

	Time (s)	Mass		Acceleration					Velocity				Atmosphere										Engine Cutoff						
		Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Space Fixed			Earth Fixed	Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)
									Vert (m/s)	Horz (m/s)	Total (m/s)																		
Target Orbit	0	310079	275900	34179	4041488	0.0	3.23	0.00	1.33	0	287	287	0	116	0	90.00	9.82	99938	1.2E+00	287.4	28.97	0.0	0.60	28.2	0	0	0	0	0.00
Altitude	1	308471	274292	34179	4041662	0.0	3.29	0.00	1.34	3	287	287	3	118	0	89.35	9.82	99918	1.2E+00	287.4	28.97	0.0	0.59	28.2	107	0	0	0	0.00
Inclination	2	306864	272685	34179	4042188	0.0	3.36	0.00	1.34	7	287	287	7	123	0	88.69	9.82	99860	1.2E+00	287.4	28.97	0.0	0.58	28.2	432	0	0	0	0.00
Velocity	3	305256	271077	34179	4043074	0.0	3.43	0.00	1.35	10	287	287	10	131	0	88.01	9.82	99761	1.2E+00	287.3	28.97	0.0	0.57	28.2	977	0	0	0	0.00
Launch Site	4	303648	269469	34179	4044324	0.0	3.51	0.00	1.36	13	287	287	13	143	0	87.32	9.82	99622	1.2E+00	287.3	28.97	0.0	0.57	28.2	1745	0	0	0	0.00
Elevation	5	302041	267862	34179	4045946	0.0	3.58	0.00	1.37	17	287	288	17	158	0	86.61	9.82	99442	1.2E+00	287.2	28.97	0.1	0.56	28.2	2738	0	0	0	0.00
Latitude	6	300433	266254	34179	4047945	0.0	3.65	0.00	1.37	21	287	288	21	177	0	85.89	9.82	99220	1.2E+00	287.1	28.97	0.1	0.55	28.2	3958	0	0	0	0.00
Azimuth, Inertial	7	298826	264647	34179	4050327	0.0	3.73	0.00	1.38	24	287	288	24	199	0	85.16	9.82	98956	1.2E+00	286.9	28.97	0.1	0.54	28.2	5406	0	0	0	0.00
Azimuth, Rotating	8	297218	263039	34179	4053097	0.0	3.81	0.00	1.39	28	287	289	28	225	0	84.42	9.82	98648	1.2E+00	286.7	28.97	0.1	0.53	28.2	7083	0	0	0	0.00
Initial Velocity	9	295610	261431	34179	4056259	0.0	3.88	0.00	1.40	32	287	289	32	255	0	83.66	9.82	98296	1.2E+00	286.5	28.97	0.1	0.52	28.2	8989	0	0	0	0.00
Ascent Profile:	10	294003	259824	34179	4059818	0.0	3.96	0.00	1.40	36	287	289	36	289	0	82.88	9.82	97901	1.2E+00	286.3	28.97	0.1	0.52	28.2	11125	0	0	0	0.00
Time	11	292395	258216	34179	4063778	0.0	4.05	0.00	1.41	40	287	290	40	327	0	82.10	9.82	97461	1.2E+00	286.1	28.97	0.1	0.51	28.2	13490	0	0	0	0.00
Pitch	12	290787	256608	34179	4068143	0.0	4.13	0.00	1.42	44	287	290	44	369	0	81.30	9.82	96976	1.2E+00	285.8	28.97	0.1	0.50	28.2	16084	0	0	0	0.00
Point #1	13	289180	255001	34179	4072915	0.0	4.21	0.00	1.43	48	287	291	48	415	0	80.49	9.82	96446	1.2E+00	285.5	28.97	0.1	0.49	28.2	18907	0	0	0	0.00
Point #2	14	287572	253393	34179	4078097	0.0	4.30	0.00	1.44	52	287	292	52	465	0	79.66	9.82	95870	1.2E+00	285.2	28.97	0.2	0.48	28.2	21957	0	0	0	0.00
Point #3	15	285964	251785	34179	4083693	0.0	4.39	0.00	1.45	57	287	293	57	520	0	78.83	9.82	95248	1.2E+00	284.8	28.97	0.2	0.48	28.2	25235	0	0	0	0.00
Point #4	16	284357	250178	34179	4089704	0.0	4.48	0.00	1.46	61	287	294	61	579	0	77.98	9.82	94581	1.2E+00	284.4	28.97	0.2	0.47	28.2	28741	0	0	0	0.00
Point #5	17	282749	248570	34179	4096133	0.0	4.57	0.00	1.47	66	287	295	66	642	0	77.12	9.82	93866	1.2E+00	284.0	28.97	0.2	0.46	28.2	32474	0	0	0	0.00
