	1647974.61	4.43107	.02	.000	25238.54	.00000
1614975.5	-60.00	1082898.56	3.80131	.09	.000	25866.08	.00003
1615267.0	-40.00	642757.52	2.76748	.39	.008	26366.61	.00050
1615548.8	-20.00	364848.68	1.45602	6.01	1.926	26688.24	.11219
1615576.6	-18.00	346911.21	1.31493	9.18	4.483	26709.15	.26094
1615604.4	-16.00	330828.47	1.17262	13.87	10.210	26727.92	.59391
1615632.2	-14.00	316611.67	1.02927	20.39	22.014	26744.52	1.27977
1615659.9	-12.00	304270.66	.88506	28.99	44.415	26758.94	2.58063
1615687.6	-10.00	293813.95	.74020	39.34	81.686	26771.17	4.74398
1615715.2	-8.00	285248.71	.59500	50.28	133.228	26781.19	7.73438
1615742.8	-6.00	278580.80	.44994	60.67	193.838	26788.99	11.24975
1615770.5	-4.00	273814.77	.30621	69.41	253.471	26794.57	14.70765
1615798.1	-2.00	270953.85	.16848	75.24	297.752	26797.92	17.27488
1615824.5	0.00	270000.00	.08103	77.29	314.173	26799.04	18.22682
1615850.9	2.00	270953.85	.16848	75.24	297.752	26797.92	17.27488
1615878.5	4.00	273814.77	.30621	69.41	253.471	26794.57	14.70765
1615906.1	6.00	278580.80	.44994	60.67	193.838	26788.99	11.24975
1615933.8	8.00	285248.71	.59500	50.28	133.228	26781.19	7.73438
1615961.4	10.00	293813.95	.74020	39.34	81.686	26771.17	4.74398
1615989.1	12.00	304270.66	.88506	28.99	44.415	26758.94	2.58063
1616016.8	14.00	316611.67	1.02927	20.39	22.014	26744.52	1.27977
1616044.6	16.00	330828.47	1.17262	13.87	10.210	26727.92	.59391
1616072.4	18.00	346911.21	1.31493	9.18	4.483	26709.15	.26094
1616100.2	20.00	364848.68	1.45602	6.01	1.926	26688.24	.11219
1616382.0	40.00	642757.52	2.76748	.39	.008	26366.61	.00050
1616673.4	60.00	1082898.56	3.80131	.09	.000	25866.08	.00003
1616978.6	80.00	1647974.61	4.43107	.02	.000	25238.54	.00000
1617300.5	100.00	2282081.27	4.55498	.01	.000	24553.12	.00000
1617640.7	120.00	2911293.80	4.11592	0.00	0.000	23891.12	0.00000
1617998.1	140.00	3450046.96	3.12672	0.00	0.000	23337.57	0.00000
1618369.3	160.00	3815025.07	1.69117	0.00	0.000	22969.06	0.00000
1618746.6	180.00	3944351.06	.08103	0.00	0.000	22839.69	0.00000

Part 2

Listing of Punched Card CMA Input

REVOLUTION 1

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	25346.972	0.0000	.0000001	.000000	GLFC CONT.
21.5861	25495.427	0.0000	.0000003	.000000	GLFC CONT.
42.9359	25628.745	0.0000	.0000006	.000000	GLFC CONT.
64.0767	25746.763	0.0000	.0000014	.000001	GLFC CONT.
85.0339	25849.338	0.0000	.0000037	.000002	GLFC CONT.
105.8308	25936.345	0.0000	.0000157	.000008	GLFC CONT.
126.4864	26007.677	0.0000	.0001320	.000070	GLFC CONT.
147.0097	26063.248	0.0000	.0011707	.000621	GLFC CONT.
167.3769	26102.990	0.0000	.0037057	.003724	GLFC CONT.
187.3787	26126.855	0.0000	.0063636	.010981	GLFC CONT.
202.4097	26134.813	0.0000	.0076068	.015690	GLFC CONT.
217.4408	26126.855	0.0000	.0063636	.010981	GLFC CONT.
237.4426	26102.990	0.0000	.0037057	.003724	GLFC CONT.
257.8098	26063.248	0.0000	.0011707	.000621	GLFC CONT.
278.3331	26007.677	0.0000	.0001320	.000070	GLFC CONT.
298.9886	25936.345	0.0000	.0000157	.000008	GLFC CONT.
319.7856	25849.338	0.0000	.0000037	.000002	GLFC CONT.
340.7428	25746.763	0.0000	.0000014	.000001	GLFC CONT.
361.8836	25628.745	0.0000	.0000006	.000000	GLFC CONT.
383.2334	25495.427	0.0000	.0000003	.000000	GLFC CONT.
404.8195	25346.972	0.0000	.0000001	.000000	GLFC CONT.

REVOLUTION 4

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	23867.829	0.0000	.0000002	.000000	GLFC CONT.
22.1773	24006.740	0.0000	.0000003	.000000	GLFC CONT.
44.1299	24131.487	0.0000	.0000007	.000000	GLFC CONT.
65.8846	24241.918	0.0000	.0000016	.000001	GLFC CONT.
87.4672	24337.898	0.0000	.0000045	.000002	GLFC CONT.
108.9027	24419.311	0.0000	.0000207	.000011	GLFC CONT.
130.2145	24486.058	0.0000	.0001736	.000089	GLFC CONT.
151.4235	24538.056	0.0000	.0013838	.000712	GLFC CONT.
172.5433	24575.243	0.0000	.0037536	.003856	GLFC CONT.
193.5443	24597.573	0.0000	.0062176	.010578	GLFC CONT.
211.8236	24605.020	0.0000	.0073475	.014771	GLFC CONT.
230.1028	24597.573	0.0000	.0062176	.010578	GLFC CONT.
251.1039	24575.243	0.0000	.0037536	.003856	GLFC CONT.
272.2236	24538.056	0.0000	.0013838	.000712	GLFC CONT.
293.4327	24486.058	0.0000	.0001736	.000089	GLFC CONT.
314.7444	24419.311	0.0000	.0000207	.000011	GLFC CONT.
336.1799	24337.898	0.0000	.0000045	.000002	GLFC CONT.
357.7626	24241.918	0.0000	.0000016	.000001	GLFC CONT.
379.5173	24131.487	0.0000	.0000007	.000000	GLFC CONT.
401.4699	24006.740	0.0000	.0000003	.000000	GLFC CONT.
423.6471	23867.829	0.0000	.0000002	.000000	GLFC CONT.

REVOLUTION 7

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	21849.755	0.0000	.0000002	.000000	GLFC CONT.
23.0595	21973.462	0.0000	.0000005	.000000	GLFC CONT.
45.9117	22084.554	0.0000	.0000010	.000000	GLFC CONT.
68.5811	22182.898	0.0000	.0000023	.000001	GLFC CONT.
91.0917	22268.373	0.0000	.0000068	.000003	GLFC CONT.
113.4666	22340.874	0.0000	.0000351	.000017	GLFC CONT.
135.7283	22400.315	0.0000	.0002711	.000133	GLFC CONT.
157.8979	22446.622	0.0000	.0017968	.000896	GLFC CONT.
179.9927	22479.738	0.0000	.0038464	.004103	GLFC CONT.
202.0102	22499.624	0.0000	.0060157	.010036	GLFC CONT.
222.0545	22506.256	0.0000	.0069803	.013511	GLFC CONT.
242.0987	22499.624	0.0000	.0060157	.010036	GLFC CONT.
264.1162	22479.738	0.0000	.0038464	.004103	GLFC CONT.
286.2111	22446.622	0.0000	.0017968	.000896	GLFC CONT.
308.3806	22400.315	0.0000	.0002711	.000133	GLFC CONT.
330.6423	22340.874	0.0000	.0000351	.000017	GLFC CONT.
353.0172	22268.373	0.0000	.0000068	.000003	GLFC CONT.
375.5278	22182.898	0.0000	.0000023	.000001	GLFC CONT.
398.1972	22084.554	0.0000	.0000010	.000000	GLFC CONT.
421.0494	21973.462	0.0000	.0000005	.000000	GLFC CONT.
444.1089	21849.755	0.0000	.0000002	.000000	GLFC CONT.

REVOLUTION 10

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	19223.741	0.0000	.0000005	.000000	GLFC CONT.
24.3929	19322.551	0.0000	.0000009	.000000	GLFC CONT.
48.6112	19411.286	0.0000	.0000019	.000001	GLFC CONT.
72.6753	19489.838	0.0000	.0000046	.000002	GLFC CONT.
96.6052	19558.111	0.0000	.0000167	.000008	GLFC CONT.
120.4203	19616.022	0.0000	.0000965	.000044	GLFC CONT.
144.1397	19663.500	0.0000	.0005851	.000269	GLFC CONT.
167.7816	19700.487	0.0000	.0021819	.001347	GLFC CONT.
191.3625	19726.939	0.0000	.0040261	.004585	GLFC CONT.
214.8871	19742.823	0.0000	.0057495	.009349	GLFC CONT.
236.8549	19748.120	0.0000	.0064748	.011855	GLFC CONT.
258.8228	19742.823	0.0000	.0057495	.009349	GLFC CONT.
282.3474	19726.939	0.0000	.0040261	.004585	GLFC CONT.
305.9282	19700.487	0.0000	.0021819	.001347	GLFC CONT.
329.5702	19663.500	0.0000	.0005851	.000269	GLFC CONT.
353.2896	19616.022	0.0000	.0000965	.000044	GLFC CONT.
377.1047	19558.111	0.0000	.0000167	.000008	GLFC CONT.
401.0346	19489.838	0.0000	.0000046	.000002	GLFC CONT.
425.0987	19411.286	0.0000	.0000019	.000001	GLFC CONT.
449.3170	19322.551	0.0000	.0000009	.000000	GLFC CONT.
473.7099	19223.741	0.0000	.0000005	.000000	GLFC CONT.

REVOLUTION 13

TIME	H R	QDOTR	QDOIC/H R	P T A	I. D.
0.0000	15766.922	0.0000	.0000032	.000001	GLFC CONT.
26.6032	15818.803	0.0000	.0000074	.000003	GLFC CONT.
53.1071	15865.394	0.0000	.0000211	.000009	GLFC CONT.
79.5228	15906.639	0.0000	.0000769	.000032	GLFC CONT.
105.8614	15942.486	0.0000	.0002876	.000119	GLFC CONT.
132.1338	15972.892	0.0000	.0010074	.000418	GLFC CONT.
158.3508	15997.821	0.0000	.0020857	.001270	GLFC CONT.
184.5230	16017.242	0.0000	.0032779	.003135	GLFC CONT.
210.6596	16031.131	0.0000	.0044766	.005847	GLFC CONT.
236.7634	16039.471	0.0000	.0053980	.008501	GLFC CONT.
261.5997	16042.252	0.0000	.0057455	.009631	GLFC CONT.
286.4360	16039.471	0.0000	.0053980	.008501	GLFC CONT.
312.5399	16031.131	0.0000	.0044766	.005847	GLFC CONT.
338.6765	16017.242	0.0000	.0032779	.003135	GLFC CONT.
364.8486	15997.821	0.0000	.0020857	.001270	GLFC CONT.
391.0657	15972.892	0.0000	.0010074	.000418	GLFC CONT.
417.3381	15942.486	0.0000	.0002876	.000119	GLFC CONT.
443.6766	15906.639	0.0000	.0000769	.000032	GLFC CONT.
470.0923	15865.394	0.0000	.0000211	.000009	GLFC CONT.
496.5962	15818.803	0.0000	.0000074	.000003	GLFC CONT.
523.1995	15766.922	0.0000	.0000032	.000001	GLFC CONT.

APPENDIX F

Trajectory and Reentry Environment
Output from Computer Code HRS017 (Version 3)
for a Perigee Altitude of 275,000 Feet
(Eighteen Revolutions)

Part 1. Trajectory and Reentry Environment Tabulated Data (105)

Part 2. Listing of Punched Card CMA Input (123)

Part 1

Trajectory and Reentry Environment Tabulated Data

REVOLUTION 1

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
0.0	-180.00	1246374303.00	.08103	0.00	0.000	605.04	0.00000
385002.5	-160.00	436199862.87	74.58030	0.00	0.000	6308.59	0.00000
422282.2	-140.00	139990545.64	67.36841	0.00	0.000	12383.00	0.00000
428403.0	-120.00	59824473.02	58.34032	0.00	0.000	18091.24	0.00000
430264.6	-100.00	29194993.57	48.85790	0.00	0.000	23252.51	0.00000
431079.4	-80.00	14781574.42	39.19584	0.00	0.000	27708.49	0.00000
431534.1	-60.00	7185143.18	29.44673	0.00	0.000	31323.26	0.00000
431838.3	-40.00	3030457.28	19.65130	0.00	0.000	33986.77	0.00000
432074.3	-20.00	922791.23	9.83132	.38	.003	35617.99	.00013
432095.9	-18.00	797716.44	8.84856	.57	.007	35722.14	.00029
432117.3	-16.00	686609.06	7.86571	.86	.015	35815.42	.00065
432138.4	-14.00	589196.51	6.88279	1.31	.034	35897.79	.00148
432159.4	-12.00	505241.46	5.89981	2.10	.088	35969.23	.00381
432180.2	-10.00	434540.63	4.91681	4.24	.356	36029.71	.01536
432200.9	-8.00	376923.72	3.93381	11.84	2.763	36079.22	.11906
432221.4	-6.00	332252.56	2.95088	34.50	23.379	36117.75	1.00638
432241.8	-4.00	300420.38	1.96820	83.61	136.966	36145.27	5.89146
432261.8	-2.00	281351.32	.98660	144.43	408.126	36161.79	17.54710
432276.8	0.00	275000.00	.08103	172.70	583.224	36167.30	25.07148
432291.8	2.00	281351.32	.98660	144.43	408.126	36161.79	17.54710
432311.9	4.00	300420.38	1.96820	83.61	136.966	36145.27	5.89146
432332.2	6.00	332252.56	2.95088	34.50	23.379	36117.75	1.00638
432352.8	8.00	376923.72	3.93381	11.84	2.763	36079.22	.11906
432373.4	10.00	434540.63	4.91681	4.24	.356	36029.71	.01536
432394.2	12.00	505241.46	5.89981	2.10	.088	35969.23	.00381
432415.2	14.00	589196.51	6.88279	1.31	.034	35897.79	.00148
432436.3	16.00	686609.06	7.86571	.86	.015	35815.42	.00065
432457.7	18.00	797716.44	8.84856	.57	.007	35722.14	.00029
432479.3	20.00	922791.23	9.83132	.38	.003	35617.99	.00013
432715.3	40.00	3030457.28	19.65130	0.00	0.000	33986.77	0.00000
433019.5	60.00	7185143.18	29.44673	0.00	0.000	31323.26	0.00000
433474.2	80.00	14781574.42	39.19584	0.00	0.000	27708.49	0.00000
434289.0	100.00	29194993.57	48.85790	0.00	0.000	23252.51	0.00000
436150.6	120.00	59824473.02	58.34032	0.00	0.000	18091.24	0.00000
442271.4	140.00	139990545.64	67.36841	0.00	0.000	12383.00	0.00000
479551.2	160.00	436199862.87	74.58030	0.00	0.000	6308.59	0.00000
864553.6	180.00	1246374303.00	.08103	0.00	0.000	605.04	0.00000

REVOLUTION 2

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
864553.6	-180.00	718299127.32	.08103	0.00	0.000	1031.22	0.00000
1023892.1	-160.00	344801998.94	70.76175	0.00	0.000	6325.85	0.00000
1051258.9	-140.00	128057569.31	65.49462	0.00	0.000	12336.00	0.00000
1056759.0	-120.00	57158785.64	57.15623	0.00	0.000	18000.47	0.00000
1058539.5	-100.00	28377582.42	48.04250	0.00	0.000	23125.95	0.00000
1059339.1	-80.00	14487070.36	38.62151	0.00	0.000	27552.33	0.00000
1059790.9	-60.00	7074223.05	29.05148	0.00	0.000	31143.60	0.00000
1060095.2	-40.00	2992674.68	19.40210	0.00	0.000	33789.99	0.00000
1060332.2	-20.00	914680.46	9.71059	.38	.003	35410.79	.00013
1060353.9	-18.00	791208.70	8.74011	.57	.007	35514.28	.00030
1060375.4	-16.00	681510.47	7.76948	.86	.015	35606.96	.00067
1060396.7	-14.00	585321.89	6.79872	1.31	.035	35688.81	.00152
1060417.8	-12.00	502413.11	5.82785	2.11	.090	35759.79	.00392
1060438.7	-10.00	432587.17	4.85691	4.27	.368	35819.89	.01598
1060459.5	-8.00	375679.07	3.88594	11.94	2.865	35869.08	.12417
1060480.2	-6.00	331554.86	2.91501	34.50	23.830	35907.36	1.03180
1060500.8	-4.00	300111.06	1.94431	82.83	137.032	35934.71	5.92882
1060521.1	-2.00	281274.10	.97469	142.11	402.775	35951.13	17.41853
1060537.3	0.00	275000.00	.08103	169.55	573.090	35956.60	24.78022
1060553.6	2.00	281274.10	.97469	142.11	402.775	35951.13	17.41853
1060573.9	4.00	300111.06	1.94431	82.83	137.032	35934.71	5.92882
1060594.4	6.00	331554.86	2.91501	34.50	23.830	35907.36	1.03180
1060615.1	8.00	375679.07	3.88594	11.94	2.865	35869.08	.12417
1060635.9	10.00	432587.17	4.85691	4.27	.368	35819.89	.01598
1060656.9	12.00	502413.11	5.82785	2.11	.090	35759.79	.00392
1060678.0	14.00	585321.89	6.79872	1.31	.035	35688.81	.00152
1060699.2	16.00	681510.47	7.76948	.86	.015	35606.96	.00067
1060720.7	18.00	791208.70	8.74011	.57	.007	35514.28	.00030
1060742.4	20.00	914680.46	9.71059	.38	.003	35410.79	.00013
1060979.4	40.00	2992674.68	19.40210	0.00	0.000	33789.99	0.00000
1061283.7	60.00	7074223.05	29.05148	0.00	0.000	31143.60	0.00000
1061735.6	80.00	14487070.36	38.62151	0.00	0.000	27552.33	0.00000
1062535.1	100.00	28377582.42	48.04250	0.00	0.000	23125.95	0.00000
1064315.6	120.00	57158785.64	57.15623	0.00	0.000	18000.47	0.00000
1069815.8	140.00	128057569.31	65.49462	0.00	0.000	12336.00	0.00000
1097182.5	160.00	344801998.94	70.76175	0.00	0.000	6325.85	0.00000
1256521.0	180.00	718299127.32	.08103	0.00	0.000	1031.22	0.00000

REVOLUTION 3

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1256521.0	-180.00	478817779.30	.08103	0.00	0.000	1515.30	0.00000
1338693.9	-160.00	276429133.40	66.47213	0.00	0.000	6379.49	0.00000
1359069.0	-140.00	116350395.96	63.35182	0.00	0.000	12299.25	0.00000
1363973.3	-120.00	54302797.60	55.79755	0.00	0.000	17907.54	0.00000
1365667.6	-100.00	27469892.45	47.10576	0.00	0.000	22988.92	0.00000
1366450.2	-80.00	14154332.04	37.96136	0.00	0.000	27379.51	0.00000
1366898.8	-60.00	6947739.12	28.59704	0.00	0.000	30942.65	0.00000
1367203.2	-40.00	2949370.72	19.11554	0.00	0.000	33568.68	0.00000
1367441.3	-20.00	905360.30	9.57176	.38	.003	35177.12	.00014
1367463.2	-18.00	783729.43	8.61540	.57	.007	35279.82	.00031
1367484.8	-16.00	675649.93	7.65882	.86	.016	35371.80	.00069
1367506.2	-14.00	580867.70	6.70204	1.31	.036	35453.02	.00156
1367527.4	-12.00	499161.34	5.74510	2.11	.093	35523.47	.00405
1367548.5	-10.00	430341.08	4.78803	4.31	.383	35583.11	.01673
1367569.4	-8.00	374247.86	3.83089	12.06	2.987	35631.93	.13035
1367590.3	-6.00	330752.54	2.87376	34.50	24.365	35669.92	1.06201
1367611.0	-4.00	299755.34	1.91683	81.95	137.137	35697.06	5.97289
1367631.5	-2.00	281185.30	.96099	139.51	396.808	35713.35	17.27471
1367648.6	0.00	275000.00	.08103	166.04	561.794	35718.78	24.45351
1367665.6	2.00	281185.30	.96099	139.51	396.808	35713.35	17.27471
1367686.2	4.00	299755.34	1.91683	81.95	137.137	35697.06	5.97289
1367706.9	6.00	330752.54	2.87376	34.50	24.365	35669.92	1.06201
1367727.7	8.00	374247.86	3.83089	12.06	2.987	35631.93	.13035
1367748.7	10.00	430341.08	4.78803	4.31	.383	35583.11	.01673
1367769.8	12.00	499161.34	5.74510	2.11	.093	35523.47	.00405
1367791.0	14.00	580867.70	6.70204	1.31	.036	35453.02	.00156
1367812.4	16.00	675649.93	7.65882	.86	.016	35371.80	.00069
1367834.0	18.00	783729.43	8.61540	.57	.007	35279.82	.00031
1367855.8	20.00	905360.30	9.57176	.38	.003	35177.12	.00014
1368093.9	40.00	2949370.72	19.11554	0.00	0.000	33568.68	0.00000
1368398.4	60.00	6947739.12	28.59704	0.00	0.000	30942.65	0.00000
1368846.9	80.00	14154332.04	37.96136	0.00	0.000	27379.51	0.00000
1369629.6	100.00	27469892.45	47.10576	0.00	0.000	22988.92	0.00000
1371323.9	120.00	54302797.60	55.79755	0.00	0.000	17907.54	0.00000
1376228.1	140.00	116350395.96	63.35182	0.00	0.000	12299.25	0.00000
1396603.3	160.00	276429133.40	66.47213	0.00	0.000	6379.49	0.00000
1478776.1	180.00	478817779.30	.08103	0.00	0.000	1515.30	0.00000

REVOLUTION 4

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1478776.1	-180.00	342959559.17	.08103	0.00	0.000	2065.42	0.00000
1526184.6	-160.00	223719605.85	61.71542	0.00	0.000	6483.25	0.00000
1541499.9	-140.00	104950894.89	60.90564	0.00	0.000	12279.13	0.00000
1545837.9	-120.00	51260026.57	54.23767	0.00	0.000	17815.26	0.00000
1547441.2	-100.00	26464407.20	46.02816	0.00	0.000	22841.99	0.00000
1548205.1	-80.00	13778536.42	37.20125	0.00	0.000	27189.07	0.00000
1548650.0	-60.00	6803381.32	28.07354	0.00	0.000	30718.38	0.00000
1548954.6	-40.00	2899658.66	18.78536	0.00	0.000	33320.04	0.00000
1549193.9	-20.00	894629.04	9.41176	.39	.003	34913.75	.00015
1549215.9	-18.00	775116.25	8.47169	.58	.007	35015.51	.00032
1549237.6	-16.00	668899.82	7.53129	.87	.016	35106.65	.00072
1549259.2	-14.00	575736.70	6.59063	1.31	.037	35187.13	.00162
1549280.6	-12.00	495415.03	5.64973	2.12	.096	35256.94	.00422
1549301.8	-10.00	427753.14	4.70865	4.37	.403	35316.04	.01776
1549322.9	-8.00	372598.68	3.76744	12.20	3.136	35364.41	.13787
1549343.9	-6.00	329827.98	2.82622	34.52	25.009	35402.06	1.09834
1549364.8	-4.00	299345.40	1.88517	80.99	137.301	35428.95	6.02529
1549385.6	-2.00	281082.97	.94521	136.63	390.166	35445.10	17.11413
1549403.2	0.00	275000.00	.08103	162.15	549.229	35450.48	24.08752
1549420.9	2.00	281082.97	.94521	136.63	390.166	35445.10	17.11413
1549441.7	4.00	299345.40	1.88517	80.99	137.301	35428.95	6.02529
1549462.6	6.00	329827.98	2.82622	34.52	25.009	35402.06	1.09834
1549483.6	8.00	372598.68	3.76744	12.20	3.136	35364.41	.13787
1549504.7	10.00	427753.14	4.70865	4.37	.403	35316.04	.01776
1549525.9	12.00	495415.03	5.64973	2.12	.096	35256.94	.00422
1549547.3	14.00	575736.70	6.59063	1.31	.037	35187.13	.00162
1549568.8	16.00	668899.82	7.53129	.87	.016	35106.65	.00072
1549590.6	18.00	775116.25	8.47169	.58	.007	35015.51	.00032
1549612.6	20.00	894629.04	9.41176	.39	.003	34913.75	.00015
1549851.9	40.00	2899658.66	18.78536	0.00	0.000	33320.04	0.00000
1550156.5	60.00	6803381.32	28.07354	0.00	0.000	30718.38	0.00000
1550601.3	80.00	13778536.42	37.20125	0.00	0.000	27189.07	0.00000
1551365.3	100.00	26464407.20	46.02816	0.00	0.000	22841.99	0.00000
1552968.6	120.00	51260026.57	54.23767	0.00	0.000	17815.26	0.00000
1557306.6	140.00	104950894.89	60.90564	0.00	0.000	12279.13	0.00000
1572621.8	160.00	223719605.85	61.71542	0.00	0.000	6483.25	0.00000
1620030.4	180.00	342959559.17	.08103	0.00	0.000	2065.42	0.00000

REVOLUTION 5

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1620030.4	-180.00	256545808.73	.08103	0.00	0.000	2685.73	0.00000
1649403.4	-160.00	182425621.04	56.57179	0.00	0.000	6652.22	0.00000
1661013.4	-140.00	94016468.98	58.14433	0.00	0.000	12284.20	0.00000
1664822.9	-120.00	48063392.03	52.46131	0.00	0.000	17728.45	0.00000
1666331.6	-100.00	25362696.17	44.79717	0.00	0.000	22687.73	0.00000
1667075.0	-80.00	13357807.22	36.33170	0.00	0.000	26982.07	0.00000
1667515.7	-60.00	6639834.61	27.47423	0.00	0.000	30470.76	0.00000
1667820.4	-40.00	2842963.31	18.40720	0.00	0.000	33043.36	0.00000
1668061.1	-20.00	882348.47	9.22848	.39	.003	34619.54	.00015
1668083.2	-18.00	765257.55	8.30705	.58	.008	34720.20	.00034
1668105.1	-16.00	661172.20	7.38521	.87	.017	34810.34	.00075
1668126.9	-14.00	569861.74	6.46300	1.31	.038	34889.95	.00169
1668148.4	-12.00	491124.95	5.54048	2.13	.100	34958.99	.00443
1668169.8	-10.00	424789.21	4.61771	4.44	.429	35017.44	.01904
1668191.1	-8.00	370709.73	3.69477	12.38	3.317	35065.29	.14706
1668212.3	-6.00	328768.91	2.77175	34.58	25.801	35102.53	1.14278
1668233.4	-4.00	298875.81	1.84890	79.93	137.546	35129.13	6.08755
1668254.4	-2.00	280965.73	.92713	133.46	382.852	35145.09	16.93666
1668272.6	0.00	275000.00	.08103	157.86	535.400	35150.42	23.68148
1668290.8	2.00	280965.73	.92713	133.46	382.852	35145.09	16.93666
1668311.7	4.00	298875.81	1.84890	79.93	137.546	35129.13	6.08755
1668332.8	6.00	328768.91	2.77175	34.58	25.801	35102.53	1.14278
1668354.0	8.00	370709.73	3.69477	12.38	3.317	35065.29	.14706
1668375.3	10.00	424789.21	4.61771	4.44	.429	35017.44	.01904
1668396.7	12.00	491124.95	5.54048	2.13	.100	34958.99	.00443
1668418.2	14.00	569861.74	6.46300	1.31	.038	34889.95	.00169
1668440.0	16.00	661172.20	7.38521	.87	.017	34810.34	.00075
1668461.9	18.00	765257.55	8.30705	.58	.008	34720.20	.00034
1668484.1	20.00	882348.47	9.22848	.39	.003	34619.54	.00015
1668724.8	40.00	2842963.31	18.40720	0.00	0.000	33043.36	0.00000
1669029.5	60.00	6639834.61	27.47423	0.00	0.000	30470.76	0.00000
1669470.1	80.00	13357807.22	36.33170	0.00	0.000	26982.07	0.00000
1670213.5	100.00	25362696.17	44.79717	0.00	0.000	22687.73	0.00000
1671722.3	120.00	48063392.03	52.46131	0.00	0.000	17728.45	0.00000
1675531.7	140.00	94016468.98	58.14433	0.00	0.000	12284.20	0.00000
1687141.7	160.00	182425621.04	56.57179	0.00	0.000	6652.22	0.00000
1716514.8	180.00	256545808.73	.08103	0.00	0.000	2685.73	0.00000

REVOLUTION 6

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P
1716514.8	-180.00	197447968.15	.08103	0.00	0.000	3380.25	0.00000
1735649.1	-160.00	149620293.42	51.16315	0.00	0.000	6901.87	0.00000
1744518.5	-140.00	83662938.61	55.06484	0.00	0.000	12324.67	0.00000
1747842.3	-120.00	44749081.16	50.45476	0.00	0.000	17653.20	0.00000
1749254.2	-100.00	24168023.15	43.40024	0.00	0.000	22529.61	0.00000
1749975.4	-80.00	12890610.98	35.34285	0.00	0.000	26760.17	0.00000
1750411.3	-60.00	6455792.84	26.79194	0.00	0.000	30200.24	0.00000
1750716.1	-40.00	2778681.28	17.97642	0.00	0.000	32738.25	0.00000
1750958.3	-20.00	868370.37	9.01963	.40	.004	34293.65	.00017
1750980.7	-18.00	754033.48	8.11945	.59	.008	34392.99	.00036
1751002.8	-16.00	652372.54	7.21874	.87	.017	34481.95	.00079
1751024.7	-14.00	563170.54	6.31756	1.31	.039	34560.52	.00176
1751046.5	-12.00	486238.05	5.41598	2.16	.105	34628.65	.00472
1751068.1	-10.00	421412.51	4.51408	4.53	.460	34686.34	.02062
1751089.6	-8.00	368557.49	3.61194	12.62	3.559	34733.57	.15933
1751111.0	-6.00	327562.13	2.70969	34.66	26.748	34770.32	1.19603
1751132.3	-4.00	298340.68	1.80757	78.79	137.898	34796.57	6.16143
1751153.4	-2.00	280832.13	.90653	130.00	374.879	34812.33	16.74245
1751172.1	0.00	275000.00	.08103	153.20	520.335	34817.58	23.23513
1751190.8	2.00	280832.13	.90653	130.00	374.879	34812.33	16.74245
1751212.0	4.00	298340.68	1.80757	78.79	137.898	34796.57	6.16143
1751233.3	6.00	327562.13	2.70969	34.66	26.748	34770.32	1.19603
1751254.7	8.00	368557.49	3.61194	12.62	3.559	34733.57	.15933
1751276.2	10.00	421412.51	4.51408	4.53	.460	34686.34	.02062
1751297.8	12.00	486238.05	5.41598	2.16	.105	34628.65	.00472
1751319.5	14.00	563170.54	6.31756	1.31	.039	34560.52	.00176
1751341.4	16.00	652372.54	7.21874	.87	.017	34481.95	.00079
1751363.6	18.00	754033.48	8.11945	.59	.008	34392.99	.00036
1751385.9	20.00	868370.37	9.01963	.40	.004	34293.65	.00017
1751628.1	40.00	2778681.28	17.97642	0.00	0.000	32738.25	0.00000
1751932.9	60.00	6455792.84	26.79194	0.00	0.000	30200.24	0.00000
1752368.9	80.00	12890610.98	35.34285	0.00	0.000	26760.17	0.00000
1753090.0	100.00	24168023.15	43.40024	0.00	0.000	22529.61	0.00000
1754501.9	120.00	44749081.16	50.45476	0.00	0.000	17653.20	0.00000
1757825.7	140.00	83662938.61	55.06484	0.00	0.000	12324.67	0.00000
1766695.1	160.00	149620293.42	51.16315	0.00	0.000	6901.87	0.00000
1785829.5	180.00	197447968.15	.08103	0.00	0.000	3380.25	0.00000

REVOLUTION 7

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1785829.5	-180.00	154915077.18	.08103	0.00	0.000	4153.65	0.00000
1798767.3	-160.00	123212682.27	45.63680	0.00	0.000	7247.12	0.00000
1805589.8	-140.00	73956783.86	51.67225	0.00	0.000	12412.53	0.00000
1808473.3	-120.00	41351320.89	48.20454	0.00	0.000	17597.00	0.00000
1809787.1	-100.00	22883924.05	41.82338	0.00	0.000	22371.99	0.00000
1810484.4	-80.00	12375236.81	34.22323	0.00	0.000	26525.58	0.00000
1810915.1	-60.00	6249739.97	26.01820	0.00	0.000	29907.49	0.00000
1811220.0	-40.00	2706098.48	17.48748	0.00	0.000	32404.34	0.00000
1811463.9	-20.00	852517.56	8.78249	.40	.004	33935.11	.00018
1811486.4	-18.00	741300.72	7.90642	.60	.008	34032.88	.00039
1811508.8	-16.00	642387.73	7.02970	.88	.018	34120.45	.00084
1811530.9	-14.00	555576.59	6.15240	1.32	.041	34197.78	.00187
1811552.9	-12.00	480690.86	5.27460	2.19	.112	34264.85	.00510
1811574.7	-10.00	417579.00	4.39639	4.65	.503	34321.64	.02278
1811596.4	-8.00	366113.79	3.51789	12.94	3.873	34368.13	.17519
1811618.0	-6.00	326191.79	2.63921	34.77	27.883	34404.30	1.26005
1811639.6	-4.00	297732.98	1.76063	77.56	138.387	34430.15	6.24909
1811661.0	-2.00	280680.41	.88315	126.28	366.261	34445.66	16.53170
1811680.1	0.00	275000.00	.08103	148.18	504.064	34450.83	22.74821
1811699.3	2.00	280680.41	.88315	126.28	366.261	34445.66	16.53170
1811720.7	4.00	297732.98	1.76063	77.56	138.387	34430.15	6.24909
1811742.2	6.00	326191.79	2.63921	34.77	27.883	34404.30	1.26005
1811763.8	8.00	366113.79	3.51789	12.94	3.873	34368.13	.17519
1811785.5	10.00	417579.00	4.39639	4.65	.503	34321.64	.02278
1811807.4	12.00	480690.86	5.27460	2.19	.112	34264.85	.00510
1811829.3	14.00	555576.59	6.15240	1.32	.041	34197.78	.00187
1811851.5	16.00	642387.73	7.02970	.88	.018	34120.45	.00084
1811873.8	18.00	741300.72	7.90642	.60	.008	34032.88	.00039
1811896.4	20.00	852517.56	8.78249	.40	.004	33935.11	.00018
1812140.3	40.00	2706098.48	17.48748	0.00	0.000	32404.34	0.00000
1812445.1	60.00	6249739.97	26.01820	0.00	0.000	29907.49	0.00000
1812875.8	80.00	12375236.81	34.22323	0.00	0.000	26525.58	0.00000
1813573.1	100.00	22883924.05	41.82338	0.00	0.000	22371.99	0.00000
1814887.0	120.00	41351320.89	48.20454	0.00	0.000	17597.00	0.00000
1817770.4	140.00	73956783.86	51.67225	0.00	0.000	12412.53	0.00000
1824592.9	160.00	123212682.27	45.63680	0.00	0.000	7247.12	0.00000
1837530.8	180.00	154915077.18	.08103	0.00	0.000	4153.65	0.00000

REVOLUTION 8

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
1837530.8	-180.00	123107969.01	.08103	0.00	0.000	5011.72	0.00000
1846532.4	-160.00	101686930.26	40.14592	0.00	0.000	7701.79	0.00000
1851811.7	-140.00	64923710.32	47.98123	0.00	0.000	12561.57	0.00000
1854299.9	-120.00	37900665.07	45.69746	0.00	0.000	17568.91	0.00000
1855515.7	-100.00	21513713.36	40.05062	0.00	0.000	22220.26	0.00000
1856187.5	-80.00	11809586.43	32.95918	0.00	0.000	26281.00	0.00000
1856612.3	-60.00	6019837.35	25.14270	0.00	0.000	29593.32	0.00000
1856917.2	-40.00	2624340.11	16.93357	0.00	0.000	32041.19	0.00000
1857163.0	-20.00	834571.57	8.51366	.41	.004	33542.71	.00020
1857185.8	-18.00	726882.42	7.66493	.61	.009	33638.64	.00042
1857208.4	-16.00	631078.15	6.81539	.89	.020	33724.55	.00090
1857230.7	-14.00	546973.08	5.96516	1.33	.044	33800.42	.00200
1857253.0	-12.00	474404.93	5.11431	2.24	.122	33866.23	.00560
1857275.0	-10.00	413234.23	4.26297	4.81	.560	33921.94	.02567
1857297.0	-8.00	363343.80	3.41125	13.32	4.264	33967.56	.19519
1857318.9	-6.00	324638.32	2.55931	34.93	29.252	34003.05	1.33750
1857340.7	-4.00	297044.02	1.70742	76.26	139.054	34028.41	6.35336
1857362.4	-2.00	280508.39	.85663	122.28	357.014	34043.62	16.30462
1857381.9	0.00	275000.00	.08103	142.80	486.618	34048.70	22.22025
1857401.5	2.00	280508.39	.85663	122.28	357.014	34043.62	16.30462
1857423.2	4.00	297044.02	1.70742	76.26	139.054	34028.41	6.35336
1857445.0	6.00	324638.32	2.55931	34.93	29.252	34003.05	1.33750
1857466.8	8.00	363343.80	3.41125	13.32	4.264	33967.56	.19519
1857488.8	10.00	413234.23	4.26297	4.81	.560	33921.94	.02567
1857510.9	12.00	474404.93	5.11431	2.24	.122	33866.23	.00560
1857533.1	14.00	546973.08	5.96516	1.33	.044	33800.42	.00200
1857555.5	16.00	631078.15	6.81539	.89	.020	33724.55	.00090
1857578.0	18.00	726882.42	7.66493	.61	.009	33638.64	.00042
1857600.8	20.00	834571.57	8.51366	.41	.004	33542.71	.00020
1857846.7	40.00	2624340.11	16.93357	0.00	0.000	32041.19	0.00000
1858151.5	60.00	6019837.35	25.14270	0.00	0.000	29593.32	0.00000
1858576.3	80.00	11809586.43	32.95918	0.00	0.000	26281.00	0.00000
1859248.2	100.00	21513713.36	40.05062	0.00	0.000	22220.26	0.00000
1860463.9	120.00	37900665.07	45.69746	0.00	0.000	17568.91	0.00000
1862952.1	140.00	64923710.32	47.98123	0.00	0.000	12561.57	0.00000
1868231.4	160.00	101686930.26	40.14592	0.00	0.000	7701.79	0.00000
1877233.1	180.00	123107969.01	.08103	0.00	0.000	5011.72	0.00000

REVOLUTION 9

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	$\frac{P}{T}$
1877233.1	-180.00	98593928.66	.08103	0.00	0.000	5961.71	0.00000
1883637.0	-160.00	83930912.07	34.82910	0.00	0.000	8278.37	0.00000
1887742.2	-140.00	56559249.93	44.01756	0.00	0.000	12787.53	0.00000
1889878.4	-120.00	34423267.03	42.92124	0.00	0.000	17579.91	0.00000
1890997.0	-100.00	20060185.96	38.06369	0.00	0.000	22081.10	0.00000
1891641.9	-80.00	11191009.45	31.53425	0.00	0.000	26029.87	0.00000
1892060.2	-60.00	5763814.29	24.15275	0.00	0.000	29258.77	0.00000
1892365.0	-40.00	2532316.80	16.30619	0.00	0.000	31648.19	0.00000
1892612.9	-20.00	814258.52	8.20892	.42	.005	33114.92	.00022
1892635.9	-18.00	710556.86	7.39116	.62	.010	33208.64	.00046
1892658.7	-16.00	618268.67	6.57244	.90	.021	33292.59	.00098
1892681.4	-14.00	537225.98	5.75287	1.35	.047	33366.72	.00218
1892703.9	-12.00	467281.85	4.93258	2.30	.135	33431.03	.00626
1892726.2	-10.00	408309.88	4.11170	5.03	.639	33485.47	.02965
1892748.5	-8.00	360203.80	3.29035	13.77	4.761	33530.04	.22078
1892770.6	-6.00	322877.12	2.46871	35.15	30.915	33564.72	1.43200
1892792.7	-4.00	296262.86	1.64709	74.88	139.951	33589.50	6.47790
1892814.7	-2.00	280313.34	.82658	118.02	347.150	33604.37	16.06135
1892834.7	0.00	275000.00	.08103	137.07	468.022	33609.33	21.65048
1892854.7	2.00	280313.34	.82658	118.02	347.150	33604.37	16.06135
1892876.7	4.00	296262.86	1.64709	74.88	139.951	33589.50	6.47790
1892898.8	6.00	322877.12	2.46871	35.15	30.915	33564.72	1.43200
1892920.9	8.00	360203.80	3.29035	13.77	4.761	33530.04	.22078
1892943.2	10.00	408309.88	4.11170	5.03	.639	33485.47	.02965
1892965.5	12.00	467281.85	4.93258	2.30	.135	33431.03	.00626
1892988.0	14.00	537225.98	5.75287	1.35	.047	33366.72	.00218
1893010.6	16.00	618268.67	6.57244	.90	.021	33292.59	.00098
1893033.5	18.00	710556.86	7.39116	.62	.010	33208.64	.00046
1893056.5	20.00	814258.52	8.20892	.42	.005	33114.92	.00022
1893304.4	40.00	2532316.80	16.30619	0.00	0.000	31648.19	0.00000
1893609.2	60.00	5763814.29	24.15275	0.00	0.000	29258.77	0.00000
1894027.5	80.00	11191009.45	31.53425	0.00	0.000	26029.87	0.00000
1894672.4	100.00	20060185.96	38.06369	0.00	0.000	22081.10	0.00000
1895791.0	120.00	34423267.03	42.92124	0.00	0.000	17579.91	0.00000
1897927.1	140.00	56559249.93	44.01756	0.00	0.000	12787.53	0.00000
1902032.4	160.00	83930912.07	34.82910	0.00	0.000	8278.37	0.00000
1908436.3	180.00	98593928.66	.08103	0.00	0.000	5961.71	0.00000

REVOLUTION 10

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
1908436.3	-180.00	79230357.15	.08103	0.00	0.000	7012.91	0.00000
1913071.8	-160.00	69118567.29	29.79445	0.00	0.000	8988.61	0.00000
1916276.1	-140.00	48838001.93	39.81878	0.00	0.000	13108.19	0.00000
1918100.8	-120.00	30940501.73	39.86538	0.00	0.000	17643.41	0.00000
1919123.7	-100.00	18525323.39	35.84168	0.00	0.000	21962.91	0.00000
1919740.2	-80.00	10516104.76	29.92839	0.00	0.000	25776.50	0.00000
1920151.3	-60.00	5478825.37	23.03248	0.00	0.000	28905.15	0.00000
1920455.9	-40.00	2428651.98	15.59461	0.00	0.000	31224.56	0.00000
1920706.1	-20.00	791229.98	7.86288	.44	.005	32649.69	.00025
1920729.5	-18.00	692041.75	7.08027	.63	.011	32740.79	.00052
1920752.6	-16.00	603736.25	6.29652	.92	.023	32822.39	.00108
1920775.5	-14.00	526164.54	5.51178	1.38	.051	32894.45	.00241
1920798.3	-12.00	459196.17	4.72618	2.39	.152	32956.96	.00717
1920821.0	-10.00	402718.85	3.93988	5.34	.755	33009.88	.03556
1920843.5	-8.00	356638.06	3.15302	14.29	5.377	33053.21	.25292
1920866.0	-6.00	320876.85	2.36580	35.45	32.958	33086.93	1.54870
1920888.4	-4.00	295375.58	1.57856	73.44	141.146	33111.02	6.62760
1920910.7	-2.00	280091.78	.79246	113.51	336.677	33125.48	15.80199
1920931.2	0.00	275000.00	.08103	131.01	448.294	33130.30	21.03771
1920951.6	2.00	280091.78	.79246	113.51	336.677	33125.48	15.80199
1920974.0	4.00	295375.58	1.57856	73.44	141.146	33111.02	6.62760
1920996.3	6.00	320876.85	2.36580	35.45	32.958	33086.93	1.54870
1921018.8	8.00	356638.06	3.15302	14.29	5.377	33053.21	.25292
1921041.4	10.00	402718.85	3.93988	5.34	.755	33009.88	.03556
1921064.0	12.00	459196.17	4.72618	2.39	.152	32956.96	.00717
1921086.8	14.00	526164.54	5.51178	1.38	.051	32894.45	.00241
1921109.8	16.00	603736.25	6.29652	.92	.023	32822.39	.00108
1921132.9	18.00	692041.75	7.08027	.63	.011	32740.79	.00052
1921156.2	20.00	791229.98	7.86288	.44	.005	32649.69	.00025
1921406.4	40.00	2428651.98	15.59461	0.00	0.000	31224.56	0.00000
1921711.1	60.00	5478825.37	23.03248	0.00	0.000	28905.15	0.00000
1922122.2	80.00	10516104.76	29.92839	0.00	0.000	25776.50	0.00000
1922738.6	100.00	18525323.39	35.84168	0.00	0.000	21962.91	0.00000
1923761.5	120.00	30940501.73	39.86538	0.00	0.000	17643.41	0.00000
1925586.3	140.00	48838001.93	39.81878	0.00	0.000	13108.19	0.00000
1928790.5	160.00	69118567.29	29.79445	0.00	0.000	8988.61	0.00000
1933426.0	180.00	79230357.15	.08103	0.00	0.000	7012.91	0.00000

REVOLUTION 11

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1933426.0	-180.00	63614769.49	.08103	0.00	0.000	8177.39	0.00000
1936826.1	-160.00	56628104.07	25.11218	0.00	0.000	9844.58	0.00000
1939333.2	-140.00	41720724.67	35.43321	0.00	0.000	13543.65	0.00000
1940883.7	-120.00	27468682.60	36.52206	0.00	0.000	17775.78	0.00000
1941813.1	-100.00	16909911.13	33.36063	0.00	0.000	21876.31	0.00000
1942399.7	-80.00	9780433.17	28.11696	0.00	0.000	25526.50	0.00000
1942802.8	-60.00	5161241.87	21.76180	0.00	0.000	28534.12	0.00000
1943107.2	-40.00	2311574.66	14.78500	0.00	0.000	30769.21	0.00000
1943359.9	-20.00	765034.31	7.46855	.46	.006	32144.35	.00029
1943383.6	-18.00	670971.08	6.72595	.66	.012	32232.29	.00059
1943407.0	-16.00	587191.57	5.98204	.95	.025	32311.07	.00122
1943430.3	-14.00	513567.15	5.23697	1.43	.057	32380.64	.00275
1943453.4	-12.00	449985.05	4.49090	2.52	.177	32440.99	.00850
1943476.4	-10.00	396348.02	3.74401	5.76	.924	32492.09	.04423
1943499.4	-8.00	352574.18	2.99646	14.93	6.183	32533.93	.29547
1943522.2	-6.00	318596.78	2.24849	35.89	35.603	32566.48	1.69971
1943544.9	-4.00	294364.08	1.50045	71.94	142.729	32589.75	6.80913
1943567.6	-2.00	279839.18	.75357	108.74	325.600	32603.71	15.52669
1943588.5	0.00	275000.00	.08103	124.62	427.439	32608.36	20.38007
1943609.5	2.00	279839.18	.75357	108.74	325.600	32603.71	15.52669
1943632.2	4.00	294364.08	1.50045	71.94	142.729	32589.75	6.80913
1943654.9	6.00	318596.78	2.24849	35.89	35.603	32566.48	1.69971
1943677.7	8.00	352574.18	2.99646	14.93	6.183	32533.93	.29547
1943700.6	10.00	396348.02	3.74401	5.76	.924	32492.09	.04423
1943723.6	12.00	449985.05	4.49090	2.52	.177	32440.99	.00850
1943746.8	14.00	513567.15	5.23697	1.43	.057	32380.64	.00275
1943770.1	16.00	587191.57	5.98204	.95	.025	32311.07	.00122
1943793.5	18.00	670971.08	6.72595	.66	.012	32232.29	.00059
1943817.2	20.00	765034.31	7.46855	.46	.006	32144.35	.00029
1944069.9	40.00	2311574.66	14.78500	0.00	0.000	30769.21	0.00000
1944374.3	60.00	5161241.87	21.76180	0.00	0.000	28534.12	0.00000
1944777.3	80.00	9780433.17	28.11696	0.00	0.000	25526.50	0.00000
1945364.0	100.00	16909911.13	33.36063	0.00	0.000	21876.31	0.00000
1946293.4	120.00	27468682.60	36.52206	0.00	0.000	17775.78	0.00000
1947843.8	140.00	41720724.67	35.43321	0.00	0.000	13543.65	0.00000
1950350.9	160.00	56628104.07	25.11218	0.00	0.000	9844.58	0.00000
1953751.0	180.00	63614769.49	.08103	0.00	0.000	8177.39	0.00000

REVOLUTION 12

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1953751.0	-180.00	50792099.32	.08103	0.00	0.000	9471.18	0.00000
1956269.0	-160.00	45984574.07	20.81536	0.00	0.000	10860.54	0.00000
1958232.4	-140.00	35159254.72	30.91696	0.00	0.000	14116.96	0.00000
1959542.0	-120.00	24018687.21	32.88690	0.00	0.000	17997.34	0.00000
1960380.6	-100.00	15212966.66	30.59286	0.00	0.000	21835.02	0.00000
1960936.0	-80.00	8978066.61	26.06915	0.00	0.000	25287.20	0.00000
1961330.2	-60.00	4806327.19	20.31469	0.00	0.000	28147.94	0.00000
1961634.1	-40.00	2178752.36	13.85916	.01	.000	30280.72	.00000
1961889.6	-20.00	735071.99	7.01665	.48	.007	31595.24	.00035
1961913.7	-18.00	646858.70	6.31986	.68	.014	31679.37	.00070
1961937.5	-16.00	568250.15	5.62156	.98	.029	31754.72	.00142
1961961.1	-14.00	499139.25	4.92193	1.49	.067	31821.28	.00325
1961984.7	-12.00	439431.91	4.22116	2.70	.217	31879.02	.01058
1962008.1	-10.00	389046.93	3.51943	6.31	1.176	31927.91	.05728
1962031.4	-8.00	347915.82	2.81696	15.78	7.316	31967.94	.35581
1962054.6	-6.00	315982.71	2.11397	36.51	39.045	31999.09	1.89710
1962077.7	-4.00	293204.25	1.41088	70.40	144.826	32021.34	7.03183
1962100.8	-2.00	279549.52	.70900	103.71	313.913	32034.70	15.23525
1962122.3	0.00	275000.00	.08103	117.89	405.443	32039.16	19.67479
1962143.7	2.00	279549.52	.70900	103.71	313.913	32034.70	15.23525
1962166.8	4.00	293204.25	1.41088	70.40	144.826	32021.34	7.03183
1962189.9	6.00	315982.71	2.11397	36.51	39.045	31999.09	1.89710
1962213.2	8.00	347915.82	2.81696	15.78	7.316	31967.94	.35581
1962236.5	10.00	389046.93	3.51943	6.31	1.176	31927.91	.05728
1962259.9	12.00	439431.91	4.22116	2.70	.217	31879.02	.01058
1962283.4	14.00	499139.25	4.92193	1.49	.067	31821.28	.00325
1962307.0	16.00	568250.15	5.62156	.98	.029	31754.72	.00142
1962330.9	18.00	646858.70	6.31986	.68	.014	31679.37	.00070
1962354.9	20.00	735071.99	7.01665	.48	.007	31595.24	.00035
1962610.4	40.00	2178752.36	13.85916	.01	.000	30280.72	.00000
1962914.3	60.00	4806327.19	20.31469	0.00	0.000	28147.94	0.00000
1963308.5	80.00	8978066.61	26.06915	0.00	0.000	25287.20	0.00000
1963863.9	100.00	15212966.66	30.59286	0.00	0.000	21835.02	0.00000
1964702.5	120.00	24018687.21	32.88690	0.00	0.000	17997.34	0.00000
1966012.1	140.00	35159254.72	30.91696	0.00	0.000	14116.96	0.00000
1967975.5	160.00	45984574.07	20.81536	0.00	0.000	10860.54	0.00000
1970493.5	180.00	50792099.32	.08103	0.00	0.000	9471.18	0.00000

REVOLUTION 13

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1970493.5	-180.00	40088794.87	.08103	0.00	0.000	10916.32	0.00000
1972369.5	-160.00	36818889.18	16.90615	0.00	0.000	12055.48	0.00000
1973905.6	-140.00	29099379.46	26.32873	0.00	0.000	14855.43	0.00000
1975004.2	-120.00	20595253.49	28.95908	0.00	0.000	18333.72	0.00000
1975754.8	-100.00	13430805.77	27.50574	0.00	0.000	21857.16	0.00000
1976277.5	-80.00	8100835.66	23.74546	0.00	0.000	25068.58	0.00000
1976661.8	-60.00	4407701.44	18.65653	0.00	0.000	27749.66	0.00000
1976965.1	-40.00	2027015.55	12.79240	.02	.000	29757.10	.00000
1977223.6	-20.00	700521.61	6.49447	.52	.009	30997.32	.00044
1977248.1	-18.00	619038.16	5.85053	.72	.017	31076.76	.00085
1977272.3	-16.00	546384.68	5.20488	1.04	.034	31147.93	.00171
1977296.4	-14.00	482476.60	4.55774	1.61	.082	31210.79	.00410
1977320.3	-12.00	427239.49	3.90929	3.00	.284	31265.32	.01413
1977344.2	-10.00	380608.95	3.25977	7.00	1.544	31311.51	.07667
1977367.9	-8.00	342530.65	2.60939	16.94	8.989	31349.32	.44580
1977391.6	-6.00	312960.15	1.95843	37.33	43.539	31378.74	2.15728
1977415.2	-4.00	291862.98	1.30733	68.81	147.620	31399.77	7.30937
1977438.7	-2.00	279214.52	.65751	98.42	301.592	31412.39	14.92723
1977460.7	0.00	275000.00	.08103	110.83	382.265	31416.60	18.91761
1977482.7	2.00	279214.52	.65751	98.42	301.592	31412.39	14.92723
1977506.3	4.00	291862.98	1.30733	68.81	147.620	31399.77	7.30937
1977529.9	6.00	312960.15	1.95843	37.33	43.539	31378.74	2.15728
1977553.6	8.00	342530.65	2.60939	16.94	8.989	31349.32	.44580
1977577.3	10.00	380608.95	3.25977	7.00	1.544	31311.51	.07667
1977601.1	12.00	427239.49	3.90929	3.00	.284	31265.32	.01413
1977625.1	14.00	482476.60	4.55774	1.61	.082	31210.79	.00410
1977649.2	16.00	546384.68	5.20488	1.04	.034	31147.93	.00171
1977673.4	18.00	619038.16	5.85053	.72	.017	31076.76	.00085
1977697.8	20.00	700521.61	6.49447	.52	.009	30997.32	.00044
1977956.4	40.00	2027015.55	12.79240	.02	.000	29757.10	.00000
1978259.7	60.00	4407701.44	18.65653	0.00	0.000	27749.66	0.00000
1978644.0	80.00	8100835.66	23.74546	0.00	0.000	25068.58	0.00000
1979166.6	100.00	13430805.77	27.50574	0.00	0.000	21857.16	0.00000
1979917.3	120.00	20595253.49	28.95908	0.00	0.000	18333.72	0.00000
1981015.9	140.00	29099379.46	26.32873	0.00	0.000	14855.43	0.00000
1982552.0	160.00	36818889.18	16.90615	0.00	0.000	12055.48	0.00000
1984428.0	180.00	40088794.87	.08103	0.00	0.000	10916.32	0.00000

REVOLUTION 14

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1984428.0	-180.00	31013175.85	.08103	0.00	0.000	12544.30	0.00000
1985828.9	-160.00	28837583.75	13.36350	0.00	0.000	13457.08	0.00000
1987026.6	-140.00	23481602.51	21.72284	0.00	0.000	15793.39	0.00000
1987940.4	-120.00	17195511.62	24.73989	0.00	0.000	18818.38	0.00000
1988606.0	-100.00	11555387.53	24.05922	0.00	0.000	21967.36	0.00000
1989094.4	-80.00	7136984.34	21.09339	0.00	0.000	24884.56	0.00000
1989467.5	-60.00	3956395.45	16.73948	0.00	0.000	27343.65	0.00000
1989769.9	-40.00	1851871.46	11.54981	.02	.000	29195.46	.00000
1990031.9	-20.00	660208.89	5.88384	.57	.011	30343.26	.00057
1990056.7	-18.00	586556.16	5.30158	.79	.021	30416.86	.00109
1990081.5	-16.00	520840.46	4.71742	1.12	.043	30482.81	.00221
1990106.0	-14.00	463000.43	4.13159	1.81	.112	30541.07	.00569
1990130.5	-12.00	412981.93	3.54433	3.49	.414	30591.61	.02105
1990154.8	-10.00	370738.03	2.95585	8.08	2.209	30634.42	.11211
1990179.1	-8.00	336229.01	2.36643	18.57	11.618	30669.48	.58894
1990203.3	-6.00	309422.36	1.77636	38.45	49.679	30696.76	2.51618
1990227.4	-4.00	290292.81	1.18612	67.20	151.385	30716.25	7.66259
1990251.5	-2.00	278822.30	.59730	92.84	288.590	30727.95	14.60187
1990274.1	0.00	275000.00	.08103	103.40	357.811	30731.85	18.10195
1990296.7	2.00	278822.30	.59730	92.84	288.590	30727.95	14.60187
1990320.8	4.00	290292.81	1.18612	67.20	151.385	30716.25	7.66259
1990344.9	6.00	309422.36	1.77636	38.45	49.679	30696.76	2.51618
1990369.1	8.00	336229.01	2.36643	18.57	11.618	30669.48	.58894
1990393.3	10.00	370738.03	2.95585	8.08	2.209	30634.42	.11211
1990417.7	12.00	412981.93	3.54433	3.49	.414	30591.61	.02105
1990442.1	14.00	463000.43	4.13159	1.81	.112	30541.07	.00569
1990466.7	16.00	520840.46	4.71742	1.12	.043	30482.81	.00221
1990491.4	18.00	586556.16	5.30158	.79	.021	30416.86	.00109
1990516.3	20.00	660208.89	5.88384	.57	.011	30343.26	.00057
1990778.3	40.00	1851871.46	11.54981	.02	.000	29195.46	.00000
1991080.6	60.00	3956395.45	16.73948	0.00	0.000	27343.65	0.00000
1991453.8	80.00	7136984.34	21.09339	0.00	0.000	24884.56	0.00000
1991942.1	100.00	11555387.53	24.05922	0.00	0.000	21967.36	0.00000
1992607.8	120.00	17195511.62	24.73989	0.00	0.000	18818.38	0.00000
1993521.6	140.00	23481602.51	21.72284	0.00	0.000	15793.39	0.00000
1994719.3	160.00	28837583.75	13.36350	0.00	0.000	13457.08	0.00000
1996120.1	180.00	31013175.85	.08103	0.00	0.000	12544.30	0.00000

REVOLUTION 15

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
1996120.1	-180.00	23191246.97	.08103	0.00	0.000	14402.93	0.00000
1997163.7	-160.00	21798700.12	10.14953	0.00	0.000	15108.80	0.00000
1998091.1	-140.00	18239109.07	17.14021	0.00	0.000	16978.13	0.00000
1998842.7	-120.00	13805767.34	20.22789	0.00	0.000	19497.53	0.00000
1999426.2	-100.00	9571082.85	20.20016	0.00	0.000	22200.94	0.00000
1999878.5	-80.00	6068541.82	18.03916	0.00	0.000	24755.69	0.00000
2000239.0	-60.00	3439021.90	14.49357	0.00	0.000	26936.44	0.00000
2000540.0	-40.00	1646565.42	10.07917	.03	.000	28591.41	.00000
2000805.8	-20.00	612353.26	5.15724	.64	.016	29621.78	.00082
2000831.2	-18.00	547966.33	4.64816	.88	.029	29687.96	.00153
2000856.5	-16.00	490471.81	4.13703	1.29	.062	29747.27	.00324
2000881.6	-14.00	439831.67	3.62409	2.17	.175	29799.68	.00914
2000906.7	-12.00	396012.22	3.10959	4.44	.726	29845.15	.03782
2000931.6	-10.00	358984.13	2.59378	9.86	3.567	29883.67	.18556
2000956.4	-8.00	328722.52	2.07695	20.92	16.010	29915.21	.83205
2000981.2	-6.00	305206.95	1.55942	40.19	58.912	29939.75	3.05925
2001006.0	-4.00	288421.51	1.04174	65.47	156.072	29957.30	8.09996
2001030.6	-2.00	278354.81	.52569	86.93	274.818	29967.83	14.25777
2001053.9	0.00	275000.00	.08103	95.55	331.899	29971.34	17.21711
2001077.2	2.00	278354.81	.52569	86.93	274.818	29967.83	14.25777
2001101.9	4.00	288421.51	1.04174	65.47	156.072	29957.30	8.09996
2001126.7	6.00	305206.95	1.55942	40.19	58.912	29939.75	3.05925
2001151.4	8.00	328722.52	2.07695	20.92	16.010	29915.21	.83205
2001176.3	10.00	358984.13	2.59378	9.86	3.567	29883.67	.18556
2001201.2	12.00	396012.22	3.10959	4.44	.726	29845.15	.03782
2001226.2	14.00	439831.67	3.62409	2.17	.175	29799.68	.00914
2001251.4	16.00	490471.81	4.13703	1.29	.062	29747.27	.00324
2001276.6	18.00	547966.33	4.64816	.88	.029	29687.96	.00153
2001302.0	20.00	612353.26	5.15724	.64	.016	29621.78	.00082
2001567.9	40.00	1646565.42	10.07917	.03	.000	28591.41	.00000
2001868.9	60.00	3439021.90	14.49357	0.00	0.000	26936.44	0.00000
2002229.4	80.00	6068541.82	18.03916	0.00	0.000	24755.69	0.00000
2002681.6	100.00	9571082.85	20.20016	0.00	0.000	22200.94	0.00000
2003265.1	120.00	13805767.34	20.22789	0.00	0.000	19497.53	0.00000
2004016.8	140.00	18239109.07	17.14021	0.00	0.000	16978.13	0.00000
2004944.2	160.00	21798700.12	10.14953	0.00	0.000	15108.80	0.00000
2005987.7	180.00	23191246.97	.08103	0.00	0.000	14402.93	0.00000

REVOLUTION 16

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2005987.7	-180.00	16319421.02	.08103	0.00	0.000	16571.33	0.00000
2006758.1	-160.00	15488452.45	7.21182	0.00	0.000	17084.63	0.00000
2007467.3	-140.00	13290364.85	12.59585	0.00	0.000	18483.17	0.00000
2008076.0	-120.00	10393859.22	15.40644	0.00	0.000	20441.10	0.00000
2008579.6	-100.00	7447507.50	15.84837	0.00	0.000	22612.49	0.00000
2008993.5	-80.00	4865515.29	14.46954	0.00	0.000	24714.59	0.00000
2009339.4	-60.00	2833770.93	11.80769	0.00	0.000	26538.60	0.00000
2009638.5	-40.00	1400028.81	8.29548	.05	.000	27937.57	.00001
2009908.7	-20.00	554012.43	4.26924	.78	.025	28814.08	.00135
2009934.7	-18.00	500877.15	3.84924	1.09	.048	28870.51	.00261
2009960.6	-16.00	453383.35	3.42711	1.69	.117	28921.09	.00627
2009986.4	-14.00	411515.29	3.00310	3.01	.369	28965.80	.01981
2010012.1	-12.00	375258.89	2.57749	6.17	1.542	29004.60	.08268
2010037.7	-10.00	344601.77	2.15053	12.64	6.452	29037.47	.34547
2010063.3	-8.00	319533.33	1.72252	24.44	24.027	29064.39	1.28526
2010088.8	-6.00	300044.82	1.29382	42.63	72.942	29085.34	3.89908
2010114.3	-4.00	286129.38	.86505	63.72	162.684	29100.32	8.69178
2010139.7	-2.00	277782.10	.43830	80.61	260.101	29109.31	13.89218
2010163.8	0.00	275000.00	.08103	87.18	304.170	29112.31	16.24431
2010187.9	2.00	277782.10	.43830	80.61	260.101	29109.31	13.89218
2010213.3	4.00	286129.38	.86505	63.72	162.684	29100.32	8.69178
2010238.7	6.00	300044.82	1.29382	42.63	72.942	29085.34	3.89908
2010264.2	8.00	319533.33	1.72252	24.44	24.027	29064.39	1.28526
2010289.8	10.00	344601.77	2.15053	12.64	6.452	29037.47	.34547
2010315.4	12.00	375258.89	2.57749	6.17	1.542	29004.60	.08268
2010341.1	14.00	411515.29	3.00310	3.01	.369	28965.80	.01981
2010366.9	16.00	453383.35	3.42711	1.69	.117	28921.09	.00627
2010392.8	18.00	500877.15	3.84924	1.09	.048	28870.51	.00261
2010418.8	20.00	554012.43	4.26924	.78	.025	28814.08	.00135
2010689.0	40.00	1400028.81	8.29548	.05	.000	27937.57	.00001
2010988.1	60.00	2833770.93	11.80769	0.00	0.000	26538.60	0.00000
2011334.1	80.00	4865515.29	14.46954	0.00	0.000	24714.59	0.00000
2011747.9	100.00	7447507.50	15.84837	0.00	0.000	22612.49	0.00000
2012251.6	120.00	10393859.22	15.40644	0.00	0.000	20441.10	0.00000
2012860.3	140.00	13290364.85	12.59585	0.00	0.000	18483.17	0.00000
2013569.4	160.00	15488452.45	7.21182	0.00	0.000	17084.63	0.00000
2014339.8	180.00	16319421.02	.08103	0.00	0.000	16571.33	0.00000

REVOLUTION 17

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
2014339.8	-180.00	10115464.65	.08103	0.00	0.000	19199.53	0.00000
2014897.1	-160.00	9687007.22	4.47672	0.00	0.000	19527.80	0.00000
2015427.1	-140.00	8516848.43	8.05400	0.00	0.000	20443.61	0.00000
2015908.0	-120.00	6887981.93	10.20922	0.00	0.000	21772.12	0.00000
2016332.9	-100.00	5120380.62	10.85637	0.00	0.000	23298.55	0.00000
2016705.1	-80.00	3470465.60	10.18356	0.00	0.000	24820.05	0.00000
2017033.7	-60.00	2099851.95	8.47995	.01	.000	26169.30	.00000
2017330.0	-40.00	1091474.31	6.04053	.10	.000	27219.78	.00003
2017605.2	-20.00	479616.04	3.13405	1.16	.062	27884.09	.00344
2017632.0	-18.00	440758.19	2.82723	1.75	.141	27927.02	.00785
2017658.7	-16.00	405982.50	2.51842	2.98	.406	27965.51	.02257
2017685.3	-14.00	375292.01	2.20787	5.52	1.386	27999.53	.07694
2017711.9	-12.00	348689.19	1.89581	10.23	4.747	28029.08	.26334
2017738.3	-10.00	326176.06	1.58251	18.29	15.131	28054.11	.83854
2017764.8	-8.00	307754.22	1.26827	30.47	41.880	28074.62	2.31928
2017791.2	-6.00	293424.91	.95349	46.30	96.526	28090.59	5.34250
2017817.5	-4.00	283189.06	.63889	61.99	172.778	28102.00	9.55901
2017843.8	-2.00	277047.29	.32717	73.70	244.058	28108.85	13.49929
2017868.9	0.00	275000.00	.08103	78.08	273.856	28111.13	15.14623
2017894.0	2.00	277047.29	.32717	73.70	244.058	28108.85	13.49929
2017920.3	4.00	283189.06	.63889	61.99	172.778	28102.00	9.55901
2017946.6	6.00	293424.91	.95349	46.30	96.526	28090.59	5.34250
2017973.0	8.00	307754.22	1.26827	30.47	41.880	28074.62	2.31928
2017999.5	10.00	326176.06	1.58251	18.29	15.131	28054.11	.83854
2018025.9	12.00	348689.19	1.89581	10.23	4.747	28029.08	.26334
2018052.5	14.00	375292.01	2.20787	5.52	1.386	27999.53	.07694
2018079.1	16.00	405982.50	2.51842	2.98	.406	27965.51	.02257
2018105.8	18.00	440758.19	2.82723	1.75	.141	27927.02	.00785
2018132.6	20.00	479616.04	3.13405	1.16	.062	27884.09	.00344
2018407.8	40.00	1091474.31	6.04053	.10	.000	27219.78	.00003
2018704.1	60.00	2099851.95	8.47995	.01	.000	26169.30	.00000
2019032.7	80.00	3470465.60	10.18356	0.00	0.000	24820.05	0.00000
2019404.9	100.00	5120380.62	10.85637	0.00	0.000	23298.55	0.00000
2019829.8	120.00	6887981.93	10.20922	0.00	0.000	21772.12	0.00000
2020310.8	140.00	8516848.43	8.05400	0.00	0.000	20443.61	0.00000
2020840.7	160.00	9687007.22	4.47672	0.00	0.000	19527.80	0.00000
2021398.0	180.00	10115464.65	.08103	0.00	0.000	19199.53	0.00000

REVOLUTION 18

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2021398.0	-180.00	4214041.33	.08103	0.00	0.000	22652.10	0.00000
2021782.5	-160.00	4073980.94	1.81154	0.00	0.000	22790.37	0.00000
2022160.2	-140.00	3679271.85	3.34577	0.00	0.000	23183.91	0.00000
2022522.9	-120.00	3098147.37	4.39709	0.00	0.000	23774.23	0.00000
2022866.9	-100.00	2421726.26	4.85715	0.00	0.000	24478.91	0.00000
2023191.3	-80.00	1742513.15	4.71653	.02	.000	25207.20	.00000
2023497.8	-60.00	1139318.94	4.03993	.07	.000	25872.89	.00002
2023789.6	-40.00	670837.76	2.93771	.35	.007	26403.15	.00040
2024071.1	-20.00	375641.51	1.54427	4.74	1.189	26743.58	.06914
2024098.9	-18.00	356604.34	1.39451	7.36	2.860	26765.71	.16610
2024126.7	-16.00	339537.26	1.24347	11.11	6.505	26785.57	.37760
2024154.4	-14.00	324451.64	1.09133	16.59	14.471	26803.13	.83939
2024182.0	-12.00	311357.43	.93828	23.80	29.709	26818.39	1.72233
2024209.7	-10.00	300263.25	.78453	32.85	56.540	26831.32	3.27625
2024237.3	-8.00	291176.34	.63039	42.83	95.969	26841.92	5.55874
2024264.8	-6.00	284102.63	.47633	52.34	143.174	26850.18	8.29046
2024292.4	-4.00	279046.70	.32349	60.36	190.255	26856.08	11.01424
2024320.0	-2.00	276011.84	.17638	65.75	225.690	26859.62	13.06394
2024346.3	0.00	275000.00	.08103	67.66	238.915	26860.80	13.82884
2024372.7	2.00	276011.84	.17638	65.75	225.690	26859.62	13.06394
2024400.2	4.00	279046.70	.32349	60.36	190.255	26856.08	11.01424
2024427.8	6.00	284102.63	.47633	52.34	143.174	26850.18	8.29046
2024455.4	8.00	291176.34	.63039	42.83	95.969	26841.92	5.55874
2024483.0	10.00	300263.25	.78453	32.85	56.540	26831.32	3.27625
2024510.6	12.00	311357.43	.93828	23.80	29.709	26818.39	1.72233
2024538.3	14.00	324451.64	1.09133	16.59	14.471	26803.13	.83939
2024566.0	16.00	339537.26	1.24347	11.11	6.505	26785.57	.37760
2024593.7	18.00	356604.34	1.39451	7.36	2.860	26765.71	.16610
2024621.5	20.00	375641.51	1.54427	4.74	1.189	26743.58	.06914
2024903.1	40.00	670837.76	2.93771	.35	.007	26403.15	.00040
2025194.9	60.00	1139318.94	4.03993	.07	.000	25872.89	.00002
2025501.3	80.00	1742513.15	4.71653	.02	.000	25207.20	.00000
2025825.7	100.00	2421726.26	4.85715	0.00	0.000	24478.91	0.00000
2026169.7	120.00	3098147.37	4.39709	0.00	0.000	23774.23	0.00000
2026532.5	140.00	3679271.85	3.34577	0.00	0.000	23183.91	0.00000
2026910.1	160.00	4073980.94	1.81154	0.00	0.000	22790.37	0.00000
2027294.6	180.00	4214041.33	.08103	0.00	0.000	22652.10	0.00000

Part 2

Listing of Punched Card CMA Input

REVOLUTION 1

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	25340.896	0.0000	.0000001	.000000	GLFC TRANS.
21.5938	25489.315	0.0000	.0000003	.000000	GLFC TRANS.
42.9512	25622.601	0.0000	.0000006	.000000	GLFC TRANS.
64.0995	25740.591	0.0000	.0000013	.000001	GLFC TRANS.
85.0642	25843.142	0.0000	.0000034	.000002	GLFC TRANS.
105.8685	25930.127	0.0000	.0000137	.000007	GLFC TRANS.
126.5314	26001.443	0.0000	.0001063	.000056	GLFC TRANS.
147.0620	26057.000	0.0000	.0008972	.000476	GLFC TRANS.
167.4365	26096.733	0.0000	.0032038	.002784	GLFC TRANS.
187.4456	26120.591	0.0000	.0055294	.008291	GLFC TRANS.
202.4825	26128.548	0.0000	.0066096	.011846	GLFC TRANS.
217.5194	26120.591	0.0000	.0055294	.008291	GLFC TRANS.
237.5284	26096.733	0.0000	.0032038	.002784	GLFC TRANS.
257.9029	26057.000	0.0000	.0008972	.000476	GLFC TRANS.
278.4335	26001.443	0.0000	.0001063	.000056	GLFC TRANS.
299.0964	25930.127	0.0000	.0000137	.000007	GLFC TRANS.
319.9008	25843.142	0.0000	.0000034	.000002	GLFC TRANS.
340.8655	25740.591	0.0000	.0000013	.000001	GLFC TRANS.
362.0138	25622.601	0.0000	.0000006	.000000	GLFC TRANS.
383.3712	25489.315	0.0000	.0000003	.000000	GLFC TRANS.
404.9650	25340.896	0.0000	.0000001	.000000	GLFC TRANS.

REVOLUTION 4

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	24348.714	0.0000	.0000001	.000000	GLFC TRANS.
21.9871	24490.864	0.0000	.0000003	.000000	GLFC TRANS.
43.7459	24618.520	0.0000	.0000007	.000000	GLFC TRANS.
65.3036	24731.526	0.0000	.0000015	.000001	GLFC TRANS.
86.6863	24829.745	0.0000	.0000039	.000002	GLFC TRANS.
107.9190	24913.056	0.0000	.0000162	.000008	GLFC TRANS.
129.0250	24981.359	0.0000	.0001255	.000065	GLFC TRANS.
150.0244	25034.570	0.0000	.0009990	.000519	GLFC TRANS.
170.9270	25072.624	0.0000	.0032302	.002847	GLFC TRANS.
191.6852	25095.475	0.0000	.0054444	.008086	GLFC TRANS.
209.3528	25103.095	0.0000	.0064592	.011381	GLFC TRANS.
227.0204	25095.475	0.0000	.0054444	.008086	GLFC TRANS.
247.7786	25072.624	0.0000	.0032302	.002847	GLFC TRANS.
268.6813	25034.570	0.0000	.0009990	.000519	GLFC TRANS.
289.6806	24981.359	0.0000	.0001255	.000065	GLFC TRANS.
310.7866	24913.056	0.0000	.0000162	.000008	GLFC TRANS.
332.0193	24829.745	0.0000	.0000039	.000002	GLFC TRANS.
353.4020	24731.526	0.0000	.0000015	.000001	GLFC TRANS.
374.9597	24618.520	0.0000	.0000007	.000000	GLFC TRANS.
396.7185	24490.864	0.0000	.0000003	.000000	GLFC TRANS.
418.7056	24348.714	0.0000	.0000001	.000000	GLFC TRANS.

REVOLUTION 7

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	23002.847	0.0000	.0000002	.000000	GLFC TRANS.
22.5481	23135.593	0.0000	.0000004	.000000	GLFC TRANS.
44.8782	23254.803	0.0000	.0000008	.000000	GLFC TRANS.
67.0163	23360.333	0.0000	.0000018	.000001	GLFC TRANS.
88.9875	23452.053	0.0000	.0000048	.000002	GLFC TRANS.
110.8162	23529.853	0.0000	.0000214	.000011	GLFC TRANS.
132.5256	23593.637	0.0000	.0001641	.000083	GLFC TRANS.
154.1371	23643.327	0.0000	.0011793	.000595	GLFC TRANS.
175.6670	23678.863	0.0000	.0032756	.002953	GLFC TRANS.
197.1023	23700.203	0.0000	.0053281	.007811	GLFC TRANS.
216.2267	23707.319	0.0000	.0062502	.010749	GLFC TRANS.
235.3510	23700.203	0.0000	.0053281	.007811	GLFC TRANS.
256.7864	23678.863	0.0000	.0032756	.002953	GLFC TRANS.
278.3163	23643.327	0.0000	.0011793	.000595	GLFC TRANS.
299.9278	23593.637	0.0000	.0001641	.000083	GLFC TRANS.
321.6372	23529.853	0.0000	.0000214	.000011	GLFC TRANS.
343.4658	23452.053	0.0000	.0000048	.000002	GLFC TRANS.
365.4371	23360.333	0.0000	.0000018	.000001	GLFC TRANS.
387.5752	23254.803	0.0000	.0000008	.000000	GLFC TRANS.
409.9053	23135.593	0.0000	.0000004	.000000	GLFC TRANS.
432.4534	23002.847	0.0000	.0000002	.000000	GLFC TRANS.

REVOLUTION 10

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	21293.217	0.0000	.0000002	.000000	GLFC TRANS.
23.3286	21412.210	0.0000	.0000005	.000000	GLFC TRANS.
46.4556	21519.070	0.0000	.0000011	.000001	GLFC TRANS.
69.4047	21613.667	0.0000	.0000024	.000001	GLFC TRANS.
92.1992	21695.885	0.0000	.0000070	.000003	GLFC TRANS.
114.8618	21765.624	0.0000	.0000347	.000017	GLFC TRANS.
137.4141	21822.800	0.0000	.0002464	.000120	GLFC TRANS.
159.8770	21867.343	0.0000	.0015072	.000732	GLFC TRANS.
182.2681	21899.198	0.0000	.0033536	.003132	GLFC TRANS.
204.5873	21918.326	0.0000	.0051787	.007466	GLFC TRANS.
225.0477	21924.705	0.0000	.0059755	.009940	GLFC TRANS.
245.5081	21918.326	0.0000	.0051787	.007466	GLFC TRANS.
267.8274	21899.198	0.0000	.0033536	.003132	GLFC TRANS.
290.2184	21867.343	0.0000	.0015072	.000732	GLFC TRANS.
312.6814	21822.800	0.0000	.0002464	.000120	GLFC TRANS.
335.2337	21765.624	0.0000	.0000347	.000017	GLFC TRANS.
357.8962	21695.885	0.0000	.0000070	.000003	GLFC TRANS.
380.6908	21613.667	0.0000	.0000024	.000001	GLFC TRANS.
403.6399	21519.070	0.0000	.0000011	.000001	GLFC TRANS.
426.7669	21412.210	0.0000	.0000005	.000000	GLFC TRANS.
450.0955	21293.217	0.0000	.0000002	.000000	GLFC TRANS.

REVOLUTION 13

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	19192.500	0.0000	.0000005	.000000	GLFC TRANS.
24.4164	19290.996	0.0000	.0000009	.000000	GLFC TRANS.
48.6585	19379.449	0.0000	.0000018	.000001	GLFC TRANS.
72.7468	19457.751	0.0000	.0000042	.000002	GLFC TRANS.
96.7011	19525.807	0.0000	.0000146	.000007	GLFC TRANS.
120.5408	19583.533	0.0000	.0000788	.000036	GLFC TRANS.
144.2851	19630.860	0.0000	.0004579	.000211	GLFC TRANS.
167.9521	19667.730	0.0000	.0018980	.001019	GLFC TRANS.
191.5580	19694.098	0.0000	.0034940	.003454	GLFC TRANS.
215.1079	19709.931	0.0000	.0049934	.007053	GLFC TRANS.
237.1034	19715.211	0.0000	.0056214	.008939	GLFC TRANS.
259.0990	19709.931	0.0000	.0049934	.007053	GLFC TRANS.
282.6489	19694.098	0.0000	.0034940	.003454	GLFC TRANS.
306.2548	19667.730	0.0000	.0018980	.001019	GLFC TRANS.
329.9218	19630.860	0.0000	.0004579	.000211	GLFC TRANS.
353.6660	19583.533	0.0000	.0000788	.000036	GLFC TRANS.
377.5058	19525.807	0.0000	.0000146	.000007	GLFC TRANS.
401.4601	19457.751	0.0000	.0000042	.000002	GLFC TRANS.
425.5483	19379.449	0.0000	.0000018	.000001	GLFC TRANS.
449.7905	19290.996	0.0000	.0000009	.000000	GLFC TRANS.
474.2069	19192.500	0.0000	.0000005	.000000	GLFC TRANS.

REVOLUTION 16

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	16584.123	0.0000	.0000015	.000001	GLFC TRANS.
26.0278	16649.147	0.0000	.0000029	.000001	GLFC TRANS.
51.9335	16707.540	0.0000	.0000070	.000003	GLFC TRANS.
77.7310	16759.233	0.0000	.0000220	.000009	GLFC TRANS.
103.4340	16804.161	0.0000	.0000918	.000039	GLFC TRANS.
129.0560	16842.270	0.0000	.0003831	.000163	GLFC TRANS.
154.6104	16873.514	0.0000	.0014239	.000607	GLFC TRANS.
180.1100	16897.854	0.0000	.0025227	.001842	GLFC TRANS.
205.5665	16915.261	0.0000	.0037669	.004107	GLFC TRANS.
230.9841	16925.714	0.0000	.0047624	.006564	GLFC TRANS.
255.0782	16929.200	0.0000	.0051499	.007675	GLFC TRANS.
279.1723	16925.714	0.0000	.0047624	.006564	GLFC TRANS.
304.5899	16915.261	0.0000	.0037669	.004107	GLFC TRANS.
330.0463	16897.854	0.0000	.0025227	.001842	GLFC TRANS.
355.5460	16873.514	0.0000	.0014239	.000607	GLFC TRANS.
381.1004	16842.270	0.0000	.0003831	.000163	GLFC TRANS.
406.7224	16804.161	0.0000	.0000918	.000039	GLFC TRANS.
432.4254	16759.233	0.0000	.0000220	.000009	GLFC TRANS.
458.2229	16707.540	0.0000	.0000070	.000003	GLFC TRANS.
484.1286	16649.147	0.0000	.0000029	.000001	GLFC TRANS.
510.1564	16584.123	0.0000	.0000015	.000001	GLFC TRANS.

REVOLUTION 17

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	15530.883	0.0000	.0000040	.000002	GLFC TRANS.
26.7864	15578.735	0.0000	.0000091	.000004	GLFC TRANS.
53.4805	15621.707	0.0000	.0000260	.000011	GLFC TRANS.
80.0927	15659.748	0.0000	.0000885	.000036	GLFC TRANS.
106.6332	15692.811	0.0000	.0003025	.000124	GLFC TRANS.
133.1122	15720.855	0.0000	.0009625	.000396	GLFC TRANS.
159.5398	15743.848	0.0000	.0019354	.001096	GLFC TRANS.
185.9255	15761.760	0.0000	.0029376	.002524	GLFC TRANS.
212.2781	15774.570	0.0000	.0039297	.004517	GLFC TRANS.
238.5998	15782.262	0.0000	.0046701	.006378	GLFC TRANS.
263.6682	15784.827	0.0000	.0049468	.007157	GLFC TRANS.
288.7366	15782.262	0.0000	.0046701	.006378	GLFC TRANS.
315.0583	15774.570	0.0000	.0039297	.004517	GLFC TRANS.
341.4109	15761.760	0.0000	.0029376	.002524	GLFC TRANS.
367.7967	15743.848	0.0000	.0019354	.001096	GLFC TRANS.
394.2242	15720.855	0.0000	.0009625	.000396	GLFC TRANS.
420.7032	15692.811	0.0000	.0003025	.000124	GLFC TRANS.
447.2437	15659.748	0.0000	.0000885	.000036	GLFC TRANS.
473.8559	15621.707	0.0000	.0000260	.000011	GLFC TRANS.
500.5501	15578.735	0.0000	.0000091	.000004	GLFC TRANS.
527.3364	15530.883	0.0000	.0000040	.000002	GLFC TRANS.

APPENDIX G

Trajectory and Reentry Environment
Output From Computer Code HRS017 (Version 3)
for a Perigee Altitude of 285,000 Feet
(Thirty Revolutions)

Part 1. Trajectory and Reentry Environment Tabulated Data (129)

Part 2. Listing of Punched Card CMA Input (159)

Part 1

Trajectory and Reentry Environment Tabulated Data

REVOLUTION 1

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
0.0	-180.00	1246374303.00	.08103	0.00	0.000	605.18	0.00000
384983.0	-160.00	436340027.88	74.57776	0.00	0.000	6307.10	0.00000
422280.7	-140.00	140057933.23	67.36717	0.00	0.000	12380.05	0.00000
428405.4	-120.00	59860740.46	58.33954	0.00	0.000	18086.91	0.00000
430268.2	-100.00	29218085.70	48.85736	0.00	0.000	23246.94	0.00000
431083.6	-80.00	14798220.75	39.19546	0.00	0.000	27701.85	0.00000
431538.6	-60.00	7198329.01	29.44647	0.00	0.000	31315.76	0.00000
431843.0	-40.00	3041731.98	19.65113	0.00	0.000	33978.63	0.00000
432079.2	-20.00	933091.42	9.83124	.36	.003	35609.46	.00012
432100.8	-18.00	807958.70	8.84848	.55	.006	35713.58	.00027
432122.2	-16.00	696799.84	7.86564	.83	.014	35806.84	.00060
432143.4	-14.00	599342.15	6.88273	1.25	.031	35889.19	.00135
432164.3	-12.00	515348.19	5.89976	1.96	.077	35960.61	.00331
432185.2	-10.00	444614.59	4.91677	3.73	.276	36021.08	.01191
432205.8	-8.00	386970.98	3.93378	9.66	1.840	36070.58	.07930
432226.4	-6.00	342279.10	2.95086	26.60	13.907	36109.09	.59881
432246.8	-4.00	310432.17	1.96818	62.46	76.511	36136.61	3.29183
432266.8	-2.00	291354.27	.98659	108.87	232.080	36153.13	9.98050
432281.8	0.00	285000.00	.08103	130.35	332.506	36158.63	14.29712
432296.9	2.00	291354.27	.98659	108.87	232.080	36153.13	9.98050
432316.9	4.00	310432.17	1.96818	62.46	76.511	36136.61	3.29183
432337.3	6.00	342279.10	2.95086	26.60	13.907	36109.09	.59881
432357.8	8.00	386970.98	3.93378	9.66	1.840	36070.58	.07930
432378.5	10.00	444614.59	4.91677	3.73	.276	36021.08	.01191
432399.3	12.00	515348.19	5.89976	1.96	.077	35960.61	.00331
432420.3	14.00	599342.15	6.88273	1.25	.031	35889.19	.00135
432441.5	16.00	696799.84	7.86564	.83	.014	35806.84	.00060
432462.9	18.00	807958.70	8.84848	.55	.006	35713.58	.00027
432484.5	20.00	933091.42	9.83124	.36	.003	35609.46	.00012
432720.7	40.00	3041731.98	19.65113	0.00	0.000	33978.63	0.00000
433025.1	60.00	7198329.01	29.44647	0.00	0.000	31315.76	0.00000
433480.1	80.00	14798220.75	39.19546	0.00	0.000	27701.85	0.00000
434295.5	100.00	29218085.70	48.85736	0.00	0.000	23246.94	0.00000
436158.3	120.00	59860740.46	58.33954	0.00	0.000	18086.91	0.00000
442283.0	140.00	140057933.23	67.36717	0.00	0.000	12380.05	0.00000
479580.7	160.00	436340027.88	74.57776	0.00	0.000	6307.10	0.00000
864563.7	180.00	1246374303.00	.08103	0.00	0.000	605.18	0.00000

REVOLUTION 2

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
864563.7	-180.00	911942930.77	.08103	0.00	0.000	819.73	0.00000
1098668.0	-160.00	385369373.78	72.65237	0.00	0.000	6312.27	0.00000
1130366.8	-140.00	133834642.25	66.42543	0.00	0.000	12354.69	0.00000
1136166.1	-120.00	58499406.76	57.74479	0.00	0.000	18040.18	0.00000
1137987.5	-100.00	28804134.55	48.44789	0.00	0.000	23182.55	0.00000
1138795.2	-80.00	14649678.28	38.90708	0.00	0.000	27622.77	0.00000
1139248.7	-60.00	7142502.68	29.24801	0.00	0.000	31224.99	0.00000
1139553.2	-40.00	3022738.30	19.52601	0.00	0.000	33879.34	0.00000
1139789.9	-20.00	929016.50	9.77063	.37	.003	35504.98	.00012
1139811.5	-18.00	804689.27	8.79404	.55	.006	35608.77	.00027
1139833.0	-16.00	694238.44	7.81733	.83	.014	35701.73	.00061
1139854.2	-14.00	597395.69	6.84052	1.25	.031	35783.82	.00137
1139875.2	-12.00	513927.37	5.86363	1.96	.077	35855.01	.00335
1139896.1	-10.00	443633.30	4.88670	3.74	.280	35915.29	.01212
1139916.9	-8.00	386345.75	3.90974	9.69	1.869	35964.63	.08079
1139937.5	-6.00	341928.63	2.93284	26.58	14.024	36003.03	.60563
1139958.0	-4.00	310276.79	1.95619	62.15	76.495	36030.46	3.30084
1139978.2	-2.00	291315.48	.98061	107.99	230.559	36046.92	9.94433
1139994.0	0.00	285000.00	.08103	129.15	329.584	36052.41	14.21324
1140009.7	2.00	291315.48	.98061	107.99	230.559	36046.92	9.94433
1140029.9	4.00	310276.79	1.95619	62.15	76.495	36030.46	3.30084
1140050.4	6.00	341928.63	2.93284	26.58	14.024	36003.03	.60563
1140071.0	8.00	386345.75	3.90974	9.69	1.869	35964.63	.08079
1140091.8	10.00	443633.30	4.88670	3.74	.280	35915.29	.01212
1140112.7	12.00	513927.37	5.86363	1.96	.077	35855.01	.00335
1140133.7	14.00	597395.69	6.84052	1.25	.031	35783.82	.00137
1140154.9	16.00	694238.44	7.81733	.83	.014	35701.73	.00061
1140176.4	18.00	804689.27	8.79404	.55	.006	35608.77	.00027
1140198.0	20.00	929016.50	9.77063	.37	.003	35504.98	.00012
1140434.7	40.00	3022738.30	19.52601	0.00	0.000	33879.34	0.00000
1140739.2	60.00	7142502.68	29.24801	0.00	0.000	31224.99	0.00000
1141192.8	80.00	14649678.28	38.90708	0.00	0.000	27622.77	0.00000
1142000.4	100.00	28804134.55	48.44789	0.00	0.000	23182.55	0.00000
1143821.8	120.00	58499406.76	57.74479	0.00	0.000	18040.18	0.00000
1149621.1	140.00	133834642.25	66.42543	0.00	0.000	12354.69	0.00000
1181319.9	160.00	385369373.78	72.65237	0.00	0.000	6312.27	0.00000
1415424.2	180.00	911942930.77	.08103	0.00	0.000	819.73	0.00000

REVOLUTION 3

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1415424.2	-180.00	698833265.44	.08103	0.00	0.000	1058.95	0.00000
1567808.3	-160.00	340204217.98	70.51199	0.00	0.000	6326.48	0.00000
1594693.3	-140.00	127401151.94	65.37112	0.00	0.000	12330.49	0.00000
1600159.9	-120.00	57025608.56	57.07808	0.00	0.000	17990.56	0.00000
1601936.5	-100.00	28347747.39	47.98865	0.00	0.000	23112.39	0.00000
1602735.6	-80.00	14484479.01	38.58358	0.00	0.000	27535.71	0.00000
1603187.6	-60.00	7080129.40	29.02537	0.00	0.000	31124.55	0.00000
1603492.1	-40.00	3001463.42	19.38564	0.00	0.000	33769.17	0.00000
1603729.4	-20.00	924446.30	9.70262	.37	.003	35388.89	.00012
1603751.1	-18.00	801022.17	8.73295	.55	.006	35492.31	.00028
1603772.6	-16.00	691365.30	7.76312	.83	.014	35584.93	.00062
1603793.9	-14.00	595212.21	6.79317	1.25	.032	35666.72	.00138
1603815.0	-12.00	512333.45	5.82310	1.96	.078	35737.65	.00341
1603836.0	-10.00	442532.40	4.85295	3.75	.285	35797.71	.01237
1603856.8	-8.00	385644.29	3.88278	9.72	1.902	35846.88	.08250
1603877.5	-6.00	341535.42	2.91264	26.56	14.158	35885.13	.61341
1603898.1	-4.00	310102.46	1.94273	61.81	76.482	35912.46	3.31113
1603918.4	-2.00	291271.96	.97390	107.01	228.879	35928.87	9.90430
1603934.7	0.00	285000.00	.08103	127.82	326.357	35934.33	14.12029
1603951.1	2.00	291271.96	.97390	107.01	228.879	35928.87	9.90430
1603971.4	4.00	310102.46	1.94273	61.81	76.482	35912.46	3.31113
1603992.0	6.00	341535.42	2.91264	26.56	14.158	35885.13	.61341
1604012.7	8.00	385644.29	3.88278	9.72	1.902	35846.88	.08250
1604033.5	10.00	442532.40	4.85295	3.75	.285	35797.71	.01237
1604054.5	12.00	512333.45	5.82310	1.96	.078	35737.65	.00341
1604075.6	14.00	595212.21	6.79317	1.25	.032	35666.72	.00138
1604096.9	16.00	691365.30	7.76312	.83	.014	35584.93	.00062
1604118.4	18.00	801022.17	8.73295	.55	.006	35492.31	.00028
1604140.1	20.00	924446.30	9.70262	.37	.003	35388.89	.00012
1604377.4	40.00	3001463.42	19.38564	0.00	0.000	33769.17	0.00000
1604681.9	60.00	7080129.40	29.02537	0.00	0.000	31124.55	0.00000
1605133.8	80.00	14484479.01	38.58358	0.00	0.000	27535.71	0.00000
1605933.0	100.00	28347747.39	47.98865	0.00	0.000	23112.39	0.00000
1607709.6	120.00	57025608.56	57.07808	0.00	0.000	17990.56	0.00000
1613176.2	140.00	127401151.94	65.37112	0.00	0.000	12330.49	0.00000
1640061.2	160.00	340204217.98	70.51199	0.00	0.000	6326.48	0.00000
1792445.3	180.00	698833265.44	.08103	0.00	0.000	1058.95	0.00000

REVOLUTION 4

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
1792445.3	-180.00	552950687.62	.08103	0.00	0.000	1323.34	0.00000
1896489.4	-160.00	300450473.08	68.16149	0.00	0.000	6352.47	0.00000
1919272.6	-140.00	120843169.34	64.20164	0.00	0.000	12308.77	0.00000
1924404.1	-120.00	55448614.87	56.33712	0.00	0.000	17938.80	0.00000
1926133.0	-100.00	27849644.39	47.47794	0.00	0.000	23036.88	0.00000
1926922.9	-80.00	14302445.72	38.22370	0.00	0.000	27440.87	0.00000
1927373.1	-60.00	7011047.83	28.77765	0.00	0.000	31014.49	0.00000
1927677.7	-40.00	2977833.91	19.22944	0.00	0.000	33648.08	0.00000
1927915.5	-20.00	919363.00	9.62694	.37	.003	35261.10	.00013
1927937.3	-18.00	796943.02	8.66497	.55	.006	35364.10	.00028
1927958.9	-16.00	688169.07	7.70281	.83	.014	35456.33	.00063
1927980.2	-14.00	592783.03	6.74047	1.25	.032	35537.79	.00141
1928001.4	-12.00	510560.07	5.77799	1.96	.079	35608.43	.00347
1928022.5	-10.00	441307.49	4.81541	3.76	.290	35668.24	.01264
1928043.4	-8.00	384863.79	3.85277	9.76	1.940	35717.20	.08445
1928064.2	-6.00	341097.89	2.89015	26.54	14.309	35755.30	.62221
1928084.8	-4.00	309908.47	1.92775	61.45	76.493	35782.52	3.32361
1928105.3	-2.00	291223.53	.96644	105.95	227.041	35798.86	9.86045
1928122.1	0.00	285000.00	.08103	126.37	322.826	35804.30	14.01829
1928138.9	2.00	291223.53	.96644	105.95	227.041	35798.86	9.86045
1928159.4	4.00	309908.47	1.92775	61.45	76.493	35782.52	3.32361
1928180.0	6.00	341097.89	2.89015	26.54	14.309	35755.30	.62221
1928200.8	8.00	384863.79	3.85277	9.76	1.940	35717.20	.08445
1928221.7	10.00	441307.49	4.81541	3.76	.290	35668.24	.01264
1928242.8	12.00	510560.07	5.77799	1.96	.079	35608.43	.00347
1928264.0	14.00	592783.03	6.74047	1.25	.032	35537.79	.00141
1928285.3	16.00	688169.07	7.70281	.83	.014	35456.33	.00063
1928306.9	18.00	796943.02	8.66497	.55	.006	35364.10	.00028
1928328.7	20.00	919363.00	9.62694	.37	.003	35261.10	.00013
1928566.5	40.00	2977833.91	19.22944	0.00	0.000	33648.08	0.00000
1928871.2	60.00	7011047.83	28.77765	0.00	0.000	31014.49	0.00000
1929321.3	80.00	14302445.72	38.22370	0.00	0.000	27440.87	0.00000
1930111.2	100.00	27849644.39	47.47794	0.00	0.000	23036.88	0.00000
1931840.1	120.00	55448614.87	56.33712	0.00	0.000	17938.80	0.00000
1936971.6	140.00	120843169.34	64.20164	0.00	0.000	12308.77	0.00000
1959754.8	160.00	300450473.08	68.16149	0.00	0.000	6352.47	0.00000
2063798.9	180.00	552950687.62	.08103	0.00	0.000	1323.34	0.00000

REVOLUTION 5

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2063798.9	-180.00	447928331.65	.08103	0.00	0.000	1613.34	0.00000
2137428.4	-160.00	265593042.59	65.61028	0.00	0.000	6393.25	0.00000
2156737.5	-140.00	114238661.86	62.91482	0.00	0.000	12291.05	0.00000
2161535.9	-120.00	53778375.95	55.51967	0.00	0.000	17885.77	0.00000
2163214.6	-100.00	27310743.07	46.91398	0.00	0.000	22956.53	0.00000
2163994.4	-80.00	14103433.45	37.82615	0.00	0.000	27338.52	0.00000
2164442.6	-60.00	6935096.56	28.50394	0.00	0.000	30894.92	0.00000
2164747.3	-40.00	2951773.61	19.05683	0.00	0.000	33516.07	0.00000
2164985.8	-20.00	913747.85	9.54331	.37	.003	35121.55	.00013
2165007.7	-18.00	792436.67	8.58985	.55	.007	35224.06	.00029
2165029.3	-16.00	684637.80	7.63615	.83	.015	35315.87	.00064
2165050.8	-14.00	590099.03	6.68223	1.25	.033	35396.95	.00143
2165072.1	-12.00	508600.54	5.72814	1.97	.081	35467.26	.00353
2165093.2	-10.00	439953.93	4.77391	3.78	.296	35526.79	.01295
2165114.2	-8.00	384001.28	3.81961	9.80	1.983	35575.53	.08666
2165135.1	-6.00	340614.36	2.86530	26.53	14.479	35613.45	.63212
2165155.8	-4.00	309694.09	1.91120	61.06	76.535	35640.54	3.33869
2165176.4	-2.00	291170.02	.95819	104.79	225.048	35656.80	9.81281
2165193.6	0.00	285000.00	.08103	124.79	318.999	35662.22	13.90725
2165210.8	2.00	291170.02	.95819	104.79	225.048	35656.80	9.81281
2165231.4	4.00	309694.09	1.91120	61.06	76.535	35640.54	3.33869
2165252.2	6.00	340614.36	2.86530	26.53	14.479	35613.45	.63212
2165273.1	8.00	384001.28	3.81961	9.80	1.983	35575.53	.08666
2165294.0	10.00	439953.93	4.77391	3.78	.296	35526.79	.01295
2165315.2	12.00	508600.54	5.72814	1.97	.081	35467.26	.00353
2165336.4	14.00	590099.03	6.68223	1.25	.033	35396.95	.00143
2165357.9	16.00	684637.80	7.63615	.83	.015	35315.87	.00064
2165379.5	18.00	792436.67	8.58985	.55	.007	35224.06	.00029
2165401.4	20.00	913747.85	9.54331	.37	.003	35121.55	.00013
2165639.9	40.00	2951773.61	19.05683	0.00	0.000	33516.07	0.00000
2165944.6	60.00	6935096.56	28.50394	0.00	0.000	30894.92	0.00000
2166392.8	80.00	14103433.45	37.82615	0.00	0.000	27338.52	0.00000
2167172.6	100.00	27310743.07	46.91398	0.00	0.000	22956.53	0.00000
2168851.3	120.00	53778375.95	55.51967	0.00	0.000	17885.77	0.00000
2173649.8	140.00	114238661.86	62.91482	0.00	0.000	12291.05	0.00000
2192958.8	160.00	265593042.59	65.61028	0.00	0.000	6393.25	0.00000
2266588.3	180.00	447928331.65	.08103	0.00	0.000	1613.34	0.00000

REVOLUTION 6

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2266588.3	-180.00	369415766.37	.08103	0.00	0.000	1929.46	0.00000
2320177.8	-160.00	235075172.63	62.87226	0.00	0.000	6452.05	0.00000
2336554.7	-140.00	107655015.78	61.50879	0.00	0.000	12279.05	0.00000
2341025.9	-120.00	52024933.88	54.62334	0.00	0.000	17832.46	0.00000
2342652.1	-100.00	26732016.78	46.29484	0.00	0.000	22871.91	0.00000
2343421.2	-80.00	13887279.92	37.38944	0.00	0.000	27228.96	0.00000
2343867.2	-60.00	6852094.67	28.20318	0.00	0.000	30765.96	0.00000
2344172.0	-40.00	2923196.60	18.86714	0.00	0.000	33373.13	0.00000
2344411.2	-20.00	907579.66	9.45139	.37	.003	34970.16	.00013
2344433.2	-18.00	787485.95	8.50728	.56	.007	35072.13	.00030
2344454.9	-16.00	680757.98	7.56288	.83	.015	35163.46	.00065
2344476.4	-14.00	587149.85	6.61822	1.25	.033	35244.11	.00146
2344497.8	-12.00	506447.26	5.67335	1.97	.082	35314.06	.00361
2344519.0	-10.00	438466.45	4.72831	3.80	.304	35373.28	.01336
2344540.1	-8.00	383053.38	3.78316	9.85	2.031	35421.76	.08916
2344561.1	-6.00	340082.95	2.83799	26.51	14.671	35459.48	.64324
2344581.9	-4.00	309458.47	1.89301	60.65	76.590	35486.43	3.35558
2344602.7	-2.00	291111.20	.94912	103.55	222.901	35502.61	9.76142
2344620.2	0.00	285000.00	.08103	123.10	314.878	35508.00	13.78722
2344637.7	2.00	291111.20	.94912	103.55	222.901	35502.61	9.76142
2344658.5	4.00	309458.47	1.89301	60.65	76.590	35486.43	3.35558
2344679.3	6.00	340082.95	2.83799	26.51	14.671	35459.48	.64324
2344700.3	8.00	383053.38	3.78316	9.85	2.031	35421.76	.08916
2344721.4	10.00	438466.45	4.72831	3.80	.304	35373.28	.01336
2344742.6	12.00	506447.26	5.67335	1.97	.082	35314.06	.00361
2344764.0	14.00	587149.85	6.61822	1.25	.033	35244.11	.00146
2344785.5	16.00	680757.98	7.56288	.83	.015	35163.46	.00065
2344807.2	18.00	787485.95	8.50728	.56	.007	35072.13	.00030
2344829.2	20.00	907579.66	9.45139	.37	.003	34970.16	.00013
2345068.4	40.00	2923196.60	18.86714	0.00	0.000	33373.13	0.00000
2345373.2	60.00	6852094.67	28.20318	0.00	0.000	30765.96	0.00000
2345819.2	80.00	13887279.92	37.38944	0.00	0.000	27228.96	0.00000
2346588.3	100.00	26732016.78	46.29484	0.00	0.000	22871.91	0.00000
2348214.5	120.00	52024933.88	54.62334	0.00	0.000	17832.46	0.00000
2352685.6	140.00	107655015.78	61.50879	0.00	0.000	12279.05	0.00000
2369062.6	160.00	235075172.63	62.87226	0.00	0.000	6452.05	0.00000
2422652.1	180.00	369415766.37	.08103	0.00	0.000	1929.46	0.00000

REVOLUTION 7

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2422652.1	-180.00	308966145.54	.08103	0.00	0.000	2272.31	0.00000
2462552.0	-160.00	208352249.70	59.96614	0.00	0.000	6532.25	0.00000
2476458.6	-140.00	101148497.64	59.98200	0.00	0.000	12274.66	0.00000
2480611.3	-120.00	50198167.64	53.64555	0.00	0.000	17779.99	0.00000
2482183.2	-100.00	26114445.52	45.61834	0.00	0.000	22783.68	0.00000
2482940.7	-80.00	13653787.93	36.91192	0.00	0.000	27112.54	0.00000
2483384.5	-60.00	6761833.85	27.87419	0.00	0.000	30627.72	0.00000
2483689.3	-40.00	2892004.20	18.65959	0.00	0.000	33219.25	0.00000
2483929.2	-20.00	900834.05	9.35081	.37	.003	34806.83	.00014
2483951.3	-18.00	782071.17	8.41694	.56	.007	34908.21	.00031
2483973.1	-16.00	676514.03	7.48271	.83	.015	34999.00	.00067
2483994.8	-14.00	583923.61	6.54818	1.25	.034	35079.17	.00149
2484016.2	-12.00	504091.50	5.61340	1.97	.084	35148.71	.00370
2484037.5	-10.00	436839.00	4.67841	3.83	.313	35207.58	.01381
2484058.7	-8.00	382016.23	3.74328	9.90	2.086	35255.77	.09199
2484079.8	-6.00	339501.48	2.80810	26.52	14.909	35293.27	.65680
2484100.8	-4.00	309200.65	1.87311	60.21	76.659	35320.07	3.37446
2484121.6	-2.00	291046.83	.93920	102.22	220.604	35336.15	9.70633
2484139.5	0.00	285000.00	.08103	121.29	310.469	35341.51	13.65824
2484157.4	2.00	291046.83	.93920	102.22	220.604	35336.15	9.70633
2484178.2	4.00	309200.65	1.87311	60.21	76.659	35320.07	3.37446
2484199.2	6.00	339501.48	2.80810	26.52	14.909	35293.27	.65680
2484220.3	8.00	382016.23	3.74328	9.90	2.086	35255.77	.09199
2484241.4	10.00	436839.00	4.67841	3.83	.313	35207.58	.01381
2484262.7	12.00	504091.50	5.61340	1.97	.084	35148.71	.00370
2484284.2	14.00	583923.61	6.54818	1.25	.034	35079.17	.00149
2484305.8	16.00	676514.03	7.48271	.83	.015	34999.00	.00067
2484327.7	18.00	782071.17	8.41694	.56	.007	34908.21	.00031
2484349.7	20.00	900834.05	9.35081	.37	.003	34806.83	.00014
2484589.7	40.00	2892004.20	18.65959	0.00	0.000	33219.25	0.00000
2484894.5	60.00	6761833.85	27.87419	0.00	0.000	30627.72	0.00000
2485338.3	80.00	13653787.93	36.91192	0.00	0.000	27112.54	0.00000
2486095.8	100.00	26114445.52	45.61834	0.00	0.000	22783.68	0.00000
2487667.7	120.00	50198167.64	53.64555	0.00	0.000	17779.99	0.00000
2491820.3	140.00	101148497.64	59.98200	0.00	0.000	12274.66	0.00000
2505727.0	160.00	208352249.70	59.96614	0.00	0.000	6532.25	0.00000
2545626.9	180.00	308966145.54	.08103	0.00	0.000	2272.31	0.00000

REVOLUTION 8

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2545626.9	-180.00	261304983.45	.08103	0.00	0.000	2642.60	0.00000
2575897.8	-160.00	184920879.96	56.91546	0.00	0.000	6637.40	0.00000
2587724.1	-140.00	94764664.83	58.33338	0.00	0.000	12280.02	0.00000
2591569.3	-120.00	48307649.89	52.58355	0.00	0.000	17729.63	0.00000
2593085.4	-100.00	25458994.78	44.88203	0.00	0.000	22692.56	0.00000
2593830.7	-80.00	13402717.21	36.39170	0.00	0.000	26989.62	0.00000
2594272.0	-60.00	6664073.86	27.51560	0.00	0.000	30480.36	0.00000
2594576.9	-40.00	2858082.87	18.43331	0.00	0.000	33054.40	0.00000
2594817.6	-20.00	893482.95	9.24113	.38	.003	34631.44	.00014
2594839.8	-18.00	776169.62	8.31842	.56	.007	34732.15	.00031
2594861.7	-16.00	671888.06	7.39530	.83	.015	34822.34	.00069
2594883.5	-14.00	580406.61	6.47181	1.25	.034	34901.99	.00152
2594905.0	-12.00	501523.23	5.54802	1.98	.085	34971.07	.00379
2594926.4	-10.00	435064.61	4.62399	3.85	.323	35029.55	.01432
2594947.7	-8.00	380885.37	3.69978	9.96	2.148	35077.43	.09519
2594968.9	-6.00	338867.44	2.77552	26.54	15.181	35114.68	.67217
2594990.0	-4.00	308919.51	1.85141	59.74	76.747	35141.30	3.39550
2595011.0	-2.00	290976.65	.92838	100.80	218.158	35157.28	9.64756
2595029.1	0.00	285000.00	.08103	119.37	305.778	35162.60	13.52030
2595047.3	2.00	290976.65	.92838	100.80	218.158	35157.28	9.64756
2595068.3	4.00	308919.51	1.85141	59.74	76.747	35141.30	3.39550
2595089.4	6.00	338867.44	2.77552	26.54	15.181	35114.68	.67217
2595110.6	8.00	380885.37	3.69978	9.96	2.148	35077.43	.09519
2595131.9	10.00	435064.61	4.62399	3.85	.323	35029.55	.01432
2595153.3	12.00	501523.23	5.54802	1.98	.085	34971.07	.00379
2595174.8	14.00	580406.61	6.47181	1.25	.034	34901.99	.00152
2595196.6	16.00	671888.06	7.39530	.83	.015	34822.34	.00069
2595218.5	18.00	776169.62	8.31842	.56	.007	34732.15	.00031
2595240.7	20.00	893482.95	9.24113	.38	.003	34631.44	.00014
2595481.4	40.00	2858082.87	18.43331	0.00	0.000	33054.40	0.00000
2595786.3	60.00	6664073.86	27.51560	0.00	0.000	30480.36	0.00000
2596227.6	80.00	13402717.21	36.39170	0.00	0.000	26989.62	0.00000
2596972.9	100.00	25458994.78	44.88203	0.00	0.000	22692.56	0.00000
2598489.0	120.00	48307649.89	52.58355	0.00	0.000	17729.63	0.00000
2602334.2	140.00	94764664.83	58.33338	0.00	0.000	12280.02	0.00000
2614160.5	160.00	184920879.96	56.91546	0.00	0.000	6637.40	0.00000
2644431.4	180.00	261304983.45	.08103	0.00	0.000	2642.60	0.00000

REVOLUTION 9

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
2644431.4	-180.00	222982267.81	.08103	0.00	0.000	3041.15	0.00000
2667763.5	-160.00	164331309.81	53.74820	0.00	0.000	6771.04	0.00000
2677836.8	-140.00	88539227.54	56.56251	0.00	0.000	12297.47	0.00000
2681387.6	-120.00	46362550.16	51.43441	0.00	0.000	17682.78	0.00000
2682846.6	-100.00	24766603.33	44.08321	0.00	0.000	22599.38	0.00000
2683579.0	-80.00	13133778.84	35.82662	0.00	0.000	26860.63	0.00000
2684017.5	-60.00	6558538.54	27.12585	0.00	0.000	30324.00	0.00000
2684322.5	-40.00	2821302.25	18.18728	0.00	0.000	32878.53	0.00000
2684564.1	-20.00	885494.10	9.12187	.38	.003	34443.85	.00015
2684586.4	-18.00	769755.21	8.21129	.56	.007	34543.81	.00033
2684608.5	-16.00	666859.48	7.30023	.84	.016	34633.34	.00071
2684630.3	-14.00	576583.11	6.38875	1.25	.035	34712.40	.00156
2684652.0	-12.00	498730.87	5.47693	1.98	.087	34780.96	.00391
2684673.5	-10.00	433135.25	4.56481	3.89	.334	34839.02	.01490
2684694.9	-8.00	379655.68	3.65249	10.04	2.220	34886.54	.09894
2684716.2	-6.00	338177.96	2.74007	26.56	15.485	34923.52	.68938
2684737.4	-4.00	308613.77	1.82780	59.25	76.856	34949.94	3.41893
2684758.5	-2.00	290900.32	.91662	99.30	215.567	34965.80	9.58517
2684777.0	0.00	285000.00	.08103	117.33	300.809	34971.09	13.37343
2684795.4	2.00	290900.32	.91662	99.30	215.567	34965.80	9.58517
2684816.5	4.00	308613.77	1.82780	59.25	76.856	34949.94	3.41893
2684837.8	6.00	338177.96	2.74007	26.56	15.485	34923.52	.68938
2684859.1	8.00	379655.68	3.65249	10.04	2.220	34886.54	.09894
2684880.5	10.00	433135.25	4.56481	3.89	.334	34839.02	.01490
2684902.0	12.00	498730.87	5.47693	1.98	.087	34780.96	.00391
2684923.7	14.00	576583.11	6.38875	1.25	.035	34712.40	.00156
2684945.5	16.00	666859.48	7.30023	.84	.016	34633.34	.00071
2684967.5	18.00	769755.21	8.21129	.56	.007	34543.81	.00033
2684989.8	20.00	885494.10	9.12187	.38	.003	34443.85	.00015
2685231.5	40.00	2821302.25	18.18728	0.00	0.000	32878.53	0.00000
2685536.4	60.00	6558538.54	27.12585	0.00	0.000	30324.00	0.00000
2685975.0	80.00	13133778.84	35.82662	0.00	0.000	26860.63	0.00000
2686707.4	100.00	24766603.33	44.08321	0.00	0.000	22599.38	0.00000
2688166.4	120.00	46362550.16	51.43441	0.00	0.000	17682.78	0.00000
2691717.1	140.00	88539227.54	56.56251	0.00	0.000	12297.47	0.00000
2701790.5	160.00	164331309.81	53.74820	0.00	0.000	6771.04	0.00000
2725122.5	180.00	222982267.81	.08103	0.00	0.000	3041.15	0.00000

REVOLUTION 10

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2725122.5	-180.00	191654967.64	.08103	0.00	0.000	3468.93	0.00000
2743350.3	-160.00	146190023.02	50.49607	0.00	0.000	6936.72	0.00000
2751944.9	-140.00	82499120.96	54.66985	0.00	0.000	12329.63	0.00000
2755215.2	-120.00	44371562.12	50.19509	0.00	0.000	17641.05	0.00000
2756616.3	-100.00	24038173.26	43.21887	0.00	0.000	22505.07	0.00000
2757335.1	-80.00	12846629.94	35.21427	0.00	0.000	26726.04	0.00000
2757770.8	-60.00	6444911.59	26.70316	0.00	0.000	30158.79	0.00000
2758075.8	-40.00	2781513.00	17.92034	0.00	0.000	32691.58	0.00000
2758318.4	-20.00	876830.47	8.99244	.38	.003	34243.85	.00016
2758340.8	-18.00	762797.99	8.09502	.57	.007	34342.99	.00034
2758362.9	-16.00	661404.63	7.19706	.84	.016	34431.77	.00073
2758384.9	-14.00	572435.02	6.29862	1.25	.036	34510.18	.00161
2758406.7	-12.00	495701.18	5.39977	1.99	.090	34578.18	.00404
2758428.3	-10.00	431041.73	4.50058	3.92	.347	34635.76	.01557
2758449.8	-8.00	378321.26	3.60116	10.14	2.311	34682.89	.10358
2758471.3	-6.00	337429.71	2.70161	26.59	15.825	34719.56	.70865
2758492.6	-4.00	308281.97	1.80219	58.73	76.989	34745.77	3.44499
2758513.8	-2.00	290817.48	.90385	97.72	212.832	34761.49	9.51918
2758532.6	0.00	285000.00	.08103	115.19	295.567	34766.74	13.21759
2758551.3	2.00	290817.48	.90385	97.72	212.832	34761.49	9.51918
2758572.6	4.00	308281.97	1.80219	58.73	76.989	34745.77	3.44499
2758593.9	6.00	337429.71	2.70161	26.59	15.825	34719.56	.70865
2758615.3	8.00	378321.26	3.60116	10.14	2.311	34682.89	.10358
2758636.9	10.00	431041.73	4.50058	3.92	.347	34635.76	.01557
2758658.5	12.00	495701.18	5.39977	1.99	.090	34578.18	.00404
2758680.3	14.00	572435.02	6.29862	1.25	.036	34510.18	.00161
2758702.3	16.00	661404.63	7.19706	.84	.016	34431.77	.00073
2758724.4	18.00	762797.99	8.09502	.57	.007	34342.99	.00034
2758746.8	20.00	876830.47	8.99244	.38	.003	34243.85	.00016
2758989.4	40.00	2781513.00	17.92034	0.00	0.000	32691.58	0.00000
2759294.4	60.00	6444911.59	26.70316	0.00	0.000	30158.79	0.00000
2759730.1	80.00	12846629.94	35.21427	0.00	0.000	26726.04	0.00000
2760448.9	100.00	24038173.26	43.21887	0.00	0.000	22505.07	0.00000
2761849.9	120.00	44371562.12	50.19509	0.00	0.000	17641.05	0.00000
2765120.3	140.00	82499120.96	54.66985	0.00	0.000	12329.63	0.00000
2773714.9	160.00	146190023.02	50.49607	0.00	0.000	6936.72	0.00000
2791942.7	180.00	191654967.64	.08103	0.00	0.000	3468.93	0.00000

REVOLUTION 11

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFK	VELOCITY	P/T
2791942.7	-180.00	165681528.35	.08103	0.00	0.000	3927.04	0.00000
2806348.9	-160.00	130157107.53	47.19318	0.00	0.000	7137.90	0.00000
2813694.1	-140.00	76663648.23	52.65689	0.00	0.000	12379.36	0.00000
2816698.9	-120.00	42342845.96	48.86247	0.00	0.000	17606.23	0.00000
2818041.3	-100.00	23274559.67	42.28570	0.00	0.000	22410.68	0.00000
2818745.9	-80.00	12540867.35	34.55191	0.00	0.000	26586.39	0.00000
2819178.4	-60.00	6322831.52	26.24549	0.00	0.000	29984.91	0.00000
2819483.5	-40.00	2738544.16	17.63117	0.00	0.000	32493.48	0.00000
2819727.1	-20.00	867449.57	8.85219	.39	.004	34031.23	.00016
2819749.6	-18.00	755263.56	7.96904	.57	.008	34129.45	.00035
2819771.9	-16.00	655496.40	7.08526	.84	.017	34217.41	.00076
2819794.0	-14.00	567941.60	6.20094	1.25	.037	34295.10	.00166
2819815.9	-12.00	492418.90	5.31615	2.00	.093	34362.47	.00420
2819837.7	-10.00	428773.47	4.43099	3.97	.363	34419.51	.01637
2819859.3	-8.00	376875.35	3.54553	10.26	2.414	34466.21	.10888
2819880.9	-6.00	336618.91	2.65993	26.63	16.205	34502.54	.73025
2819902.4	-4.00	307922.41	1.77443	58.19	77.152	34528.51	3.47400
2819923.8	-2.00	290727.71	.89002	96.06	209.956	34544.09	9.44963
2819942.8	0.00	285000.00	.08103	112.93	290.055	34549.28	13.05276
2819961.8	2.00	290727.71	.89002	96.06	209.956	34544.09	9.44963
2819983.2	4.00	307922.41	1.77443	58.19	77.152	34528.51	3.47400
2820004.6	6.00	336618.91	2.65993	26.63	16.205	34502.54	.73025
2820026.2	8.00	376875.35	3.54553	10.26	2.414	34466.21	.10888
2820047.9	10.00	428773.47	4.43099	3.97	.363	34419.51	.01637
2820069.6	12.00	492418.90	5.31615	2.00	.093	34362.47	.00420
2820091.6	14.00	567941.60	6.20094	1.25	.037	34295.10	.00166
2820113.7	16.00	655496.40	7.08526	.84	.017	34217.41	.00076
2820135.9	18.00	755263.56	7.96904	.57	.008	34129.45	.00035
2820158.4	20.00	867449.57	8.85219	.39	.004	34031.23	.00016
2820402.1	40.00	2738544.16	17.63117	0.00	0.000	32493.48	0.00000
2820707.1	60.00	6322831.52	26.24549	0.00	0.000	29984.91	0.00000
2821139.6	80.00	12540867.35	34.55191	0.00	0.000	26586.39	0.00000
2821844.3	100.00	23274559.67	42.28570	0.00	0.000	22410.68	0.00000
2823186.7	120.00	42342845.96	48.86247	0.00	0.000	17606.23	0.00000
2826191.5	140.00	76663648.23	52.65689	0.00	0.000	12379.36	0.00000
2833536.7	160.00	130157107.53	47.19318	0.00	0.000	7137.90	0.00000
2847942.9	180.00	165681528.35	.08103	0.00	0.000	3927.04	0.00000

REVOLUTION 12

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2847942.9	-180.00	143881232.33	.08103	0.00	0.000	4416.79	0.00000
2859443.4	-160.00	115941192.50	43.87452	0.00	0.000	7377.90	0.00000
2865730.8	-140.00	71045607.93	50.52640	0.00	0.000	12449.77	0.00000
2868485.3	-120.00	40283981.95	47.43340	0.00	0.000	17580.36	0.00000
2869768.8	-100.00	22476558.58	41.28005	0.00	0.000	22317.41	0.00000
2870458.6	-80.00	12216019.81	33.83647	0.00	0.000	26442.27	0.00000
2870887.8	-60.00	6191885.45	25.75056	0.00	0.000	29802.54	0.00000
2871192.8	-40.00	2692199.93	17.31823	0.00	0.000	32284.10	0.00000
2871437.5	-20.00	857302.59	8.70037	.39	.004	33805.72	.00017
2871460.2	-18.00	747112.45	7.83265	.58	.008	33902.92	.00037
2871482.6	-16.00	649103.60	6.96424	.85	.017	33989.97	.00079
2871504.8	-14.00	563079.00	6.09520	1.26	.038	34066.84	.00172
2871526.9	-12.00	488866.53	5.22564	2.02	.096	34133.52	.00438
2871548.8	-10.00	426318.32	4.35564	4.03	.382	34189.97	.01736
2871570.6	-8.00	375310.19	3.48532	10.39	2.531	34236.18	.11494
2871592.3	-6.00	335741.18	2.61481	26.69	16.632	34272.14	.75451
2871613.9	-4.00	307533.15	1.74438	57.62	77.349	34297.84	3.50629
2871635.5	-2.00	290630.52	.87505	94.32	206.940	34313.25	9.37655
2871654.7	0.00	285000.00	.08103	110.57	284.279	34318.39	12.87889
2871674.0	2.00	290630.52	.87505	94.32	206.940	34313.25	9.37655
2871695.6	4.00	307533.15	1.74438	57.62	77.349	34297.84	3.50629
2871717.2	6.00	335741.18	2.61481	26.69	16.632	34272.14	.75451
2871738.9	8.00	375310.19	3.48532	10.39	2.531	34236.18	.11494
2871760.7	10.00	426318.32	4.35564	4.03	.382	34189.97	.01736
2871782.6	12.00	488866.53	5.22564	2.02	.096	34133.52	.00438
2871804.7	14.00	563079.00	6.09520	1.26	.038	34066.84	.00172
2871826.9	16.00	649103.60	6.96424	.85	.017	33989.97	.00079
2871849.3	18.00	747112.45	7.83265	.58	.008	33902.92	.00037
2871872.0	20.00	857302.59	8.70037	.39	.004	33805.72	.00017
2872116.7	40.00	2692199.93	17.31823	0.00	0.000	32284.10	0.00000
2872421.7	60.00	6191885.45	25.75056	0.00	0.000	29802.54	0.00000
2872850.9	80.00	12216019.81	33.83647	0.00	0.000	26442.27	0.00000
2873540.7	100.00	22476558.58	41.28005	0.00	0.000	22317.41	0.00000
2874824.2	120.00	40283981.95	47.43340	0.00	0.000	17580.36	0.00000
2877578.7	140.00	71045607.93	50.52640	0.00	0.000	12449.77	0.00000
2883866.1	160.00	115941192.50	43.87452	0.00	0.000	7377.90	0.00000
2895366.6	180.00	143881232.33	.08103	0.00	0.000	4416.79	0.00000

REVOLUTION 13

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2895366.6	-180.00	125385472.60	.08103	0.00	0.000	4939.66	0.00000
2904627.9	-160.00	103293553.97	40.57424	0.00	0.000	7659.86	0.00000
2910017.8	-140.00	65652352.37	48.28260	0.00	0.000	12544.29	0.00000
2912537.3	-120.00	38201932.44	45.90478	0.00	0.000	17565.72	0.00000
2913761.7	-100.00	21644892.26	40.19794	0.00	0.000	22226.62	0.00000
2914436.1	-80.00	11871537.88	33.06447	0.00	0.000	26294.38	0.00000
2914861.7	-60.00	6051601.28	25.21571	0.00	0.000	29611.87	0.00000
2915166.7	-40.00	2642255.66	16.97980	0.00	0.000	32063.34	0.00000
2915412.6	-20.00	846333.36	8.53610	.40	.004	33567.00	.00018
2915435.4	-18.00	738299.16	7.68509	.58	.008	33663.06	.00039
2915457.9	-16.00	642190.32	6.83329	.85	.018	33749.10	.00082
2915480.3	-14.00	557819.73	5.98079	1.26	.039	33825.08	.00178
2915502.5	-12.00	485023.90	5.12769	2.04	.101	33890.97	.00462
2915524.6	-10.00	423662.28	4.27411	4.09	.404	33946.77	.01849
2915546.6	-8.00	373616.81	3.42016	10.54	2.665	33992.44	.12190
2915568.4	-6.00	334791.48	2.56598	26.75	17.111	34027.98	.78182
2915590.2	-4.00	307111.96	1.71186	57.03	77.586	34053.38	3.54227
2915611.9	-2.00	290525.35	.85885	92.50	203.786	34068.62	9.29996
2915631.4	0.00	285000.00	.08103	108.11	278.241	34073.70	12.69589
2915651.0	2.00	290525.35	.85885	92.50	203.786	34068.62	9.29996
2915672.7	4.00	307111.96	1.71186	57.03	77.586	34053.38	3.54227
2915694.4	6.00	334791.48	2.56598	26.75	17.111	34027.98	.78182
2915716.3	8.00	373616.81	3.42016	10.54	2.665	33992.44	.12190
2915738.3	10.00	423662.28	4.27411	4.09	.404	33946.77	.01849
2915760.3	12.00	485023.90	5.12769	2.04	.101	33890.97	.00462
2915782.5	14.00	557819.73	5.98079	1.26	.039	33825.08	.00178
2915804.9	16.00	642190.32	6.83329	.85	.018	33749.10	.00082
2915827.5	18.00	738299.16	7.68509	.58	.008	33663.06	.00039
2915850.3	20.00	846333.36	8.53610	.40	.004	33567.00	.00018
2916096.1	40.00	2642255.66	16.97980	0.00	0.000	32063.34	0.00000
2916401.2	60.00	6051601.28	25.21571	0.00	0.000	29611.87	0.00000
2916826.8	80.00	11871537.88	33.06447	0.00	0.000	26294.38	0.00000
2917501.2	100.00	21644892.26	40.19794	0.00	0.000	22226.62	0.00000
2918725.5	120.00	38201932.44	45.90478	0.00	0.000	17565.72	0.00000
2921245.0	140.00	65652352.37	48.28260	0.00	0.000	12544.29	0.00000
2926635.0	160.00	103293553.97	40.57424	0.00	0.000	7659.86	0.00000
2935896.2	180.00	125385472.60	.08103	0.00	0.000	4939.66	0.00000

REVOLUTION 14

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P I
2935896.2	-180.00	109542610.51	.08103	0.00	0.000	5497.38	0.00000
2943410.8	-160.00	92002243.21	37.32401	0.00	0.000	7986.79	0.00000
2948037.5	-140.00	60486745.60	45.93131	0.00	0.000	12666.60	0.00000
2950337.2	-120.00	36103010.04	44.27360	0.00	0.000	17564.88	0.00000
2951502.6	-100.00	20780190.99	39.03501	0.00	0.000	22139.90	0.00000
2952160.9	-80.00	11506781.01	32.23201	0.00	0.000	26143.51	0.00000
2952582.7	-60.00	5901437.95	24.63795	0.00	0.000	29413.14	0.00000
2952887.7	-40.00	2588452.77	16.61384	0.00	0.000	31831.04	0.00000
2953134.8	-20.00	834476.96	8.35839	.40	.004	33314.70	.00020
2953157.8	-18.00	728771.15	7.52544	.59	.009	33409.50	.00041
2953180.5	-16.00	634715.05	6.69161	.86	.019	33494.40	.00086
2953203.0	-14.00	552132.04	5.85700	1.27	.040	33569.38	.00187
2953225.4	-12.00	480867.68	5.02172	2.06	.106	33634.41	.00490
2953247.6	-10.00	420789.15	4.18590	4.17	.429	33689.47	.01981
2953269.7	-8.00	371784.86	3.34965	10.70	2.819	33734.55	.12994
2953291.8	-6.00	333763.99	2.51315	26.83	17.651	33769.62	.81267
2953313.7	-4.00	306656.24	1.67668	56.42	77.869	33794.69	3.58244
2953335.6	-2.00	290411.57	.84132	90.60	200.496	33809.73	9.21990
2953355.4	0.00	285000.00	.08103	105.54	271.945	33814.74	12.50364
2953375.2	2.00	290411.57	.84132	90.60	200.496	33809.73	9.21990
2953397.1	4.00	306656.24	1.67668	56.42	77.869	33794.69	3.58244
2953419.0	6.00	333763.99	2.51315	26.83	17.651	33769.62	.81267
2953441.0	8.00	371784.86	3.34965	10.70	2.819	33734.55	.12994
2953463.1	10.00	420789.15	4.18590	4.17	.429	33689.47	.01981
2953485.4	12.00	480867.68	5.02172	2.06	.106	33634.41	.00490
2953507.7	14.00	552132.04	5.85700	1.27	.040	33569.38	.00187
2953530.3	16.00	634715.05	6.69161	.86	.019	33494.40	.00086
2953553.0	18.00	728771.15	7.52544	.59	.009	33409.50	.00041
2953575.9	20.00	834476.96	8.35839	.40	.004	33314.70	.00020
2953823.0	40.00	2588452.77	16.61384	0.00	0.000	31831.04	0.00000
2954128.1	60.00	5901437.95	24.63795	0.00	0.000	29413.14	0.00000
2954549.8	80.00	11506781.01	32.23201	0.00	0.000	26143.51	0.00000
2955208.2	100.00	20780190.99	39.03501	0.00	0.000	22139.90	0.00000
2956373.5	120.00	36103010.04	44.27360	0.00	0.000	17564.88	0.00000
2958673.2	140.00	60486745.60	45.93131	0.00	0.000	12666.60	0.00000
2963300.0	160.00	92002243.21	37.32401	0.00	0.000	7986.79	0.00000
2970814.5	180.00	109542610.51	.08103	0.00	0.000	5497.38	0.00000

REVOLUTION 15

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
2970814.5	-180.00	95855279.17	.08103	0.00	0.000	6091.98	0.00000
2976951.9	-160.00	81886652.31	34.15164	0.00	0.000	8361.58	0.00000
2980928.1	-140.00	55548005.39	43.48000	0.00	0.000	12820.72	0.00000
2983022.7	-120.00	33992849.63	42.53706	0.00	0.000	17580.78	0.00000
2984129.4	-100.00	19882970.13	37.78649	0.00	0.000	22059.02	0.00000
2984771.1	-80.00	11121000.70	31.33467	0.00	0.000	25990.57	0.00000
2985188.8	-60.00	5740772.88	24.01380	0.00	0.000	29206.62	0.00000
2985493.8	-40.00	2530492.32	16.21804	0.00	0.000	31587.02	0.00000
2985742.2	-20.00	821658.05	8.16608	.41	.004	33048.36	.00021
2985765.3	-18.00	718467.41	7.35267	.60	.009	33141.75	.00043
2985788.2	-16.00	626629.62	6.53828	.87	.019	33225.39	.00091
2985810.9	-14.00	545979.04	5.72302	1.28	.042	33299.26	.00197
2985833.4	-12.00	476370.77	4.90703	2.10	.112	33363.33	.00524
2985855.8	-10.00	417680.13	4.09043	4.27	.463	33417.58	.02153
2985878.1	-8.00	369802.30	3.27335	10.89	3.000	33461.99	.13939
2985900.3	-6.00	332651.94	2.45597	26.93	18.262	33496.54	.84765
2985922.5	-4.00	306162.99	1.63861	55.79	78.208	33521.23	3.62736
2985944.5	-2.00	290288.40	.82236	88.63	197.072	33536.05	9.13637
2985964.6	0.00	285000.00	.08103	102.87	265.394	33540.99	12.30202
2985984.7	2.00	290288.40	.82236	88.63	197.072	33536.05	9.13637
2986006.7	4.00	306162.99	1.63861	55.79	78.208	33521.23	3.62736
2986028.8	6.00	332651.94	2.45597	26.93	18.262	33496.54	.84765
2986051.0	8.00	369802.30	3.27335	10.89	3.000	33461.99	.13939
2986073.3	10.00	417680.13	4.09043	4.27	.463	33417.58	.02153
2986095.7	12.00	476370.77	4.90703	2.10	.112	33363.33	.00524
2986118.3	14.00	545979.04	5.72302	1.28	.042	33299.26	.00197
2986141.0	16.00	626629.62	6.53828	.87	.019	33225.39	.00091
2986163.9	18.00	718467.41	7.35267	.60	.009	33141.75	.00043
2986187.0	20.00	821658.05	8.16608	.41	.004	33048.36	.00021
2986435.4	40.00	2530492.32	16.21804	0.00	0.000	31587.02	0.00000
2986740.3	60.00	5740772.88	24.01380	0.00	0.000	29206.62	0.00000
2987158.0	80.00	11121000.70	31.33467	0.00	0.000	25990.57	0.00000
2987799.7	100.00	19882970.13	37.78649	0.00	0.000	22059.02	0.00000
2988906.4	120.00	33992849.63	42.53706	0.00	0.000	17580.78	0.00000
2991001.1	140.00	55548005.39	43.48000	0.00	0.000	12820.72	0.00000
2994977.3	160.00	81886652.31	34.15164	0.00	0.000	8361.58	0.00000
3001114.6	180.00	95855279.17	.08103	0.00	0.000	6091.98	0.00000

REVOLUTION 16

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
3001114.6	-180.00	83937984.28	.08103	0.00	0.000	6725.82	0.00000
3006155.6	-160.00	72792683.52	31.08019	0.00	0.000	8787.10	0.00000
3009575.9	-140.00	50832423.55	40.93782	0.00	0.000	13010.97	0.00000
3011479.8	-120.00	31876381.19	40.69264	0.00	0.000	17616.71	0.00000
3012528.3	-100.00	18953600.83	36.44720	0.00	0.000	21986.08	0.00000
3013152.8	-80.00	10713318.53	30.36742	0.00	0.000	25836.65	0.00000
3013566.1	-60.00	5568885.86	23.33929	0.00	0.000	28992.62	0.00000
3013871.0	-40.00	2468026.76	15.78968	0.00	0.000	31331.05	0.00000
3014120.8	-20.00	807788.68	7.95779	.42	.005	32767.47	.00023
3014144.0	-18.00	707316.68	7.16554	.61	.010	32859.28	.00047
3014167.1	-16.00	617877.70	6.37220	.87	.020	32941.52	.00096
3014190.0	-14.00	539317.63	5.57791	1.29	.044	33014.14	.00208
3014212.7	-12.00	471501.52	4.78280	2.14	.120	33077.13	.00564
3014235.3	-10.00	414313.23	3.98701	4.39	.504	33130.47	.02363
3014257.8	-8.00	367655.05	3.19069	11.16	3.237	33174.14	.15171
3014280.2	-6.00	331447.42	2.39403	27.04	18.956	33208.11	.88750
3014302.5	-4.00	305628.70	1.59736	55.14	78.611	33232.39	3.67774
3014324.8	-2.00	290154.99	.80182	86.58	193.513	33246.96	9.04940
3014345.1	0.00	285000.00	.08103	100.10	258.589	33251.82	12.09081
3014365.5	2.00	290154.99	.80182	86.58	193.513	33246.96	9.04940
3014387.7	4.00	305628.70	1.59736	55.14	78.611	33232.39	3.67774
3014410.0	6.00	331447.42	2.39403	27.04	18.956	33208.11	.88750
3014432.4	8.00	367655.05	3.19069	11.16	3.237	33174.14	.15171
3014454.9	10.00	414313.23	3.98701	4.39	.504	33130.47	.02363
3014477.5	12.00	471501.52	4.78280	2.14	.120	33077.13	.00564
3014500.2	14.00	539317.63	5.57791	1.29	.044	33014.14	.00208
3014523.1	16.00	617877.70	6.37220	.87	.020	32941.52	.00096
3014546.2	18.00	707316.68	7.16554	.61	.010	32859.28	.00047
3014569.4	20.00	807788.68	7.95779	.42	.005	32767.47	.00023
3014819.2	40.00	2468026.76	15.78968	0.00	0.000	31331.05	0.00000
3015124.1	60.00	5568885.86	23.33929	0.00	0.000	28992.62	0.00000
3015537.4	80.00	10713318.53	30.36742	0.00	0.000	25836.65	0.00000
3016161.9	100.00	18953600.83	36.44720	0.00	0.000	21986.08	0.00000
3017210.4	120.00	31876381.19	40.69264	0.00	0.000	17616.71	0.00000
3019114.3	140.00	50832423.55	40.93782	0.00	0.000	13010.97	0.00000
3022534.6	160.00	72792683.52	31.08019	0.00	0.000	8787.10	0.00000
3027575.6	180.00	83937984.28	.08103	0.00	0.000	6725.82	0.00000

REVOLUTION 17

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3027575.6	-180.00	73487766.35	.08103	0.00	0.000	7401.67	0.00000
3031735.9	-160.00	64588554.04	28.12742	0.00	0.000	9266.27	0.00000
3034680.2	-140.00	46333965.38	38.31547	0.00	0.000	13242.06	0.00000
3036406.9	-120.00	29757799.76	38.73815	0.00	0.000	17676.43	0.00000
3037397.8	-100.00	17992272.10	35.01146	0.00	0.000	21923.48	0.00000
3038004.5	-80.00	10282697.05	29.32455	0.00	0.000	25682.99	0.00000
3038413.2	-60.00	5384938.00	22.60979	0.00	0.000	28771.49	0.00000
3038718.0	-40.00	2400649.12	15.32561	0.00	0.000	31062.89	0.00000
3038969.2	-20.00	792765.39	7.73194	.43	.005	32471.39	.00025
3038992.7	-18.00	695235.14	6.96262	.62	.010	32561.44	.00050
3039015.9	-16.00	608393.06	6.19210	.89	.022	32642.10	.00103
3039039.0	-14.00	532097.06	5.42053	1.31	.047	32713.34	.00222
3039061.9	-12.00	466222.64	4.64806	2.19	.129	32775.12	.00614
3039084.7	-10.00	410662.56	3.87484	4.53	.552	32827.44	.02616
3039107.4	-8.00	365326.55	3.10104	11.45	3.517	32870.27	.16636
3039130.0	-6.00	330141.10	2.32685	27.19	19.748	32903.60	.93315
3039152.5	-4.00	305049.20	1.55263	54.47	79.089	32927.42	3.73441
3039175.0	-2.00	290010.28	.77954	84.45	189.821	32941.71	8.95898
3039195.6	0.00	285000.00	.08103	97.24	251.530	32946.47	11.86977
3039216.3	2.00	290010.28	.77954	84.45	189.821	32941.71	8.95898
3039238.7	4.00	305049.20	1.55263	54.47	79.089	32927.42	3.73441
3039261.2	6.00	330141.10	2.32685	27.19	19.748	32903.60	.93315
3039283.8	8.00	365326.55	3.10104	11.45	3.517	32870.27	.16636
3039306.5	10.00	410662.56	3.87484	4.53	.552	32827.44	.02616
3039329.3	12.00	466222.64	4.64806	2.19	.129	32775.12	.00614
3039352.2	14.00	532097.06	5.42053	1.31	.047	32713.34	.00222
3039375.3	16.00	608393.06	6.19210	.89	.022	32642.10	.00103
3039398.6	18.00	695235.14	6.96262	.62	.010	32561.44	.00050
3039422.0	20.00	792765.39	7.73194	.43	.005	32471.39	.00025
3039673.3	40.00	2400649.12	15.32561	0.00	0.000	31062.89	0.00000
3039978.0	60.00	5384938.00	22.60979	0.00	0.000	28771.49	0.00000
3040386.7	80.00	10282697.05	29.32455	0.00	0.000	25682.99	0.00000
3040993.4	100.00	17992272.10	35.01146	0.00	0.000	21923.48	0.00000
3041984.3	120.00	29757799.76	38.73815	0.00	0.000	17676.43	0.00000
3043711.1	140.00	46333965.38	38.31547	0.00	0.000	13242.06	0.00000
3046655.3	160.00	64588554.04	28.12742	0.00	0.000	9266.27	0.00000
3050815.7	180.00	73487766.35	.08103	0.00	0.000	7401.67	0.00000

REVOLUTION 18

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3050815.7	-180.00	64263477.25	.08103	0.00	0.000	8122.85	0.00000
3054263.1	-160.00	57161199.68	25.30577	0.00	0.000	9802.27	0.00000
3056798.5	-140.00	42044751.83	35.62497	0.00	0.000	13519.07	0.00000
3058361.1	-120.00	27640527.34	36.67186	0.00	0.000	17764.23	0.00000
3059295.2	-100.00	16998940.84	33.47304	0.00	0.000	21874.05	0.00000
3059883.5	-80.00	9827900.77	28.19950	0.00	0.000	25531.07	0.00000
3060287.3	-60.00	5187943.85	21.81988	0.00	0.000	28543.68	0.00000
3060591.9	-40.00	2327878.78	14.82207	0.00	0.000	30782.21	0.00000
3060844.7	-20.00	776465.40	7.48662	.44	.006	32159.37	.00027
3060868.3	-18.00	682123.26	6.74219	.63	.011	32247.44	.00054
3060891.8	-16.00	598097.01	5.99645	.90	.023	32326.33	.00111
3060915.1	-14.00	524257.08	5.24956	1.33	.050	32396.01	.00239
3060938.2	-12.00	460489.84	4.50168	2.25	.141	32456.44	.00676
3060961.2	-10.00	406697.34	3.75298	4.73	.621	32507.62	.02969
3060984.1	-8.00	362797.11	3.00364	11.79	3.851	32549.52	.18395
3061006.9	-6.00	328721.90	2.25386	27.38	20.685	32582.12	.98704
3061029.7	-4.00	304419.60	1.50403	53.79	79.658	32605.41	3.79841
3061052.4	-2.00	289853.05	.75535	82.24	185.940	32619.39	8.86252
3061073.3	0.00	285000.00	.08103	94.27	244.218	32624.05	11.63859
3061094.2	2.00	289853.05	.75535	82.24	185.940	32619.39	8.86252
3061116.9	4.00	304419.60	1.50403	53.79	79.658	32605.41	3.79841
3061139.6	6.00	328721.90	2.25386	27.38	20.685	32582.12	.98704
3061162.5	8.00	362797.11	3.00364	11.79	3.851	32549.52	.18395
3061185.4	10.00	406697.34	3.75298	4.73	.621	32507.62	.02969
3061208.4	12.00	460489.84	4.50168	2.25	.141	32456.44	.00676
3061231.5	14.00	524257.08	5.24956	1.33	.050	32396.01	.00239
3061254.8	16.00	598097.01	5.99645	.90	.023	32326.33	.00111
3061278.3	18.00	682123.26	6.74219	.63	.011	32247.44	.00054
3061301.9	20.00	776465.40	7.48662	.44	.006	32159.37	.00027
3061554.7	40.00	2327878.78	14.82207	0.00	0.000	30782.21	0.00000
3061859.3	60.00	5187943.85	21.81988	0.00	0.000	28543.68	0.00000
3062263.0	80.00	9827900.77	28.19950	0.00	0.000	25531.07	0.00000
3062851.4	100.00	16998940.84	33.47304	0.00	0.000	21874.05	0.00000
3063785.5	120.00	27640527.34	36.67186	0.00	0.000	17764.23	0.00000
3065348.1	140.00	42044751.83	35.62497	0.00	0.000	13519.07	0.00000
3067883.5	160.00	57161199.68	25.30577	0.00	0.000	9802.27	0.00000
3071330.9	180.00	64263477.25	.08103	0.00	0.000	8122.85	0.00000

REVOLUTION 19

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
3071330.9	-180.00	56070859.49	.08103	0.00	0.000	8893.32	0.00000
3074196.9	-160.00	50413208.55	22.62269	0.00	0.000	10398.70	0.00000
3076380.4	-140.00	37955428.03	32.87933	0.00	0.000	13847.60	0.00000
3077791.1	-120.00	25527159.91	34.49249	0.00	0.000	17885.02	0.00000
3078669.2	-100.00	15973264.13	31.82511	0.00	0.000	21841.10	0.00000
3079238.7	-80.00	9347442.84	26.98469	0.00	0.000	25382.66	0.00000
3079637.1	-60.00	4976733.63	20.96317	0.00	0.000	28309.70	0.00000
3079941.4	-40.00	2249142.16	14.27460	.01	.000	30488.64	.00000
3080195.9	-20.00	758741.53	7.21956	.45	.006	31830.49	.00030
3080219.8	-18.00	667861.70	6.50221	.64	.012	31916.34	.00060
3080243.5	-16.00	586895.17	5.78343	.92	.025	31993.24	.00120
3080267.0	-14.00	515725.37	5.06340	1.36	.054	32061.15	.00262
3080290.3	-12.00	454249.96	4.34229	2.33	.157	32120.07	.00759
3080313.6	-10.00	402380.66	3.62029	4.96	.708	32169.96	.03421
3080336.7	-8.00	360043.07	2.89757	12.18	4.254	32210.80	.20531
3080359.8	-6.00	327176.53	2.17438	27.61	21.773	32242.58	1.04989
3080382.7	-4.00	303733.96	1.45110	53.09	80.334	32265.29	3.87103
3080405.7	-2.00	289681.81	.72902	79.95	181.917	32278.92	8.76223
3080426.9	0.00	285000.00	.08103	91.21	236.649	32283.47	11.39685
3080448.1	2.00	289681.81	.72902	79.95	181.917	32278.92	8.76223
3080471.1	4.00	303733.96	1.45110	53.09	80.334	32265.29	3.87103
3080494.1	6.00	327176.53	2.17438	27.61	21.773	32242.58	1.04989
3080517.1	8.00	360043.07	2.89757	12.18	4.254	32210.80	.20531
3080540.2	10.00	402380.66	3.62029	4.96	.708	32169.96	.03421
3080563.5	12.00	454249.96	4.34229	2.33	.157	32120.07	.00759
3080586.8	14.00	515725.37	5.06340	1.36	.054	32061.15	.00262
3080610.4	16.00	586895.17	5.78343	.92	.025	31993.24	.00120
3080634.0	18.00	667861.70	6.50221	.64	.012	31916.34	.00060
3080657.9	20.00	758741.53	7.21956	.45	.006	31830.49	.00030
3080912.4	40.00	2249142.16	14.27460	.01	.000	30488.64	.00000
3081216.7	60.00	4976733.63	20.96317	0.00	0.000	28309.70	0.00000
3081615.1	80.00	9347442.84	26.98469	0.00	0.000	25382.66	0.00000
3082184.6	100.00	15973264.13	31.82511	0.00	0.000	21841.10	0.00000
3083062.7	120.00	25527159.91	34.49249	0.00	0.000	17885.02	0.00000
3084473.4	140.00	37955428.03	32.87933	0.00	0.000	13847.60	0.00000
3086657.0	160.00	50413208.55	22.62269	0.00	0.000	10398.70	0.00000
3089522.9	180.00	56070859.49	.08103	0.00	0.000	8893.32	0.00000

REVOLUTION 20

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3089522.9	-180.00	48751603.52	.08103	0.00	0.000	9717.90	0.00000
3091911.4	-160.00	44260202.56	20.08110	0.00	0.000	11059.82	0.00000
3093791.3	-140.00	34055419.14	30.09204	0.00	0.000	14233.86	0.00000
3095061.6	-120.00	23419388.54	32.19923	0.00	0.000	18044.49	0.00000
3095884.7	-100.00	14914505.80	30.06005	0.00	0.000	21828.57	0.00000
3096434.6	-80.00	8839510.71	25.67127	0.00	0.000	25239.90	0.00000
3096827.4	-60.00	4749901.06	20.03205	0.00	0.000	28070.19	0.00000
3097131.4	-40.00	2163746.09	13.67780	.02	.000	30181.72	.00000
3097387.7	-20.00	739415.00	6.92800	.47	.007	31483.63	.00034
3097411.8	-18.00	652305.46	6.24018	.66	.013	31566.96	.00066
3097435.7	-16.00	574672.86	5.55083	.94	.027	31641.61	.00132
3097459.4	-14.00	506414.04	4.86011	1.40	.059	31707.54	.00291
3097483.0	-12.00	447438.37	4.16823	2.43	.177	31764.73	.00866
3097506.5	-10.00	397667.59	3.47536	5.25	.823	31813.16	.04020
3097529.9	-8.00	357035.68	2.78173	12.60	4.725	31852.82	.23062
3097553.2	-6.00	325488.79	2.08757	27.88	23.043	31883.67	1.12366
3097576.5	-4.00	302985.09	1.39331	52.38	81.139	31905.72	3.95388
3097599.7	-2.00	289494.78	.70026	77.58	177.753	31918.95	8.65825
3097621.2	0.00	285000.00	.08103	88.04	228.818	31923.37	11.14402
3097642.8	2.00	289494.78	.70026	77.58	177.753	31918.95	8.65825
3097666.0	4.00	302985.09	1.39331	52.38	81.139	31905.72	3.95388
3097689.2	6.00	325488.79	2.08757	27.88	23.043	31883.67	1.12366
3097712.5	8.00	357035.68	2.78173	12.60	4.725	31852.82	.23062
3097735.9	10.00	397667.59	3.47536	5.25	.823	31813.16	.04020
3097759.4	12.00	447438.37	4.16823	2.43	.177	31764.73	.00866
3097783.0	14.00	506414.04	4.86011	1.40	.059	31707.54	.00291
3097806.8	16.00	574672.86	5.55083	.94	.027	31641.61	.00132
3097830.7	18.00	652305.46	6.24018	.66	.013	31566.96	.00066
3097854.8	20.00	739415.00	6.92800	.47	.007	31483.63	.00034
3098111.0	40.00	2163746.09	13.67780	.02	.000	30181.72	.00000
3098415.0	60.00	4749901.06	20.03205	0.00	0.000	28070.19	0.00000
3098807.8	80.00	8839510.71	25.67127	0.00	0.000	25239.90	0.00000
3099357.8	100.00	14914505.80	30.06005	0.00	0.000	21828.57	0.00000
3100180.8	120.00	23419388.54	32.19923	0.00	0.000	18044.49	0.00000
3101451.1	140.00	34055419.14	30.09204	0.00	0.000	14233.86	0.00000
3103331.0	160.00	44260202.56	20.08110	0.00	0.000	11059.82	0.00000
3105719.5	180.00	48751603.52	.08103	0.00	0.000	9717.90	0.00000

REVOLUTION 21

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3105719.5	-180.00	42175166.12	.08103	0.00	0.000	10602.54	0.00000
3107713.5	-160.00	38628579.17	17.68010	0.00	0.000	11790.85	0.00000
3109330.7	-140.00	30333067.56	27.27653	0.00	0.000	14684.87	0.00000
3110471.3	-120.00	21317878.36	29.79167	0.00	0.000	18249.28	0.00000
3111240.4	-100.00	13821402.96	28.16929	0.00	0.000	21841.18	0.00000
3111770.2	-80.00	8301859.67	24.24878	0.00	0.000	25105.37	0.00000
3112156.9	-60.00	4505729.34	19.01728	0.00	0.000	27825.90	0.00000
3112460.6	-40.00	2070840.18	13.02507	.02	.000	29860.87	.00000
3112718.7	-20.00	718265.40	6.60851	.49	.008	31117.40	.00038
3112743.0	-18.00	635275.70	5.95304	.68	.015	31197.87	.00074
3112767.2	-16.00	561288.54	5.29590	.97	.030	31269.95	.00147
3112791.2	-14.00	496214.60	4.63729	1.45	.066	31333.63	.00329
3112815.1	-12.00	439975.29	3.97742	2.56	.204	31388.86	.01011
3112838.9	-10.00	392502.69	3.31650	5.61	.978	31435.64	.04835
3112862.5	-8.00	353739.43	2.65474	13.10	5.305	31473.94	.26208
3112886.1	-6.00	323638.70	1.99241	28.21	24.542	31503.74	1.21118
3112909.6	-4.00	302164.11	1.32995	51.65	82.100	31525.04	4.04903
3112933.1	-2.00	289289.73	.66876	75.13	173.445	31537.82	8.55049
3112955.0	0.00	285000.00	.08103	84.77	220.716	31542.08	10.87941
3112976.9	2.00	289289.73	.66876	75.13	173.445	31537.82	8.55049
3113000.3	4.00	302164.11	1.32995	51.65	82.100	31525.04	4.04903
3113023.9	6.00	323638.70	1.99241	28.21	24.542	31503.74	1.21118
3113047.5	8.00	353739.43	2.65474	13.10	5.305	31473.94	.26208
3113071.1	10.00	392502.69	3.31650	5.61	.978	31435.64	.04835
3113094.9	12.00	439975.29	3.97742	2.56	.204	31388.86	.01011
3113118.8	14.00	496214.60	4.63729	1.45	.066	31333.63	.00329
3113142.8	16.00	561288.54	5.29590	.97	.030	31269.95	.00147
3113166.9	18.00	635275.70	5.95304	.68	.015	31197.87	.00074
3113191.3	20.00	718265.40	6.60851	.49	.008	31117.40	.00038
3113449.4	40.00	2070840.18	13.02507	.02	.000	29860.87	.00000
3113753.0	60.00	4505729.34	19.01728	0.00	0.000	27825.90	0.00000
3114139.7	80.00	8301859.67	24.24878	0.00	0.000	25105.37	0.00000
3114669.6	100.00	13821402.96	28.16929	0.00	0.000	21841.18	0.00000
3115438.7	120.00	21317878.36	29.79167	0.00	0.000	18249.28	0.00000
3116579.3	140.00	30333067.56	27.27653	0.00	0.000	14684.87	0.00000
3118196.5	160.00	38628579.17	17.68010	0.00	0.000	11790.85	0.00000
3120190.4	180.00	42175166.12	.08103	0.00	0.000	10602.54	0.00000

REVOLUTION 22

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
3120190.4	-180.00	36232511.16	.08103	0.00	0.000	11554.74	0.00000
3121856.4	-160.00	33453518.84	15.41554	0.00	0.000	12598.47	0.00000
3123245.8	-140.00	26775633.44	24.44537	0.00	0.000	15208.85	0.00000
3124266.6	-120.00	19222077.50	27.26954	0.00	0.000	18507.29	0.00000
3124982.7	-100.00	12691969.46	26.14295	0.00	0.000	21884.70	0.00000
3125491.9	-80.00	7731655.77	22.70462	0.00	0.000	24982.30	0.00000
3125872.0	-60.00	4242082.71	17.90752	0.00	0.000	27577.81	0.00000
3126175.2	-40.00	1969361.65	12.30817	.02	.000	29525.35	.00000
3126435.3	-20.00	695015.89	6.25684	.51	.009	30730.02	.00045
3126459.9	-18.00	616547.72	5.63692	.71	.017	30807.22	.00085
3126484.3	-16.00	546564.38	5.01521	1.01	.033	30876.37	.00168
3126508.6	-14.00	484990.69	4.39194	1.53	.077	30937.47	.00385
3126532.8	-12.00	431760.40	3.76730	2.74	.244	30990.47	.01223
3126556.9	-10.00	386816.20	3.14154	6.03	1.179	31035.35	.05906
3126580.8	-8.00	350109.64	2.51487	13.67	6.034	31072.10	.30191
3126604.7	-6.00	321601.11	1.88760	28.61	26.331	31100.70	1.31633
3126628.5	-4.00	301259.84	1.26017	50.92	83.254	31121.14	4.15920
3126652.3	-2.00	289063.86	.63408	72.59	168.985	31133.41	8.43885
3126674.6	0.00	285000.00	.08103	81.39	212.332	31137.50	10.60210
3126696.8	2.00	289063.86	.63408	72.59	168.985	31133.41	8.43885
3126720.6	4.00	301259.84	1.26017	50.92	83.254	31121.14	4.15920
3126744.4	6.00	321601.11	1.88760	28.61	26.331	31100.70	1.31633
3126768.3	8.00	350109.64	2.51487	13.67	6.034	31072.10	.30191
3126792.3	10.00	386816.20	3.14154	6.03	1.179	31035.35	.05906
3126816.3	12.00	431760.40	3.76730	2.74	.244	30990.47	.01223
3126840.5	14.00	484990.69	4.39194	1.53	.077	30937.47	.00385
3126864.8	16.00	546564.38	5.01521	1.01	.033	30876.37	.00168
3126889.2	18.00	616547.72	5.63692	.71	.017	30807.22	.00085
3126913.8	20.00	695015.89	6.25684	.51	.009	30730.02	.00045
3127173.9	40.00	1969361.65	12.30817	.02	.000	29525.35	.00000
3127477.1	60.00	4242082.71	17.90752	0.00	0.000	27577.81	0.00000
3127857.2	80.00	7731655.77	22.70462	0.00	0.000	24982.30	0.00000
3128366.4	100.00	12691969.46	26.14295	0.00	0.000	21884.70	0.00000
3129082.5	120.00	19222077.50	27.26954	0.00	0.000	18507.29	0.00000
3130103.3	140.00	26775633.44	24.44537	0.00	0.000	15208.85	0.00000
3131492.7	160.00	33453518.84	15.41554	0.00	0.000	12598.47	0.00000
3133158.7	180.00	36232511.16	.08103	0.00	0.000	11554.74	0.00000

REVOLUTION 23

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3133158.7	-180.00	30831163.85	.08103	0.00	0.000	12584.11	0.00000
3134550.4	-160.00	28677148.25	13.28056	0.00	0.000	13491.36	0.00000
3135741.6	-140.00	23369116.38	21.60954	0.00	0.000	15815.65	0.00000
3136651.8	-120.00	17129907.69	24.63227	0.00	0.000	18828.10	0.00000
3137315.9	-100.00	11523194.43	23.96936	0.00	0.000	21966.28	0.00000
3137803.7	-80.00	7125235.20	21.02334	0.00	0.000	24874.75	0.00000
3138176.8	-60.00	3956241.60	16.68845	0.00	0.000	27327.15	0.00000
3138479.3	-40.00	1857951.70	11.51658	.02	.000	29174.23	.00000
3138741.6	-20.00	669310.78	5.86747	.54	.010	30319.20	.00053
3138766.5	-18.00	595832.74	5.28686	.75	.020	30392.62	.00100
3138791.3	-16.00	530271.72	4.70435	1.06	.039	30458.41	.00197
3138815.9	-14.00	472566.91	4.12017	1.64	.092	30516.53	.00470
3138840.3	-12.00	422664.65	3.53454	2.98	.304	30566.96	.01544
3138864.7	-10.00	380518.41	2.94770	6.53	1.448	30609.66	.07353
3138889.0	-8.00	346088.82	2.35991	14.45	7.050	30644.63	.35767
3138913.2	-6.00	319343.66	1.77148	29.11	28.536	30671.84	1.44650
3138937.4	-4.00	300257.88	1.18287	50.18	84.647	30691.29	4.28803
3138961.5	-2.00	288813.58	.59569	69.97	164.364	30702.96	8.32314
3138984.1	0.00	285000.00	.08103	77.90	203.643	30706.86	10.31087
3139006.8	2.00	288813.58	.59569	69.97	164.364	30702.96	8.32314
3139030.9	4.00	300257.88	1.18287	50.18	84.647	30691.29	4.28803
3139055.0	6.00	319343.66	1.77148	29.11	28.536	30671.84	1.44650
3139079.2	8.00	346088.82	2.35991	14.45	7.050	30644.63	.35767
3139103.5	10.00	380518.41	2.94770	6.53	1.448	30609.66	.07353
3139127.9	12.00	422664.65	3.53454	2.98	.304	30566.96	.01544
3139152.4	14.00	472566.91	4.12017	1.64	.092	30516.53	.00470
3139177.0	16.00	530271.72	4.70435	1.06	.039	30458.41	.00197
3139201.7	18.00	595832.74	5.28686	.75	.020	30392.62	.00100
3139226.6	20.00	669310.78	5.86747	.54	.010	30319.20	.00053
3139488.9	40.00	1857951.70	11.51658	.02	.000	29174.23	.00000
3139791.4	60.00	3956241.60	16.68845	0.00	0.000	27327.15	0.00000
3140164.5	80.00	7125235.20	21.02334	0.00	0.000	24874.75	0.00000
3140652.4	100.00	11523194.43	23.96936	0.00	0.000	21966.28	0.00000
3141316.5	120.00	17129907.69	24.63227	0.00	0.000	18828.10	0.00000
3142226.6	140.00	23369116.38	21.60954	0.00	0.000	15815.65	0.00000
3143417.8	160.00	28677148.25	13.28056	0.00	0.000	13491.36	0.00000
3144809.6	180.00	30831163.85	.08103	0.00	0.000	12584.11	0.00000

REVOLUTION 24

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
3144809.6	-180.00	25891088.97	.08103	0.00	0.000	13703.40	0.00000
3145970.7	-160.00	24246709.46	11.26595	0.00	0.000	14481.26	0.00000
3146988.9	-140.00	20097809.46	18.77732	0.00	0.000	16517.68	0.00000
3147796.9	-120.00	15037245.56	21.87820	0.00	0.000	19223.68	0.00000
3148409.9	-100.00	10310557.59	21.63407	0.00	0.000	22095.01	0.00000
3148875.7	-80.00	6477718.48	19.18534	0.00	0.000	24787.97	0.00000
3149241.2	-60.00	3644640.24	15.34161	0.00	0.000	27075.51	0.00000
3149542.9	-40.00	1734822.66	10.63653	.03	.000	28806.23	.00000
3149807.5	-20.00	640679.88	5.43316	.58	.013	29881.87	.00065
3149832.7	-18.00	572748.85	4.89632	.80	.023	29950.91	.00121
3149857.8	-16.00	512108.07	4.35747	1.13	.047	30012.78	.00241
3149882.7	-14.00	458711.20	3.81686	1.80	.117	30067.44	.00603
3149907.6	-12.00	412517.22	3.27474	3.35	.401	30114.87	.02072
3149932.3	-10.00	373490.51	2.73133	7.25	1.871	30155.05	.09646
3149956.9	-8.00	341600.86	2.18693	15.38	8.402	30187.94	.43270
3149981.5	-6.00	316823.51	1.64184	29.77	31.369	30213.54	1.61421
3150006.0	-4.00	299139.18	1.09659	49.43	86.337	30231.84	4.44010
3150030.5	-2.00	288534.11	.55288	67.24	159.566	30242.82	8.20312
3150053.6	0.00	285000.00	.08103	74.28	194.620	30246.48	10.00401
3150076.6	2.00	288534.11	.55288	67.24	159.566	30242.82	8.20312
3150101.1	4.00	299139.18	1.09659	49.43	86.337	30231.84	4.44010
3150125.6	6.00	316823.51	1.64184	29.77	31.369	30213.54	1.61421
3150150.2	8.00	341600.86	2.18693	15.38	8.402	30187.94	.43270
3150174.8	10.00	373490.51	2.73133	7.25	1.871	30155.05	.09646
3150199.6	12.00	412517.22	3.27474	3.35	.401	30114.87	.02072
3150224.4	14.00	458711.20	3.81686	1.80	.117	30067.44	.00603
3150249.3	16.00	512108.07	4.35747	1.13	.047	30012.78	.00241
3150274.4	18.00	572748.85	4.89632	.80	.023	29950.91	.00121
3150299.6	20.00	640679.88	5.43316	.58	.013	29881.87	.00065
3150564.2	40.00	1734822.66	10.63653	.03	.000	28806.23	.00000
3150865.9	60.00	3644640.24	15.34161	0.00	0.000	27075.51	0.00000
3151231.5	80.00	6477718.48	19.18534	0.00	0.000	24787.97	0.00000
3151697.2	100.00	10310557.59	21.63407	0.00	0.000	22095.01	0.00000
3152310.3	120.00	15037245.56	21.87820	0.00	0.000	19223.68	0.00000
3153118.2	140.00	20097809.46	18.77732	0.00	0.000	16517.68	0.00000
3154136.4	160.00	24246709.46	11.26595	0.00	0.000	14481.26	0.00000
3155297.5	180.00	25891088.97	.08103	0.00	0.000	13703.40	0.00000

REVOLUTION 25

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3155297.5	-180.00	21340909.74	.08103	0.00	0.000	14930.12	0.00000
3156263.6	-160.00	20112487.34	9.36015	0.00	0.000	15584.52	0.00000
3157130.3	-140.00	16943394.52	15.95299	0.00	0.000	17331.32	0.00000
3157843.5	-120.00	12937011.51	19.00310	0.00	0.000	19709.54	0.00000
3158406.4	-100.00	9047203.26	19.11825	0.00	0.000	22282.87	0.00000
3158849.3	-80.00	5782355.71	17.16489	0.00	0.000	24728.96	0.00000
3159206.5	-60.00	3302424.18	13.84222	0.00	0.000	26825.01	0.00000
3159507.2	-40.00	1597534.38	9.64928	.04	.000	28419.58	.00000
3159774.3	-20.00	608478.43	4.94394	.64	.016	29413.78	.00083
3159799.9	-18.00	546772.18	4.45629	.87	.029	29477.67	.00153
3159825.3	-16.00	491658.40	3.96656	1.25	.060	29534.93	.00314
3159850.6	-14.00	443105.05	3.47500	2.04	.159	29585.53	.00833
3159875.8	-12.00	401083.65	2.98186	3.92	.581	29629.43	.03047
3159901.0	-10.00	365569.40	2.48739	8.24	2.556	29666.62	.13396
3159926.0	-8.00	336541.21	1.99188	16.64	10.376	29697.08	.54321
3159951.0	-6.00	313981.77	1.49567	30.58	34.958	29720.79	1.82870
3159975.9	-4.00	297877.56	.99932	48.68	88.421	29737.73	4.62282
3160000.8	-2.00	288218.90	.50468	64.40	154.568	29747.90	8.07840
3160024.3	0.00	285000.00	.08103	70.51	185.217	29751.29	9.67912
3160047.8	2.00	288218.90	.50468	64.40	154.568	29747.90	8.07840
3160072.7	4.00	297877.56	.99932	48.68	88.421	29737.73	4.62282
3160097.6	6.00	313981.77	1.49567	30.58	34.958	29720.79	1.82870
3160122.6	8.00	336541.21	1.99188	16.64	10.376	29697.08	.54321
3160147.6	10.00	365569.40	2.48739	8.24	2.556	29666.62	.13396
3160172.7	12.00	401083.65	2.98186	3.92	.581	29629.43	.03047
3160197.9	14.00	443105.05	3.47500	2.04	.159	29585.53	.00833
3160223.3	16.00	491658.40	3.96656	1.25	.060	29534.93	.00314
3160248.7	18.00	546772.18	4.45629	.87	.029	29477.67	.00153
3160274.3	20.00	608478.43	4.94394	.64	.016	29413.78	.00083
3160541.3	40.00	1597534.38	9.64928	.04	.000	28419.58	.00000
3160842.1	60.00	3302424.18	13.84222	0.00	0.000	26825.01	0.00000
3161199.3	80.00	5782355.71	17.16489	0.00	0.000	24728.96	0.00000
3161642.1	100.00	9047203.26	19.11825	0.00	0.000	22282.87	0.00000
3162205.0	120.00	12937011.51	19.00310	0.00	0.000	19709.54	0.00000
3162918.3	140.00	16943394.52	15.95299	0.00	0.000	17331.32	0.00000
3163785.0	160.00	20112487.34	9.36015	0.00	0.000	15584.52	0.00000
3164751.0	180.00	21340909.74	.08103	0.00	0.000	14930.12	0.00000

REVOLUTION 26

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
3164751.0	-180.00	17113805.27	.08103	0.00	0.000	16289.54	0.00000
3165550.9	-160.00	16225001.58	7.54878	0.00	0.000	16825.06	0.00000
3166284.2	-140.00	13883144.84	13.13467	0.00	0.000	18279.60	0.00000
3166909.5	-120.00	10817460.62	15.99733	0.00	0.000	20307.00	0.00000
3167422.9	-100.00	7722423.73	16.39545	0.00	0.000	22546.35	0.00000
3167841.8	-80.00	5029330.56	14.92630	0.00	0.000	24707.50	0.00000
3168189.9	-60.00	2922647.11	12.15542	0.00	0.000	26578.64	0.00000
3168489.4	-40.00	1442589.39	8.52810	.05	.000	28011.68	.00001
3168759.2	-20.00	571778.36	4.38551	.72	.021	28908.75	.00114
3168785.2	-18.00	517148.43	3.95387	.98	.039	28966.48	.00209
3168811.0	-16.00	468324.92	3.52010	1.46	.086	29018.24	.00461
3168836.8	-14.00	425289.56	3.08446	2.45	.242	29063.97	.01293
3168862.4	-12.00	388026.01	2.64721	4.81	.927	29103.66	.04954
3168888.0	-10.00	356519.97	2.20862	9.63	3.703	29137.29	.19761
3168913.4	-8.00	330759.19	1.76897	18.29	13.313	29164.83	.70973
3168938.9	-6.00	310733.59	1.32863	31.61	39.642	29186.27	2.11172
3168964.2	-4.00	296435.25	.88820	47.94	91.041	29201.59	4.84720
3168989.6	-2.00	287858.53	.44972	61.43	149.334	29210.78	7.94837
3169013.6	0.00	285000.00	.08103	66.58	175.360	29213.85	9.33259
3169037.6	2.00	287858.53	.44972	61.43	149.334	29210.78	7.94837
3169062.9	4.00	296435.25	.88820	47.94	91.041	29201.59	4.84720
3169088.3	6.00	310733.59	1.32863	31.61	39.642	29186.27	2.11172
3169113.8	8.00	330759.19	1.76897	18.29	13.313	29164.83	.70973
3169139.2	10.00	356519.97	2.20862	9.63	3.703	29137.29	.19761
3169164.8	12.00	388026.01	2.64721	4.81	.927	29103.66	.04954
3169190.4	14.00	425289.56	3.08446	2.45	.242	29063.97	.01293
3169216.1	16.00	468324.92	3.52010	1.46	.086	29018.24	.00461
3169242.0	18.00	517148.43	3.95387	.98	.039	28966.48	.00209
3169268.0	20.00	571778.36	4.38551	.72	.021	28908.75	.00114
3169537.8	40.00	1442589.39	8.52810	.05	.000	28011.68	.00001
3169837.3	60.00	2922647.11	12.15542	0.00	0.000	26578.64	0.00000
3170185.4	80.00	5029330.56	14.92630	0.00	0.000	24707.50	0.00000
3170604.3	100.00	7722423.73	16.39545	0.00	0.000	22546.35	0.00000
3171117.7	120.00	10817460.62	15.99733	0.00	0.000	20307.00	0.00000
3171742.9	140.00	13883144.84	13.13467	0.00	0.000	18279.60	0.00000
3172476.2	160.00	16225001.58	7.54878	0.00	0.000	16825.06	0.00000
3173276.1	180.00	17113805.27	.08103	0.00	0.000	16289.54	0.00000

REVOLUTION 27

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3173276.1	-180.00	13141778.84	.08103	0.00	0.000	17820.69	0.00000
3173933.3	-160.00	12530285.76	5.81305	0.00	0.000	18240.18	0.00000
3174548.4	-140.00	10886140.91	10.31042	0.00	0.000	19397.47	0.00000
3175091.4	-120.00	8658667.72	12.84028	0.00	0.000	21047.48	0.00000
3175555.6	-100.00	6318586.35	13.42498	0.00	0.000	22909.78	0.00000
3175949.3	-80.00	4203349.96	12.41632	0.00	0.000	24738.10	0.00000
3176287.2	-60.00	2494661.55	10.22868	0.00	0.000	26340.75	0.00000
3176585.2	-40.00	1264623.40	7.23225	.07	.000	27578.42	.00001
3176858.0	-20.00	529150.77	3.73588	.85	.032	28357.13	.00173
3176884.4	-18.00	482715.89	3.36916	1.19	.062	28407.35	.00338
3176910.7	-16.00	441186.68	3.00034	1.85	.148	28452.37	.00807
3176936.9	-14.00	404557.60	2.62968	3.25	.453	28492.17	.02472
3176963.0	-12.00	372823.51	2.25743	6.17	1.630	28526.71	.08884
3176989.1	-10.00	345979.79	1.88386	11.60	5.735	28555.97	.31224
3177015.1	-8.00	324022.44	1.50926	20.54	17.951	28579.95	.97654
3177041.0	-6.00	306948.09	1.13403	33.06	46.396	28598.61	2.52229
3177066.9	-4.00	294754.05	.75881	47.21	94.422	28611.95	5.13081
3177092.8	-2.00	287438.42	.38595	58.28	143.804	28619.95	7.81202
3177117.3	0.00	285000.00	.08103	62.43	164.927	28622.62	8.95867
3177141.9	2.00	287438.42	.38595	58.28	143.804	28619.95	7.81202
3177167.8	4.00	294754.05	.75881	47.21	94.422	28611.95	5.13081
3177193.7	6.00	306948.09	1.13403	33.06	46.396	28598.61	2.52229
3177219.6	8.00	324022.44	1.50926	20.54	17.951	28579.95	.97654
3177245.6	10.00	345979.79	1.88386	11.60	5.735	28555.97	.31224
3177271.6	12.00	372823.51	2.25743	6.17	1.630	28526.71	.08884
3177297.8	14.00	404557.60	2.62968	3.25	.453	28492.17	.02472
3177324.0	16.00	441186.68	3.00034	1.85	.148	28452.37	.00807
3177350.3	18.00	482715.89	3.36916	1.19	.062	28407.35	.00338
3177376.7	20.00	529150.77	3.73588	.85	.032	28357.13	.00173
3177649.5	40.00	1264623.40	7.23225	.07	.000	27578.42	.00001
3177947.5	60.00	2494661.55	10.22868	0.00	0.000	26340.75	0.00000
3178285.4	80.00	4203349.96	12.41632	0.00	0.000	24738.10	0.00000
3178679.0	100.00	6318586.35	13.42498	0.00	0.000	22909.78	0.00000
3179143.3	120.00	8658667.72	12.84028	0.00	0.000	21047.48	0.00000
3179686.3	140.00	10886140.91	10.31042	0.00	0.000	19397.47	0.00000
3180301.4	160.00	12530285.76	5.81305	0.00	0.000	18240.18	0.00000
3180958.5	180.00	13141778.84	.08103	0.00	0.000	17820.69	0.00000

REVOLUTION 28

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
3180958.5	-180.00	9344769.36	.08103	0.00	0.000	19590.14	0.00000
3181491.5	-160.00	8959855.10	4.12554	0.00	0.000	19893.98	0.00000
3182000.5	-140.00	7904280.52	7.44932	0.00	0.000	20744.02	0.00000
3182465.8	-120.00	6424258.36	9.48733	0.00	0.000	21982.69	0.00000
3182880.6	-100.00	4803978.39	10.13611	0.00	0.000	23412.81	0.00000
3183247.2	-80.00	3278062.97	9.54642	0.00	0.000	24844.47	0.00000
3183573.4	-60.00	2000411.75	7.97448	.01	.000	26118.36	.00000
3183869.5	-40.00	1054544.71	5.69308	.11	.001	27112.60	.00003
3184145.7	-20.00	478165.98	2.95772	1.15	.062	27742.33	.00350
3184172.6	-18.00	441498.59	2.66841	1.71	.136	27783.04	.00764
3184199.4	-16.00	408676.88	2.37715	2.79	.361	27819.55	.02018
3184226.2	-14.00	379705.83	2.08419	4.93	1.127	27851.83	.06292
3184252.8	-12.00	354589.65	1.78977	8.76	3.546	27879.86	.19774
3184279.5	-10.00	333331.85	1.49414	14.88	10.187	27903.61	.56759
3184306.1	-8.00	315935.34	1.19760	23.80	26.013	27923.07	1.44838
3184332.6	-6.00	302402.41	.90056	35.06	56.357	27938.22	3.13627
3184359.1	-4.00	292734.81	.60376	46.49	98.963	27949.05	5.50511
3184385.6	-2.00	286933.76	.31003	54.90	137.867	27955.55	7.66751
3184410.8	0.00	285000.00	.08103	57.97	153.698	27957.71	8.54728
3184436.0	2.00	286933.76	.31003	54.90	137.867	27955.55	7.66751
3184462.5	4.00	292734.81	.60376	46.49	98.963	27949.05	5.50511
3184489.0	6.00	302402.41	.90056	35.06	56.357	27938.22	3.13627
3184515.6	8.00	315935.34	1.19760	23.80	26.013	27923.07	1.44838
3184542.2	10.00	333331.85	1.49414	14.88	10.187	27903.61	.56759
3184568.8	12.00	354589.65	1.78977	8.76	3.546	27879.86	.19774
3184595.5	14.00	379705.83	2.08419	4.93	1.127	27851.83	.06292
3184622.2	16.00	408676.88	2.37715	2.79	.361	27819.55	.02018
3184649.1	18.00	441498.59	2.66841	1.71	.136	27783.04	.00764
3184676.0	20.00	478165.98	2.95772	1.15	.062	27742.33	.00350
3184952.2	40.00	1054544.71	5.69308	.11	.001	27112.60	.00003
3185248.2	60.00	2000411.75	7.97448	.01	.000	26118.36	.00000
3185574.4	80.00	3278062.97	9.54642	0.00	0.000	24844.47	0.00000
3185941.0	100.00	4803978.39	10.13611	0.00	0.000	23412.81	0.00000
3186355.8	120.00	6424258.36	9.48733	0.00	0.000	21982.69	0.00000
3186821.1	140.00	7904280.52	7.44932	0.00	0.000	20744.02	0.00000
3187330.2	160.00	8959855.10	4.12554	0.00	0.000	19893.98	0.00000
3187863.1	180.00	9344769.36	.08103	0.00	0.000	19590.14	0.00000

REVOLUTION 29

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3187863.1	-180.00	5601741.80	.08103	0.00	0.000	21731.56	0.00000
3188285.5	-160.00	5402740.35	2.43749	0.00	0.000	21915.62	0.00000
3188697.3	-140.00	4846061.54	4.47596	0.00	0.000	22437.18	0.00000
3189087.4	-120.00	4037408.59	5.83251	0.00	0.000	23213.53	0.00000
3189451.1	-100.00	3112186.09	6.38218	0.00	0.000	24131.78	0.00000
3189787.7	-80.00	2200054.27	6.14193	.01	.000	25072.06	.00000
3190100.1	-60.00	1403845.38	5.22091	.04	.000	25924.56	.00001
3190393.4	-40.00	794227.59	3.77472	.23	.003	26599.32	.00016
3190673.5	-20.00	413966.90	1.97661	2.33	.277	27030.66	.01591
3190701.1	-18.00	389545.51	1.78430	3.71	.702	27058.65	.04034
3190728.5	-16.00	367661.83	1.59046	5.89	1.761	27083.76	.10109
3190756.0	-14.00	348326.99	1.39528	9.29	4.371	27105.96	.25070
3190783.4	-12.00	331550.72	1.19896	14.26	10.275	27125.25	.58894
3190810.7	-10.00	317341.41	1.00174	20.93	22.097	27141.60	1.26576
3190838.0	-8.00	305706.08	.80392	29.12	42.696	27155.00	2.44456
3190865.3	-6.00	296650.48	.60592	37.94	72.383	27165.43	4.14268
3190892.5	-4.00	290179.04	.40873	45.83	105.501	27172.89	6.03643
3190919.8	-2.00	286294.92	.21616	51.13	131.293	27177.37	7.51096
3190945.8	0.00	285000.00	.08103	53.04	141.207	27178.86	8.07769
3190971.9	2.00	286294.92	.21616	51.13	131.293	27177.37	7.51096
3190999.1	4.00	290179.04	.40873	45.83	105.501	27172.89	6.03643
3191026.3	6.00	296650.48	.60592	37.94	72.383	27165.43	4.14268
3191053.6	8.00	305706.08	.80392	29.12	42.696	27155.00	2.44456
3191080.9	10.00	317341.41	1.00174	20.93	22.097	27141.60	1.26576
3191108.3	12.00	331550.72	1.19896	14.26	10.275	27125.25	.58894
3191135.7	14.00	348326.99	1.39528	9.29	4.371	27105.96	.25070
3191163.1	16.00	367661.83	1.59046	5.89	1.761	27083.76	.10109
3191190.6	18.00	389545.51	1.78430	3.71	.702	27058.65	.04034
3191218.1	20.00	413966.90	1.97661	2.33	.277	27030.66	.01591
3191498.3	40.00	794227.59	3.77472	.23	.003	26599.32	.00016
3191791.5	60.00	1403845.38	5.22091	.04	.000	25924.56	.00001
3192104.0	80.00	2200054.27	6.14193	.01	.000	25072.06	.00000
3192440.6	100.00	3112186.09	6.38218	0.00	0.000	24131.78	0.00000
3192804.2	120.00	4037408.59	5.83251	0.00	0.000	23213.53	0.00000
3193194.4	140.00	4846061.54	4.47596	0.00	0.000	22437.18	0.00000
3193606.1	160.00	5402740.35	2.43749	0.00	0.000	21915.62	0.00000
3194028.5	180.00	5601741.80	.08103	0.00	0.000	21731.56	0.00000

REVOLUTION 30

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3194028.5	-180.00	1631178.50	.08103	.02	.000	24612.49	.00000
3194346.8	-160.00	1588092.44	.62591	.02	.000	24661.04	.00000
3194663.9	-140.00	1464945.35	1.16277	.03	.000	24800.30	.00000
3194976.6	-120.00	1278864.48	1.55175	.05	.000	25012.16	.00001
3195283.6	-100.00	1054783.91	1.74616	.09	.000	25269.61	.00003
3195584.1	-80.00	821236.94	1.72766	.18	.002	25540.74	.00013
3195878.5	-60.00	606252.91	1.50489	.43	.011	25792.92	.00065
3196167.5	-40.00	434116.09	1.10952	1.53	.135	25996.69	.00809
3196452.7	-20.00	323238.54	.59136	15.82	14.305	26128.83	.85118
3196481.1	-18.00	316022.60	.53525	19.28	21.232	26137.46	1.26293
3196509.5	-16.00	309546.61	.47870	23.11	30.474	26145.20	1.81217
3196537.8	-14.00	303817.10	.42183	27.33	42.571	26152.05	2.53084
3196566.1	-12.00	298839.84	.36480	31.61	56.907	26158.00	3.38240
3196594.5	-10.00	294619.83	.30787	35.75	72.758	26163.05	4.32369
3196622.8	-8.00	291161.32	.25142	39.55	88.989	26167.19	5.28740
3196651.1	-6.00	288467.77	.19625	42.72	103.782	26170.42	6.16555
3196679.3	-4.00	286541.87	.14419	45.10	115.651	26172.72	6.87009
3196707.6	-2.00	285385.56	.10063	46.59	123.420	26174.11	7.33122
3196734.8	0.00	285000.00	.08103	47.10	126.125	26174.57	7.49175
3196761.9	2.00	285385.56	.10063	46.59	123.420	26174.11	7.33122
3196790.2	4.00	286541.87	.14419	45.10	115.651	26172.72	6.87009
3196818.5	6.00	288467.77	.19625	42.72	103.782	26170.42	6.16555
3196846.7	8.00	291161.32	.25142	39.55	88.989	26167.19	5.28740
3196875.1	10.00	294619.83	.30787	35.75	72.758	26163.05	4.32369
3196903.4	12.00	298839.84	.36480	31.61	56.907	26158.00	3.38240
3196931.7	14.00	303817.10	.42183	27.33	42.571	26152.05	2.53084
3196960.0	16.00	309546.61	.47870	23.11	30.474	26145.20	1.81217
3196988.4	18.00	316022.60	.53525	19.28	21.232	26137.46	1.26293
3197016.8	20.00	323238.54	.59136	15.82	14.305	26128.83	.85118
3197302.0	40.00	434116.09	1.10952	1.53	.135	25996.69	.00809
3197591.1	60.00	606252.91	1.50489	.43	.011	25792.92	.00065
3197885.4	80.00	821236.94	1.72766	.18	.002	25540.74	.00013
3198186.0	100.00	1054783.91	1.74616	.09	.000	25269.61	.00003
3198492.9	120.00	1278864.48	1.55175	.05	.000	25012.16	.00001
3198805.6	140.00	1464945.35	1.16277	.03	.000	24800.30	.00000
3199122.7	160.00	1588092.44	.62591	.02	.000	24661.04	.00000
3199441.0	180.00	1631178.50	.08103	.02	.000	24612.49	.00000

Part 2

Listing of Punched Card CMA Input

REVOLUTION 1

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{T_A}	I. D.
0.0000	25328.752	0.0000	.0000001	.000000	GLFC TRANS.
21.6091	25477.101	0.0000	.0000002	.000000	GLFC TRANS.
42.9817	25610.323	0.0000	.0000005	.000000	GLFC TRANS.
64.1451	25728.256	0.0000	.0000012	.000001	GLFC TRANS.
85.1247	25830.757	0.0000	.0000030	.000002	GLFC TRANS.
105.9439	25917.701	0.0000	.0000107	.000006	GLFC TRANS.
126.6215	25988.982	0.0000	.0000708	.000037	GLFC TRANS.
147.1667	26044.513	0.0000	.0005340	.000283	GLFC TRANS.
167.5558	26084.227	0.0000	.0023947	.001555	GLFC TRANS.
187.5793	26108.074	0.0000	.0041700	.004716	GLFC TRANS.
202.6280	26116.026	0.0000	.0049911	.006755	GLFC TRANS.
217.6766	26108.074	0.0000	.0041700	.004716	GLFC TRANS.
237.7001	26084.227	0.0000	.0023947	.001555	GLFC TRANS.
258.0892	26044.513	0.0000	.0005340	.000283	GLFC TRANS.
278.6345	25988.982	0.0000	.0000708	.000037	GLFC TRANS.
299.3121	25917.701	0.0000	.0000107	.000006	GLFC TRANS.
320.1312	25830.757	0.0000	.0000030	.000002	GLFC TRANS.
341.1109	25728.256	0.0000	.0000012	.000001	GLFC TRANS.
362.2742	25610.323	0.0000	.0000005	.000000	GLFC TRANS.
383.6468	25477.101	0.0000	.0000002	.000000	GLFC TRANS.
405.2559	25328.752	0.0000	.0000001	.000000	GLFC TRANS.

REVOLUTION 5

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{T_A}	I. D.
0.0000	24639.418	0.0000	.0000001	.000000	GLFC TRANS.
21.8819	24783.466	0.0000	.0000003	.000000	GLFC TRANS.
43.5332	24912.827	0.0000	.0000006	.000000	GLFC TRANS.
64.9812	25027.341	0.0000	.0000013	.000001	GLFC TRANS.
86.2522	25126.871	0.0000	.0000032	.000002	GLFC TRANS.
107.3711	25211.295	0.0000	.0000117	.000006	GLFC TRANS.
128.3609	25280.510	0.0000	.0000784	.000041	GLFC TRANS.
149.2405	25334.431	0.0000	.0005715	.000299	GLFC TRANS.
170.0160	25372.993	0.0000	.0024067	.001578	GLFC TRANS.
190.6201	25396.149	0.0000	.0041263	.004637	GLFC TRANS.
207.8042	25403.871	0.0000	.0049124	.006571	GLFC TRANS.
224.9882	25396.149	0.0000	.0041263	.004637	GLFC TRANS.
245.5923	25372.993	0.0000	.0024067	.001578	GLFC TRANS.
266.3679	25334.431	0.0000	.0005715	.000299	GLFC TRANS.
287.2475	25280.510	0.0000	.0000784	.000041	GLFC TRANS.
308.2372	25211.295	0.0000	.0000117	.000006	GLFC TRANS.
329.3561	25126.871	0.0000	.0000032	.000002	GLFC TRANS.
350.6271	25027.341	0.0000	.0000013	.000001	GLFC TRANS.
372.0751	24912.827	0.0000	.0000006	.000000	GLFC TRANS.
393.7264	24783.466	0.0000	.0000003	.000000	GLFC TRANS.
415.6083	24639.418	0.0000	.0000001	.000000	GLFC TRANS.

REVOLUTION 9

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	23697.711	0.0000	.0000001	.000000	GLFC TRANS.
22.2643	23835.464	0.0000	.0000003	.000000	GLFC TRANS.
44.3049	23959.171	0.0000	.0000007	.000000	GLFC TRANS.
66.1484	24068.682	0.0000	.0000014	.000001	GLFC TRANS.
87.8206	24163.862	0.0000	.0000036	.000002	GLFC TRANS.
109.3462	24244.597	0.0000	.0000138	.000007	GLFC TRANS.
130.7489	24310.787	0.0000	.0000913	.000047	GLFC TRANS.
152.0497	24362.352	0.0000	.0006356	.000326	GLFC TRANS.
173.2628	24399.229	0.0000	.0024283	.001615	GLFC TRANS.
194.3628	24421.373	0.0000	.0040662	.004529	GLFC TRANS.
212.8286	24428.757	0.0000	.0048031	.006319	GLFC TRANS.
231.2943	24421.373	0.0000	.0040662	.004529	GLFC TRANS.
252.3943	24399.229	0.0000	.0024283	.001615	GLFC TRANS.
273.6074	24362.352	0.0000	.0006356	.000326	GLFC TRANS.
294.9082	24310.787	0.0000	.0000913	.000047	GLFC TRANS.
316.3109	24244.597	0.0000	.0000138	.000007	GLFC TRANS.
337.8365	24163.862	0.0000	.0000036	.000002	GLFC TRANS.
359.5087	24068.682	0.0000	.0000014	.000001	GLFC TRANS.
381.3522	23959.171	0.0000	.0000007	.000000	GLFC TRANS.
403.3928	23835.464	0.0000	.0000003	.000000	GLFC TRANS.
425.6571	23697.711	0.0000	.0000001	.000000	GLFC TRANS.

REVOLUTION 13

TIME	H_R	QDOTR	$QDOTC/H_R$	P_{TA}	I. D.
0.0000	22506.516	0.0000	.0000002	.000000	GLFC TRANS.
22.7776	22635.517	0.0000	.0000004	.000000	GLFC TRANS.
45.3413	22751.365	0.0000	.0000008	.000000	GLFC TRANS.
67.7165	22853.918	0.0000	.0000017	.000001	GLFC TRANS.
89.9279	22943.052	0.0000	.0000044	.000002	GLFC TRANS.
111.9994	23018.657	0.0000	.0000175	.000009	GLFC TRANS.
133.9539	23080.642	0.0000	.0001155	.000058	GLFC TRANS.
155.8130	23128.930	0.0000	.0007398	.000369	GLFC TRANS.
177.5935	23163.465	0.0000	.0024621	.001674	GLFC TRANS.
199.2879	23184.202	0.0000	.0039896	.004394	GLFC TRANS.
218.8314	23191.117	0.0000	.0046616	.005999	GLFC TRANS.
238.3749	23184.202	0.0000	.0039896	.004394	GLFC TRANS.
260.0693	23163.465	0.0000	.0024621	.001674	GLFC TRANS.
281.8498	23128.930	0.0000	.0007398	.000369	GLFC TRANS.
303.7089	23080.642	0.0000	.0001155	.000058	GLFC TRANS.
325.6635	23018.657	0.0000	.0000175	.000009	GLFC TRANS.
347.7349	22943.052	0.0000	.0000044	.000002	GLFC TRANS.
369.9463	22853.918	0.0000	.0000017	.000001	GLFC TRANS.
392.3215	22751.365	0.0000	.0000008	.000000	GLFC TRANS.
414.8852	22635.517	0.0000	.0000004	.000000	GLFC TRANS.
437.6628	22506.516	0.0000	.0000002	.000000	GLFC TRANS.

REVOLUTION 17

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	21061.287	0.0000	.0000002	.000000	GLFC TRANS.
23.4529	21178.266	0.0000	.0000005	.000000	GLFC TRANS.
46.7065	21283.317	0.0000	.0000010	.000000	GLFC TRANS.
69.7843	21376.312	0.0000	.0000022	.000001	GLFC TRANS.
92.7092	21457.138	0.0000	.0000060	.000003	GLFC TRANS.
115.5036	21525.697	0.0000	.0000257	.000012	GLFC TRANS.
138.1891	21581.905	0.0000	.0001630	.000079	GLFC TRANS.
160.7862	21625.693	0.0000	.0009132	.000441	GLFC TRANS.
183.3125	21657.009	0.0000	.0025153	.001765	GLFC TRANS.
205.7689	21675.814	0.0000	.0038961	.004233	GLFC TRANS.
226.4061	21682.084	0.0000	.0044847	.005608	GLFC TRANS.
247.0434	21675.814	0.0000	.0038961	.004233	GLFC TRANS.
269.4998	21657.009	0.0000	.0025153	.001765	GLFC TRANS.
292.0261	21625.693	0.0000	.0009132	.000441	GLFC TRANS.
314.6232	21581.905	0.0000	.0001630	.000079	GLFC TRANS.
337.3087	21525.697	0.0000	.0000257	.000012	GLFC TRANS.
360.1031	21457.138	0.0000	.0000060	.000003	GLFC TRANS.
383.0280	21376.312	0.0000	.0000022	.000001	GLFC TRANS.
406.1058	21283.317	0.0000	.0000010	.000000	GLFC TRANS.
429.3594	21178.266	0.0000	.0000005	.000000	GLFC TRANS.
452.8123	21061.287	0.0000	.0000002	.000000	GLFC TRANS.

REVOLUTION 21

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	19341.483	0.0000	.0000004	.000000	GLFC TRANS.
24.3460	19441.642	0.0000	.0000008	.000000	GLFC TRANS.
48.5152	19531.589	0.0000	.0000015	.000001	GLFC TRANS.
72.5284	19611.213	0.0000	.0000034	.000002	GLFC TRANS.
96.4056	19680.417	0.0000	.0000104	.000005	GLFC TRANS.
120.1666	19739.119	0.0000	.0000495	.000023	GLFC TRANS.
143.8308	19787.245	0.0000	.0002681	.000124	GLFC TRANS.
167.4166	19824.737	0.0000	.0012379	.000572	GLFC TRANS.
190.9404	19851.550	0.0000	.0026020	.001913	GLFC TRANS.
214.4071	19867.651	0.0000	.0037815	.004040	GLFC TRANS.
236.3004	19873.020	0.0000	.0042656	.005141	GLFC TRANS.
258.1937	19867.651	0.0000	.0037815	.004040	GLFC TRANS.
281.6605	19851.550	0.0000	.0026020	.001913	GLFC TRANS.
305.1843	19824.737	0.0000	.0012379	.000572	GLFC TRANS.
328.7701	19787.245	0.0000	.0002681	.000124	GLFC TRANS.
352.4343	19739.119	0.0000	.0000495	.000023	GLFC TRANS.
376.1953	19680.417	0.0000	.0000104	.000005	GLFC TRANS.
400.0725	19611.213	0.0000	.0000034	.000002	GLFC TRANS.
424.0856	19531.589	0.0000	.0000015	.000001	GLFC TRANS.
448.2549	19441.642	0.0000	.0000008	.000000	GLFC TRANS.
472.6009	19341.483	0.0000	.0000004	.000000	GLFC TRANS.

REVOLUTION 25

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	17281.631	0.0000	.0000009	.000000	GLFC TRANS.
25.5757	17356.792	0.0000	.0000017	.000001	GLFC TRANS.
51.0126	17424.288	0.0000	.0000034	.000001	GLFC TRANS.
76.3265	17484.039	0.0000	.0000091	.000004	GLFC TRANS.
101.5331	17535.971	0.0000	.0000331	.000014	GLFC TRANS.
126.6478	17580.021	0.0000	.0001454	.000063	GLFC TRANS.
151.6858	17616.136	0.0000	.0005890	.000257	GLFC TRANS.
176.6618	17644.270	0.0000	.0017333	.000864	GLFC TRANS.
201.5890	17664.391	0.0000	.0027561	.002184	GLFC TRANS.
226.4723	17676.473	0.0000	.0036435	.003817	GLFC TRANS.
249.9783	17680.502	0.0000	.0039883	.004573	GLFC TRANS.
273.4843	17676.473	0.0000	.0036435	.003817	GLFC TRANS.
298.3677	17664.391	0.0000	.0027561	.002184	GLFC TRANS.
323.2949	17644.270	0.0000	.0017333	.000864	GLFC TRANS.
348.2709	17616.136	0.0000	.0005890	.000257	GLFC TRANS.
373.3089	17580.021	0.0000	.0001454	.000063	GLFC TRANS.
398.4236	17535.971	0.0000	.0000331	.000014	GLFC TRANS.
423.6302	17484.039	0.0000	.0000091	.000004	GLFC TRANS.
448.9441	17424.288	0.0000	.0000034	.000001	GLFC TRANS.
474.3810	17356.792	0.0000	.0000017	.000001	GLFC TRANS.
499.9567	17281.631	0.0000	.0000009	.000000	GLFC TRANS.

REVOLUTION 28

TIME	H R	QDOTR	QDOTC/H R	P T A	I. D.
0.0000	15373.366	0.0000	.0000041	.000002	GLFC TRANS.
26.9198	15418.522	0.0000	.0000088	.000004	GLFC TRANS.
53.7522	15459.073	0.0000	.0000234	.000010	GLFC TRANS.
80.5068	15494.970	0.0000	.0000727	.000030	GLFC TRANS.
107.1933	15526.171	0.0000	.0002284	.000093	GLFC TRANS.
133.8215	15552.635	0.0000	.0006550	.000268	GLFC TRANS.
160.4008	15574.332	0.0000	.0015282	.000684	GLFC TRANS.
186.9404	15591.235	0.0000	.0022489	.001482	GLFC TRANS.
213.4484	15603.324	0.0000	.0029797	.002601	GLFC TRANS.
239.9268	15610.583	0.0000	.0035167	.003623	GLFC TRANS.
265.1603	15613.003	0.0000	.0037130	.004039	GLFC TRANS.
290.3937	15610.583	0.0000	.0035167	.003623	GLFC TRANS.
316.8721	15603.324	0.0000	.0029797	.002601	GLFC TRANS.
343.3801	15591.235	0.0000	.0022489	.001482	GLFC TRANS.
369.9197	15574.332	0.0000	.0015282	.000684	GLFC TRANS.
396.4990	15552.635	0.0000	.0006550	.000268	GLFC TRANS.
423.1272	15526.171	0.0000	.0002284	.000093	GLFC TRANS.
449.8138	15494.970	0.0000	.0000727	.000030	GLFC TRANS.
476.5684	15459.073	0.0000	.0000234	.000010	GLFC TRANS.
503.4007	15418.522	0.0000	.0000088	.000004	GLFC TRANS.
530.3205	15373.366	0.0000	.0000041	.000002	GLFC TRANS.

APPENDIX H

Trajectory and Reentry Environment
Output From Computer Code HRS017 (Version 3)
for a Perigee Altitude of 290,000 Feet
(Thirty-Nine Revolutions)

Part 1. Trajectory and Reentry Environment Tabulated Data (165)

Part 2. Listing of Punched Card CMA Input (204)

Part 2

Trajectory and Reentry Environment Tabulated Data

REVOLUTION 1

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
0.0	-180.00	1246374303.00	.08103	0.00	0.000	605.25	0.00000
384973.2	-160.00	436410093.04	74.57649	0.00	0.000	6306.36	0.00000
422279.9	-140.00	140091624.35	67.36655	0.00	0.000	12378.57	0.00000
428406.6	-120.00	59878873.56	58.33915	0.00	0.000	18084.75	0.00000
430270.0	-100.00	29229631.58	48.85709	0.00	0.000	23244.16	0.00000
431085.7	-80.00	14806543.85	39.19527	0.00	0.000	27698.53	0.00000
431540.9	-60.00	7204921.90	29.44634	0.00	0.000	31312.00	0.00000
431845.4	-40.00	3047369.32	19.65105	0.00	0.000	33974.56	0.00000
432081.7	-20.00	938241.51	9.83120	.36	.003	35605.19	.00012
432103.3	-18.00	813079.82	8.84845	.54	.006	35709.31	.00026
432124.7	-16.00	701895.23	7.86561	.81	.013	35802.55	.00058
432145.8	-14.00	604414.97	6.88270	1.22	.030	35884.89	.00129
432166.8	-12.00	520401.56	5.89974	1.89	.071	35956.30	.00308
432187.6	-10.00	449651.57	4.91675	3.51	.245	36016.76	.01056
432208.3	-8.00	391994.60	3.93376	8.74	1.507	36066.25	.06496
432228.9	-6.00	347292.38	2.95084	23.51	10.867	36104.77	.46797
432249.3	-4.00	315438.06	1.96817	54.35	57.938	36132.28	2.49303
432269.3	-2.00	296355.74	.98659	94.12	173.502	36148.80	7.46228
432284.4	0.00	290000.00	.08103	113.25	251.099	36154.30	10.79806
432299.4	2.00	296355.74	.98659	94.12	173.502	36148.80	7.46228
432319.4	4.00	315438.06	1.96817	54.35	57.938	36132.28	2.49303
432339.8	6.00	347292.38	2.95084	23.51	10.867	36104.77	.46797
432360.4	8.00	391994.60	3.93376	8.74	1.507	36066.25	.06496
432381.1	10.00	449651.57	4.91675	3.51	.245	36016.76	.01056
432401.9	12.00	520401.56	5.89974	1.89	.071	35956.30	.00308
432422.9	14.00	604414.97	6.88270	1.22	.030	35884.89	.00129
432444.1	16.00	701895.23	7.86561	.81	.013	35802.55	.00058
432465.4	18.00	813079.82	8.84845	.54	.006	35709.31	.00026
432487.1	20.00	938241.51	9.83120	.36	.003	35605.19	.00012
432723.3	40.00	3047369.32	19.65105	0.00	0.000	33974.56	0.00000
433027.8	60.00	7204921.90	29.44634	0.00	0.000	31312.00	0.00000
433483.0	80.00	14806543.85	39.19527	0.00	0.000	27698.53	0.00000
434298.7	100.00	29229631.58	48.85709	0.00	0.000	23244.16	0.00000
436162.1	120.00	59878873.56	58.33915	0.00	0.000	18084.75	0.00000
442288.8	140.00	140091624.35	67.36655	0.00	0.000	12378.57	0.00000
479595.5	160.00	436410093.04	74.57649	0.00	0.000	6306.36	0.00000
864568.7	180.00	1246374303.00	.08103	0.00	0.000	605.25	0.00000

REVOLUTION 2

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
864568.7	-180.00	986136943.19	.08103	0.00	0.000	760.04	0.00000
1129890.6	-160.00	398478218.06	73.18682	0.00	0.000	6309.37	0.00000
1163014.6	-140.00	135554940.06	66.68739	0.00	0.000	12359.93	0.00000
1168903.7	-120.00	58892519.29	57.91030	0.00	0.000	18050.82	0.00000
1170737.1	-100.00	28930420.83	48.56185	0.00	0.000	23197.56	0.00000
1171547.1	-80.00	14699297.20	38.98735	0.00	0.000	27641.39	0.00000
1172001.3	-60.00	7164640.00	29.30325	0.00	0.000	31246.46	0.00000
1172305.8	-40.00	3033668.84	19.56084	0.00	0.000	33902.88	0.00000
1172542.5	-20.00	935302.70	9.78750	.36	.003	35529.77	.00012
1172564.1	-18.00	810721.94	8.80919	.54	.006	35633.65	.00026
1172585.5	-16.00	700047.99	7.83078	.81	.013	35726.68	.00058
1172606.8	-14.00	603011.23	6.85227	1.22	.030	35808.83	.00130
1172627.8	-12.00	519376.90	5.87369	1.89	.072	35880.08	.00311
1172648.7	-10.00	448943.89	4.89507	3.52	.247	35940.40	.01070
1172669.4	-8.00	391543.71	3.91643	8.76	1.525	35989.79	.06588
1172690.0	-6.00	347039.63	2.93786	23.50	10.933	36028.21	.47181
1172710.5	-4.00	315326.01	1.95952	54.15	57.929	36055.66	2.49794
1172730.7	-2.00	296327.77	.98228	93.56	172.681	36072.14	7.44275
1172746.2	0.00	290000.00	.08103	112.50	249.505	36077.63	10.75231
1172761.8	2.00	296327.77	.98228	93.56	172.681	36072.14	7.44275
1172782.0	4.00	315326.01	1.95952	54.15	57.929	36055.66	2.49794
1172802.5	6.00	347039.63	2.93786	23.50	10.933	36028.21	.47181
1172823.1	8.00	391543.71	3.91643	8.76	1.525	35989.79	.06588
1172843.8	10.00	448943.89	4.89507	3.52	.247	35940.40	.01070
1172864.7	12.00	519376.90	5.87369	1.89	.072	35880.08	.00311
1172885.7	14.00	603011.23	6.85227	1.22	.030	35808.83	.00130
1172907.0	16.00	700047.99	7.83078	.81	.013	35726.68	.00058
1172928.4	18.00	810721.94	8.80919	.54	.006	35633.65	.00026
1172950.0	20.00	935302.70	9.78750	.36	.003	35529.77	.00012
1173186.7	40.00	3033668.84	19.56084	0.00	0.000	33902.88	0.00000
1173491.2	60.00	7164640.00	29.30325	0.00	0.000	31246.46	0.00000
1173945.3	80.00	14699297.20	38.98735	0.00	0.000	27641.39	0.00000
1174755.4	100.00	28930420.83	48.56185	0.00	0.000	23197.56	0.00000
1176588.8	120.00	58892519.29	57.91030	0.00	0.000	18050.82	0.00000
1182477.9	140.00	135554940.06	66.68739	0.00	0.000	12359.93	0.00000
1215601.9	160.00	398478218.06	73.18682	0.00	0.000	6309.37	0.00000
1480923.8	180.00	986136943.19	.08103	0.00	0.000	760.04	0.00000

REVOLUTION 3

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
1480923.8	-180.00	800597336.01	.08103	0.00	0.000	929.54	0.00000
1670785.0	-160.00	363417929.69	71.66772	0.00	0.000	6316.95	0.00000
1700126.1	-140.00	130851672.77	65.94151	0.00	0.000	12341.58	0.00000
1705770.8	-120.00	57835132.31	57.43891	0.00	0.000	18014.93	0.00000
1707572.0	-100.00	28605434.54	48.23722	0.00	0.000	23147.37	0.00000
1708376.1	-80.00	14582084.75	38.75869	0.00	0.000	27579.37	0.00000
1708829.0	-60.00	7120469.65	29.14589	0.00	0.000	31175.07	0.00000
1709133.6	-40.00	3018618.66	19.46163	0.00	0.000	33824.66	0.00000
1709370.7	-20.00	932071.40	9.73943	.36	.003	35447.41	.00012
1709392.4	-18.00	808129.26	8.76602	.54	.006	35551.02	.00027
1709413.8	-16.00	698016.70	7.79247	.81	.013	35643.81	.00059
1709435.1	-14.00	601467.56	6.81880	1.22	.030	35725.75	.00131
1709456.2	-12.00	518250.06	5.84504	1.89	.072	35796.82	.00315
1709477.1	-10.00	448165.62	4.87122	3.53	.250	35856.99	.01085
1709497.9	-8.00	391047.82	3.89737	8.78	1.545	35906.25	.06690
1709518.6	-6.00	346761.66	2.92358	23.48	11.007	35944.57	.47608
1709539.1	-4.00	315202.77	1.95001	53.94	57.921	35971.95	2.50342
1709559.4	-2.00	296297.00	.97754	92.96	171.788	35988.39	7.42148
1709575.4	0.00	290000.00	.08103	111.67	247.771	35993.87	10.70244
1709591.5	2.00	296297.00	.97754	92.96	171.788	35988.39	7.42148
1709611.8	4.00	315202.77	1.95001	53.94	57.921	35971.95	2.50342
1709632.3	6.00	346761.66	2.92358	23.48	11.007	35944.57	.47608
1709653.0	8.00	391047.82	3.89737	8.78	1.545	35906.25	.06690
1709673.8	10.00	448165.62	4.87122	3.53	.250	35856.99	.01085
1709694.7	12.00	518250.06	5.84504	1.89	.072	35796.82	.00315
1709715.8	14.00	601467.56	6.81880	1.22	.030	35725.75	.00131
1709737.1	16.00	698016.70	7.79247	.81	.013	35643.81	.00059
1709758.5	18.00	808129.26	8.76602	.54	.006	35551.02	.00027
1709780.2	20.00	932071.40	9.73943	.36	.003	35447.41	.00012
1710017.3	40.00	3018618.66	19.46163	0.00	0.000	33824.66	0.00000
1710321.9	60.00	7120469.65	29.14589	0.00	0.000	31175.07	0.00000
1710774.8	80.00	14582084.75	38.75869	0.00	0.000	27579.37	0.00000
1711578.9	100.00	28605434.54	48.23722	0.00	0.000	23147.37	0.00000
1713380.1	120.00	57835132.31	57.43891	0.00	0.000	18014.93	0.00000
1719024.8	140.00	130851672.77	65.94151	0.00	0.000	12341.58	0.00000
1748365.9	160.00	363417929.69	71.66772	0.00	0.000	6316.95	0.00000
1938227.1	180.00	800597336.01	.08103	0.00	0.000	929.54	0.00000

REVOLUTION 4

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
1938227.1	-180.00	662921251.23	.08103	0.00	0.000	1113.86	0.00000
2078092.5	-160.00	331247371.87	70.02119	0.00	0.000	6330.26	0.00000
2104042.0	-140.00	126025190.50	65.12803	0.00	0.000	12324.08	0.00000
2109438.1	-120.00	56711252.54	56.92419	0.00	0.000	17977.40	0.00000
2111205.3	-100.00	28255117.12	47.88262	0.00	0.000	23093.77	0.00000
2112002.8	-80.00	14454880.01	38.50887	0.00	0.000	27512.61	0.00000
2112454.5	-60.00	7072361.21	28.97395	0.00	0.000	31097.89	0.00000
2112759.2	-40.00	3002194.24	19.35322	0.00	0.000	33739.93	0.00000
2112996.6	-20.00	928541.51	9.68691	.36	.003	35358.08	.00012
2113018.4	-18.00	805296.82	8.71884	.54	.006	35461.40	.00027
2113039.9	-16.00	695797.45	7.75060	.81	.014	35553.93	.00059
2113061.2	-14.00	599780.97	6.78223	1.22	.030	35635.64	.00132
2113082.3	-12.00	517018.85	5.81374	1.89	.073	35706.51	.00319
2113103.3	-10.00	447315.22	4.84516	3.53	.253	35766.51	.01101
2113124.2	-8.00	390505.97	3.87655	8.81	1.567	35815.62	.06803
2113144.9	-6.00	346457.91	2.90797	23.47	11.088	35853.84	.48080
2113165.5	-4.00	315068.10	1.93962	53.71	57.915	35881.15	2.50947
2113185.9	-2.00	296263.39	.97235	92.32	170.823	35897.53	7.39849
2113202.3	0.00	290000.00	.08103	110.79	245.899	35903.00	10.64847
2113218.7	2.00	296263.39	.97235	92.32	170.823	35897.53	7.39849
2113239.1	4.00	315068.10	1.93962	53.71	57.915	35881.15	2.50947
2113259.8	6.00	346457.91	2.90797	23.47	11.088	35853.84	.48080
2113280.5	8.00	390505.97	3.87655	8.81	1.567	35815.62	.06803
2113301.3	10.00	447315.22	4.84516	3.53	.253	35766.51	.01101
2113322.3	12.00	517018.85	5.81374	1.89	.073	35706.51	.00319
2113343.5	14.00	599780.97	6.78223	1.22	.030	35635.64	.00132
2113364.8	16.00	695797.45	7.75060	.81	.014	35553.93	.00059
2113386.3	18.00	805296.82	8.71884	.54	.006	35461.40	.00027
2113408.0	20.00	928541.51	9.68691	.36	.003	35358.08	.00012
2113645.5	40.00	3002194.24	19.35322	0.00	0.000	33739.93	0.00000
2113950.2	60.00	7072361.21	28.97395	0.00	0.000	31097.89	0.00000
2114401.9	80.00	14454880.01	38.50887	0.00	0.000	27512.61	0.00000
2115199.4	100.00	28255117.12	47.88262	0.00	0.000	23093.77	0.00000
2116966.5	120.00	56711252.54	56.92419	0.00	0.000	17977.40	0.00000
2122362.6	140.00	126025190.50	65.12803	0.00	0.000	12324.08	0.00000
2148312.1	160.00	331247371.87	70.02119	0.00	0.000	6330.26	0.00000
2288177.5	180.00	662921251.23	.08103	0.00	0.000	1113.86	0.00000

REVOLUTION 5

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2288177.5	-180.00	557549336.84	.08103	0.00	0.000	1313.16	0.00000
2393636.4	-160.00	301878977.08	68.25029	0.00	0.000	6350.54	0.00000
2416564.9	-140.00	121115659.67	64.24608	0.00	0.000	12308.05	0.00000
2421710.4	-120.00	55525496.55	56.36530	0.00	0.000	17938.59	0.00000
2423441.7	-100.00	27879924.04	47.49737	0.00	0.000	23036.99	0.00000
2424232.2	-80.00	14317647.08	38.23740	0.00	0.000	27441.21	0.00000
2424682.6	-60.00	7020257.55	28.78708	0.00	0.000	31014.99	0.00000
2424987.3	-40.00	2984367.59	19.23539	0.00	0.000	33648.70	0.00000
2425225.2	-20.00	924706.05	9.62982	.36	.003	35261.78	.00012
2425247.0	-18.00	802219.00	8.66756	.54	.006	35364.78	.00027
2425268.6	-16.00	693385.79	7.70510	.81	.014	35457.02	.00060
2425289.9	-14.00	597948.07	6.74247	1.22	.031	35538.48	.00134
2425311.1	-12.00	515680.77	5.77971	1.90	.074	35609.13	.00323
2425332.2	-10.00	446390.98	4.81684	3.54	.257	35668.94	.01120
2425353.1	-8.00	389917.05	3.85391	8.84	1.592	35717.90	.06928
2425373.9	-6.00	346127.77	2.89101	23.46	11.177	35756.00	.48600
2425394.6	-4.00	314921.73	1.92832	53.47	57.910	35783.22	2.51614
2425415.1	-2.00	296226.85	.96672	91.62	169.788	35799.56	7.37380
2425431.8	0.00	290000.00	.08103	109.84	243.891	35805.01	10.59042
2425448.6	2.00	296226.85	.96672	91.62	169.788	35799.56	7.37380
2425469.1	4.00	314921.73	1.92832	53.47	57.910	35783.22	2.51614
2425489.8	6.00	346127.77	2.89101	23.46	11.177	35756.00	.48600
2425510.6	8.00	389917.05	3.85391	8.84	1.592	35717.90	.06928
2425531.5	10.00	446390.98	4.81684	3.54	.257	35668.94	.01120
2425552.5	12.00	515680.77	5.77971	1.90	.074	35609.13	.00323
2425573.7	14.00	597948.07	6.74247	1.22	.031	35538.48	.00134
2425595.1	16.00	693385.79	7.70510	.81	.014	35457.02	.00060
2425616.6	18.00	802219.00	8.66756	.54	.006	35364.78	.00027
2425638.5	20.00	924706.05	9.62982	.36	.003	35261.78	.00012
2425876.3	40.00	2984367.59	19.23539	0.00	0.000	33648.70	0.00000
2426181.1	60.00	7020257.55	28.78708	0.00	0.000	31014.99	0.00000
2426631.5	80.00	14317647.08	38.23740	0.00	0.000	27441.21	0.00000
2427422.0	100.00	27879924.04	47.49737	0.00	0.000	23036.99	0.00000
2429153.3	120.00	55525496.55	56.36530	0.00	0.000	17938.59	0.00000
2434298.8	140.00	121115659.67	64.24608	0.00	0.000	12308.05	0.00000
2457227.3	160.00	301878977.08	68.25029	0.00	0.000	6350.54	0.00000
2562686.1	180.00	557549336.84	.08103	0.00	0.000	1313.16	0.00000

REVOLUTION 6

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
2562686.1	-180.00	474877518.89	.08103	0.00	0.000	1527.62	0.00000
2643738.2	-160.00	275159782.18	66.35934	0.00	0.000	6379.15	0.00000
2663988.5	-140.00	116159552.41	63.29477	0.00	0.000	12294.17	0.00000
2668883.5	-120.00	54282487.86	55.76129	0.00	0.000	17898.89	0.00000
2670577.4	-100.00	27480310.16	47.08074	0.00	0.000	22977.25	0.00000
2671360.4	-80.00	14170336.59	37.94372	0.00	0.000	27365.30	0.00000
2671809.3	-60.00	6964092.30	28.58489	0.00	0.000	30926.42	0.00000
2672114.1	-40.00	2965106.60	19.10788	0.00	0.000	33550.97	0.00000
2672352.5	-20.00	920557.08	9.56804	.36	.003	35158.50	.00013
2672374.4	-18.00	798889.35	8.61207	.54	.006	35261.15	.00028
2672396.0	-16.00	690776.66	7.65586	.81	.014	35353.07	.00061
2672417.4	-14.00	595964.98	6.69946	1.22	.031	35434.25	.00136
2672438.7	-12.00	514232.96	5.74289	1.90	.075	35504.65	.00328
2672459.8	-10.00	445390.91	4.78619	3.55	.261	35564.26	.01140
2672480.8	-8.00	389279.79	3.82942	8.87	1.618	35613.06	.07062
2672501.6	-6.00	345770.53	2.87265	23.45	11.275	35651.03	.49171
2672522.4	-4.00	314763.34	1.91610	53.21	57.908	35678.16	2.52346
2672543.0	-2.00	296187.31	.96063	90.88	168.684	35694.44	7.34741
2672560.0	0.00	290000.00	.08103	108.83	241.749	35699.86	10.52832
2672577.1	2.00	296187.31	.96063	90.88	168.684	35694.44	7.34741
2672597.7	4.00	314763.34	1.91610	53.21	57.908	35678.16	2.52346
2672618.4	6.00	345770.53	2.87265	23.45	11.275	35651.03	.49171
2672639.3	8.00	389279.79	3.82942	8.87	1.618	35613.06	.07062
2672660.3	10.00	445390.91	4.78619	3.55	.261	35564.26	.01140
2672681.4	12.00	514232.96	5.74289	1.90	.075	35504.65	.00328
2672702.6	14.00	595964.98	6.69946	1.22	.031	35434.25	.00136
2672724.1	16.00	690776.66	7.65586	.81	.014	35353.07	.00061
2672745.7	18.00	798889.35	8.61207	.54	.006	35261.15	.00028
2672767.6	20.00	920557.08	9.56804	.36	.003	35158.50	.00013
2673005.9	40.00	2965106.60	19.10788	0.00	0.000	33550.97	0.00000
2673310.7	60.00	6964092.30	28.58489	0.00	0.000	30926.42	0.00000
2673759.7	80.00	14170336.59	37.94372	0.00	0.000	27365.30	0.00000
2674542.7	100.00	27480310.16	47.08074	0.00	0.000	22977.25	0.00000
2676236.6	120.00	54282487.86	55.76129	0.00	0.000	17898.89	0.00000
2681131.6	140.00	116159552.41	63.29477	0.00	0.000	12294.17	0.00000
2701381.9	160.00	275159782.18	66.35934	0.00	0.000	6379.15	0.00000
2782433.9	180.00	474877518.89	.08103	0.00	0.000	1527.62	0.00000

REVOLUTION 7

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
2782433.9	-180.00	408681507.56	.08103	0.00	0.000	1757.45	0.00000
2845737.0	-160.00	250901304.39	64.35405	0.00	0.000	6417.50	0.00000
2863621.0	-140.00	111189443.86	62.27325	0.00	0.000	12283.18	0.00000
2868267.3	-120.00	52986815.31	55.11112	0.00	0.000	17858.74	0.00000
2869922.3	-100.00	27056725.44	46.63188	0.00	0.000	22914.81	0.00000
2870697.5	-80.00	14012884.21	37.62721	0.00	0.000	27285.03	0.00000
2871144.9	-60.00	6903788.96	28.36694	0.00	0.000	30832.23	0.00000
2871449.7	-40.00	2944374.72	18.97043	0.00	0.000	33446.74	0.00000
2871688.6	-20.00	916085.55	9.50144	.37	.003	35048.21	.00013
2871710.5	-18.00	795300.57	8.55224	.55	.006	35150.47	.00028
2871732.2	-16.00	687964.28	7.60278	.81	.014	35242.05	.00062
2871753.7	-14.00	593827.27	6.65308	1.22	.031	35322.92	.00138
2871775.0	-12.00	512672.21	5.70318	1.90	.076	35393.06	.00333
2871796.2	-10.00	444312.77	4.75314	3.56	.265	35452.44	.01162
2871817.3	-8.00	388592.76	3.80301	8.90	1.646	35501.06	.07209
2871838.2	-6.00	345385.37	2.85286	23.44	11.382	35538.88	.49795
2871859.0	-4.00	314592.57	1.90292	52.93	57.909	35565.91	2.53148
2871879.7	-2.00	296144.67	.95406	90.10	167.511	35582.13	7.31935
2871897.0	0.00	290000.00	.08103	107.75	239.474	35587.53	10.46216
2871914.4	2.00	296144.67	.95406	90.10	167.511	35582.13	7.31935
2871935.1	4.00	314592.57	1.90292	52.93	57.909	35565.91	2.53148
2871955.9	6.00	345385.37	2.85286	23.44	11.382	35538.88	.49795
2871976.8	8.00	388592.76	3.80301	8.90	1.646	35501.06	.07209
2871997.9	10.00	444312.77	4.75314	3.56	.265	35452.44	.01162
2872019.0	12.00	512672.21	5.70318	1.90	.076	35393.06	.00333
2872040.4	14.00	593827.27	6.65308	1.22	.031	35322.92	.00138
2872061.9	16.00	687964.28	7.60278	.81	.014	35242.05	.00062
2872083.5	18.00	795300.57	8.55224	.55	.006	35150.47	.00028
2872105.5	20.00	916085.55	9.50144	.37	.003	35048.21	.00013
2872344.4	40.00	2944374.72	18.97043	0.00	0.000	33446.74	0.00000
2872649.2	60.00	6903788.96	28.36694	0.00	0.000	30832.23	0.00000
2873096.6	80.00	14012884.21	37.62721	0.00	0.000	27285.03	0.00000
2873871.7	100.00	27056725.44	46.63188	0.00	0.000	22914.81	0.00000
2875526.8	120.00	52986815.31	55.11112	0.00	0.000	17858.74	0.00000
2880173.1	140.00	111189443.86	62.27325	0.00	0.000	12283.18	0.00000
2898057.1	160.00	250901304.39	64.35405	0.00	0.000	6417.50	0.00000
2961360.1	180.00	408681507.56	.08103	0.00	0.000	1757.45	0.00000

REVOLUTION 8

TIME	THETA	ALTITUDE	GAMMA	QCONT.	QFM	VELOCITY	P_T
2961360.1	-180.00	354766039.11	.08103	0.00	0.000	2002.91	0.00000
3011484.2	-160.00	228900261.97	62.24169	0.00	0.000	6467.10	0.00000
3027281.9	-140.00	106233985.39	61.18075	0.00	0.000	12275.90	0.00000
3031683.1	-120.00	51643002.59	54.41367	0.00	0.000	17818.61	0.00000
3033298.0	-100.00	26609613.14	46.14988	0.00	0.000	22849.94	0.00000
3034064.9	-80.00	13845209.93	37.28715	0.00	0.000	27200.53	0.00000
3034510.6	-60.00	6839260.34	28.13272	0.00	0.000	30732.48	0.00000
3034815.5	-40.00	2922130.56	18.82269	0.00	0.000	33336.03	0.00000
3035054.9	-20.00	911281.23	9.42985	.37	.003	34930.86	.00013
3035076.9	-18.00	791444.39	8.48794	.55	.006	35032.70	.00029
3035098.7	-16.00	684942.12	7.54572	.81	.014	35123.90	.00063
3035120.2	-14.00	591529.97	6.60323	1.22	.032	35204.44	.00140
3035141.6	-12.00	510994.84	5.66051	1.90	.077	35274.29	.00338
3035162.9	-10.00	443154.03	4.71762	3.57	.270	35333.43	.01187
3035184.0	-8.00	387854.34	3.77462	8.93	1.677	35381.85	.07371
3035205.0	-6.00	344971.39	2.83159	23.43	11.500	35419.52	.50477
3035225.9	-4.00	314409.01	1.88875	52.64	57.914	35446.43	2.54023
3035246.7	-2.00	296098.85	.94700	89.27	166.270	35462.58	7.28963
3035264.3	0.00	290000.00	.08103	106.62	237.068	35467.97	10.39198
3035281.9	2.00	296098.85	.94700	89.27	166.270	35462.58	7.28963
3035302.7	4.00	314409.01	1.88875	52.64	57.914	35446.43	2.54023
3035323.6	6.00	344971.39	2.83159	23.43	11.500	35419.52	.50477
3035344.6	8.00	387854.34	3.77462	8.93	1.677	35381.85	.07371
3035365.7	10.00	443154.03	4.71762	3.57	.270	35333.43	.01187
3035386.9	12.00	510994.84	5.66051	1.90	.077	35274.29	.00338
3035408.3	14.00	591529.97	6.60323	1.22	.032	35204.44	.00140
3035429.9	16.00	684942.12	7.54572	.81	.014	35123.90	.00063
3035451.6	18.00	791444.39	8.48794	.55	.006	35032.70	.00029
3035473.6	20.00	911281.23	9.42985	.37	.003	34930.86	.00013
3035713.1	40.00	2922130.56	18.82269	0.00	0.000	33336.03	0.00000
3036018.0	60.00	6839260.34	28.13272	0.00	0.000	30732.48	0.00000
3036463.7	80.00	13845209.93	37.28715	0.00	0.000	27200.53	0.00000
3037230.5	100.00	26609613.14	46.14988	0.00	0.000	22849.94	0.00000
3038845.4	120.00	51643002.59	54.41367	0.00	0.000	17818.61	0.00000
3043246.6	140.00	106233985.39	61.18075	0.00	0.000	12275.90	0.00000
3059044.3	160.00	228900261.97	62.24169	0.00	0.000	6467.10	0.00000
3109168.4	180.00	354766039.11	.08103	0.00	0.000	2002.91	0.00000

REVOLUTION 9

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCIIY	P T
3109168.4	-180.00	310210506.38	.08103	0.00	0.000	2264.28	0.00000
3149331.4	-160.00	208952186.50	60.03114	0.00	0.000	6529.48	0.00000
3163292.4	-140.00	101317996.84	60.01658	0.00	0.000	12273.21	0.00000
3167453.3	-120.00	50255483.02	53.66775	0.00	0.000	17779.02	0.00000
3169027.0	-100.00	26139408.81	45.63371	0.00	0.000	22782.95	0.00000
3169785.1	-80.00	13667217.52	36.92278	0.00	0.000	27111.95	0.00000
3170229.0	-60.00	6770407.95	27.88168	0.00	0.000	30627.23	0.00000
3170534.0	-40.00	2898327.61	18.66431	0.00	0.000	33218.80	0.00000
3170774.0	-20.00	906132.67	9.35310	.37	.003	34806.41	.00013
3170796.1	-18.00	787311.53	8.41899	.55	.007	34907.79	.00029
3170817.9	-16.00	681702.87	7.48454	.82	.014	34998.59	.00064
3170839.5	-14.00	589067.47	6.54978	1.22	.032	35078.76	.00142
3170861.0	-12.00	509196.75	5.61476	1.90	.078	35148.30	.00344
3170882.3	-10.00	441911.83	4.67954	3.59	.275	35207.17	.01214
3170903.5	-8.00	387062.70	3.74418	8.97	1.712	35255.37	.07549
3170924.6	-6.00	344527.56	2.80878	23.42	11.627	35292.87	.51222
3170945.6	-4.00	314212.22	1.87356	52.34	57.924	35319.66	2.54978
3170966.4	-2.00	296049.72	.93942	88.39	164.963	35335.74	7.25826
3170984.3	0.00	290000.00	.08103	105.42	234.534	35341.10	10.31777
3171002.1	2.00	296049.72	.93942	88.39	164.963	35335.74	7.25826
3171023.0	4.00	314212.22	1.87356	52.34	57.924	35319.66	2.54978
3171044.0	6.00	344527.56	2.80878	23.42	11.627	35292.87	.51222
3171065.1	8.00	387062.70	3.74418	8.97	1.712	35255.37	.07549
3171086.2	10.00	441911.83	4.67954	3.59	.275	35207.17	.01214
3171107.6	12.00	509196.75	5.61476	1.90	.078	35148.30	.00344
3171129.0	14.00	589067.47	6.54978	1.22	.032	35078.76	.00142
3171150.7	16.00	681702.87	7.48454	.82	.014	34998.59	.00064
3171172.5	18.00	787311.53	8.41899	.55	.007	34907.79	.00029
3171194.6	20.00	906132.67	9.35310	.37	.003	34806.41	.00013
3171434.6	40.00	2898327.61	18.66431	0.00	0.000	33218.80	0.00000
3171739.5	60.00	6770407.95	27.88168	0.00	0.000	30627.23	0.00000
3172183.5	80.00	13667217.52	36.92278	0.00	0.000	27111.95	0.00000
3172941.5	100.00	26139408.81	45.63371	0.00	0.000	22782.95	0.00000
3174515.2	120.00	50255483.02	53.66775	0.00	0.000	17779.02	0.00000
3178676.1	140.00	101317996.84	60.01658	0.00	0.000	12273.21	0.00000
3192637.2	160.00	208952186.50	60.03114	0.00	0.000	6529.48	0.00000
3232800.1	180.00	310210506.38	.08103	0.00	0.000	2264.28	0.00000

REVOLUTION 10

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P_T
3232800.1	-180.00	272925661.97	.08103	0.00	0.000	2541.89	0.00000
3265317.3	-160.00	190859860.17	57.73293	0.00	0.000	6606.26	0.00000
3277662.7	-140.00	96462641.53	58.78024	0.00	0.000	12276.08	0.00000
3281589.3	-120.00	48828577.45	52.87210	0.00	0.000	17740.54	0.00000
3283120.7	-100.00	25646539.21	45.08226	0.00	0.000	22714.16	0.00000
3283869.6	-80.00	13478793.94	36.53323	0.00	0.000	27019.48	0.00000
3284311.7	-60.00	6697121.34	27.61318	0.00	0.000	30516.52	0.00000
3284616.7	-40.00	2872913.90	18.49489	0.00	0.000	33095.06	0.00000
3284857.3	-20.00	900627.01	9.27098	.37	.003	34674.81	.00014
3284879.5	-18.00	782891.61	8.34523	.55	.007	34775.69	.00030
3284901.4	-16.00	678238.35	7.41909	.82	.015	34866.04	.00066
3284923.1	-14.00	586433.53	6.49260	1.22	.032	34945.82	.00144
3284944.6	-12.00	507273.34	5.56581	1.91	.079	35015.01	.00351
3284966.0	-10.00	440582.98	4.63880	3.60	.281	35073.60	.01244
3284987.3	-8.00	386215.81	3.71162	9.01	1.749	35121.56	.07744
3285008.4	-6.00	344052.73	2.78438	23.41	11.767	35158.87	.52033
3285029.5	-4.00	314001.68	1.85731	52.02	57.939	35185.54	2.56018
3285050.5	-2.00	295997.16	.93133	87.47	163.589	35201.54	7.22526
3285068.6	0.00	290000.00	.08103	104.16	231.871	35206.87	10.23955
3285086.7	2.00	295997.16	.93133	87.47	163.589	35201.54	7.22526
3285107.6	4.00	314001.68	1.85731	52.02	57.939	35185.54	2.56018
3285128.7	6.00	344052.73	2.78438	23.41	11.767	35158.87	.52033
3285149.8	8.00	386215.81	3.71162	9.01	1.749	35121.56	.07744
3285171.1	10.00	440582.98	4.63880	3.60	.281	35073.60	.01244
3285192.5	12.00	507273.34	5.56581	1.91	.079	35015.01	.00351
3285214.0	14.00	586433.53	6.49260	1.22	.032	34945.82	.00144
3285235.7	16.00	678238.35	7.41909	.82	.015	34866.04	.00066
3285257.7	18.00	782891.61	8.34523	.55	.007	34775.69	.00030
3285279.8	20.00	900627.01	9.27098	.37	.003	34674.81	.00014
3285520.4	40.00	2872913.90	18.49489	0.00	0.000	33095.06	0.00000
3285825.4	60.00	6697121.34	27.61318	0.00	0.000	30516.52	0.00000
3286267.5	80.00	13478793.94	36.53323	0.00	0.000	27019.48	0.00000
3287016.4	100.00	25646539.21	45.08226	0.00	0.000	22714.16	0.00000
3288547.9	120.00	48828577.45	52.87210	0.00	0.000	17740.54	0.00000
3292474.4	140.00	96462641.53	58.78024	0.00	0.000	12276.08	0.00000
3304819.8	160.00	190859860.17	57.73293	0.00	0.000	6606.26	0.00000
3337337.0	180.00	272925661.97	.08103	0.00	0.000	2541.89	0.00000

REVOLUTION 11

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3337337.0	-180.00	241381893.57	.08103	0.00	0.000	2836.11	0.00000
3363906.1	-160.00	174438147.03	55.35917	0.00	0.000	6699.03	0.00000
3374830.5	-140.00	91685657.59	57.47142	0.00	0.000	12285.55	0.00000
3378529.4	-120.00	47366474.28	52.02538	0.00	0.000	17703.80	0.00000
3380017.9	-100.00	25131421.13	44.49432	0.00	0.000	22643.93	0.00000
3380757.2	-80.00	13279808.57	36.11753	0.00	0.000	26923.28	0.00000
3381197.2	-60.00	6619277.29	27.32653	0.00	0.000	30400.43	0.00000
3381502.3	-40.00	2845831.51	18.31397	0.00	0.000	32964.77	0.00000
3381743.6	-20.00	894749.95	9.18329	.37	.003	34535.98	.00014
3381765.8	-18.00	778173.06	8.26646	.55	.007	34636.32	.00031
3381787.8	-16.00	674539.41	7.34919	.82	.015	34726.18	.00067
3381809.6	-14.00	583621.15	6.43153	1.22	.033	34805.53	.00147
3381831.2	-12.00	505219.50	5.51354	1.91	.080	34874.36	.00358
3381852.7	-10.00	439163.93	4.59529	3.62	.287	34932.63	.01279
3381874.0	-8.00	385311.38	3.67684	9.06	1.791	34980.33	.07959
3381895.3	-6.00	343545.64	2.75833	23.41	11.919	35017.45	.52918
3381916.4	-4.00	313776.82	1.83996	51.68	57.961	35043.97	2.57150
3381937.5	-2.00	295941.02	.92268	86.51	162.150	35059.88	7.19064
3381955.8	0.00	290000.00	.08103	102.85	229.083	35065.19	10.15730
3381974.1	2.00	295941.02	.92268	86.51	162.150	35059.88	7.19064
3381995.2	4.00	313776.82	1.83996	51.68	57.961	35043.97	2.57150
3382016.3	6.00	343545.64	2.75833	23.41	11.919	35017.45	.52918
3382037.6	8.00	385311.38	3.67684	9.06	1.791	34980.33	.07959
3382058.9	10.00	439163.93	4.59529	3.62	.287	34932.63	.01279
3382080.4	12.00	505219.50	5.51354	1.91	.080	34874.36	.00358
3382102.0	14.00	583621.15	6.43153	1.22	.033	34805.53	.00147
3382123.8	16.00	674539.41	7.34919	.82	.015	34726.18	.00067
3382145.8	18.00	778173.06	8.26646	.55	.007	34636.32	.00031
3382168.0	20.00	894749.95	9.18329	.37	.003	34535.98	.00014
3382409.3	40.00	2845831.51	18.31397	0.00	0.000	32964.77	0.00000
3382714.4	60.00	6619277.29	27.32653	0.00	0.000	30400.43	0.00000
3383154.5	80.00	13279808.57	36.11753	0.00	0.000	26923.28	0.00000
3383893.7	100.00	25131421.13	44.49432	0.00	0.000	22643.93	0.00000
3385382.2	120.00	47366474.28	52.02538	0.00	0.000	17703.80	0.00000
3389081.1	140.00	91685657.59	57.47142	0.00	0.000	12285.55	0.00000
3400005.5	160.00	174438147.03	55.35917	0.00	0.000	6699.03	0.00000
3426574.6	180.00	241381893.57	.08103	0.00	0.000	2836.11	0.00000

REVOLUTION 12

TIME	THETA	ALTITUDE	GAMMA	QCONT	QFM	VELOCITY	P/T
3426574.6	-180.00	214436626.12	.08103	0.00	0.000	3147.34	0.00000
3448460.7	-160.00	159516400.03	52.92335	0.00	0.000	6809.42	0.00000
3458135.2	-140.00	87001624.96	56.09009	0.00	0.000	12302.74	0.00000
3461614.1	-120.00	45873211.48	51.12621	0.00	0.000	17669.47	0.00000
3463058.8	-100.00	24594459.65	43.86855	0.00	0.000	22572.67	0.00000
3463788.1	-80.00	13070112.12	35.67464	0.00	0.000	26823.57	0.00000
3464226.1	-60.00	6536738.88	27.02097	0.00	0.000	30279.02	0.00000
3464531.1	-40.00	2817016.05	18.12106	0.00	0.000	32827.91	0.00000
3464773.1	-20.00	888485.58	9.08976	.38	.003	34389.84	.00015
3464795.4	-18.00	773143.00	8.18245	.55	.007	34489.59	.00032
3464817.5	-16.00	670595.90	7.27464	.82	.015	34578.92	.00069
3464839.4	-14.00	580622.56	6.36640	1.22	.033	34657.81	.00150
3464861.1	-12.00	503029.52	5.45779	1.91	.082	34726.23	.00366
3464882.7	-10.00	437650.74	4.54888	3.64	.295	34784.16	.01319
3464904.1	-8.00	384346.91	3.63976	9.11	1.836	34831.59	.08196
3464925.4	-6.00	343004.85	2.73053	23.40	12.084	34868.49	.53881
3464946.7	-4.00	313537.02	1.82145	51.33	57.991	34894.85	2.58381
3464967.8	-2.00	295881.15	.91345	85.50	160.646	34910.67	7.15440
3464986.4	0.00	290000.00	.08103	101.48	226.171	34915.95	10.07102
3465004.9	2.00	295881.15	.91345	85.50	160.646	34910.67	7.15440
3465026.1	4.00	313537.02	1.82145	51.33	57.991	34894.85	2.58381
3465047.3	6.00	343004.85	2.73053	23.40	12.084	34868.49	.53881
3465066.7	8.00	384346.91	3.63976	9.11	1.836	34831.59	.08196
3465090.1	10.00	437650.74	4.54888	3.64	.295	34784.16	.01319
3465111.7	12.00	503029.52	5.45779	1.91	.082	34726.23	.00366
3465133.4	14.00	580622.56	6.36640	1.22	.033	34657.81	.00150
3465155.2	16.00	670595.90	7.27464	.82	.015	34578.92	.00069
3465177.3	18.00	773143.00	8.18245	.55	.007	34489.59	.00032
3465199.6	20.00	888485.58	9.08976	.38	.003	34389.84	.00015
3465441.6	40.00	2817016.05	18.12106	0.00	0.000	32827.91	0.00000
3465746.7	60.00	6536738.88	27.02097	0.00	0.000	30279.02	0.00000
3466184.7	80.00	13070112.12	35.67464	0.00	0.000	26823.57	0.00000
3466913.9	100.00	24594459.65	43.86855	0.00	0.000	22572.67	0.00000
3468358.7	120.00	45873211.48	51.12621	0.00	0.000	17669.47	0.00000
3471837.6	140.00	87001624.96	56.09009	0.00	0.000	12302.74	0.00000
3481512.1	160.00	159516400.03	52.92335	0.00	0.000	6809.42	0.00000
3503398.1	180.00	214436626.12	.08103	0.00	0.000	3147.34	0.00000