Engine Cutoff	18	281142	246963	34179	4102980	0.0	4.66	0.00	1.47	70	287	296	70	710	0	76.25	9.82	93106	1.1E+00	283.6	28.97	0.2	0.46	28.2	36436	0	0	0	0.00
Time, T+	19	279534	245355	34179	4110247	0.0	4.75	0.00	1.48	75	287	297	75	783	0	75.36	9.82	92298	1.1E+00	283.1	28.97	0.2	0.45	28.2	40627	0	0	0	0.00
Velocity	20	277926	243747	34179	4117934	0.0	4.85	0.00	1.49	80	287	298	80	860	0	74.47	9.82	91444	1.1E+00	282.6	28.97	0.2	0.45	28.2	45049	0	0	0	0.00
Altitude	21	276319	242140	34179	4126042	0.6	4.95	0.16	1.50	85	287	299	85	942	0	73.57	9.82	90543	1.1E+00	282.1	28.97	0.3	0.44	28.2	49706	0	0	0	0.00
Gamma	22	274711	240532	34179	4134570	1.3	5.04	0.32	1.51	90	287	301	90	1029	0	72.67	9.82	89596	1.1E+00	281.5	28.97	0.3	0.43	28.2	54599	0	0	0	0.00
Excess Velocity	23	273103	238924	34179	4143517	1.9	5.14	0.48	1.52	95	288	303	95	1122	0	71.78	9.82	88602	1.1E+00	280.9	28.97	0.3	0.43	28.2	59733	0	0	0	0.00
Insertion Orbit	24	271496	237317	34179	4152880	2.5	5.24	0.65	1.54	100	288	305	100	1219	1	70.88	9.82	87562	1.1E+00	280.3	28.97	0.3	0.42	28.2	65114	0	0	0	0.00
Perigee	25	269888	235709	34179	4162658	3.1	5.34	0.82	1.55	105	289	308	105	1322	3	70.00	9.82	86475	1.1E+00	279.6	28.97	0.3	0.42	28.2	70750	0	0	0	0.00
Apogee	26	268280	234101	34179	4172846	3.8	5.43	0.99	1.56	111	290	310	111	1430	5	69.12	9.82	85343	1.1E+00	278.9	28.97	0.3	0.42	28.2	76649	0	0	0	0.00
Eccentricity	27	266673	232494	34179	4183438	4.4	5.53	1.17	1.57	116	291	313	116	1543	9	68.26	9.82	84167	1.1E+00	278.2	28.97	0.3	0.41	28.2	82823	0	0	0	0.00
"C"	28	265065	230886	34179	4194429	5.0	5.63	1.34	1.58	122	292	317	122	1662	14	67.40	9.82	82946	1.0E+00	277.4	28.97	0.4	0.41	28.2	89286	0	0	0	0.00
Max. Acceleration	29	263458	229279	34179	4205811	5.6	5.72	1.52	1.59	127	294	320	127	1786	19	66.56	9.81	81681	1.0E+00	276.6	28.97	0.4	0.41	28.2	96052	0	0	0	0.00
General	30	261850	227671	34179	4217574	6.3	5.82	1.70	1.60	133	295	324	133	1917	27	65.74	9.81	80374	1.0E+00	275.7	28.97	0.4	0.40	28.2	103136	0	0	0	0.00
Total Mass	31	260242	226063	34179	4229709	6.9	5.91	1.89	1.61	139	297	328	139	2053	36	64.94	9.81	79026	1.0E+00	274.9	28.97	0.4	0.40	28.2	110555	0	0	0	0.00
Total Propellant	32	258635	224456	34179	4242201	7.5	6.01	2.07	1.63	145	299	332	145	2195	47	64.15	9.81	77638	9.9E-01	273.9	28.97	0.4	0.40	28.2	118325	0	0	0	0.00
Total Dry Mass	33	257027	222848	34179	4255038	8.1	6.10	2.26	1.64	151	301	337	152	2343	60	63.38	9.81	76212	9.7E-01	273.0	28.97	0.5	0.40	28.2	126459	0	0	0	0.00
Mass Fraction	34	255419	221240	34179	4268203	8.8	6.20	2.45	1.65	157	304	342	158	2497	76	62.64	9.81	74749	9.6E-01	272.0	28.97	0.5	0.40	28.2	134966	0	0	0	0.00
Payload	35	253812	219633	34179	4281680	9.4	6.29	2.65	1.66	163	306	347	165	2657	94	61.92	9.81	73252	9.4E-01	270.9	28.97	0.5	0.40	28.2	143839	0	0	0	0.00
Mass	36	252204	218025	34179	4295449	10.0	6.38	2.84	1.67	170	309	353	171	2824	114	61.22	9.81	71722	9.3E-01	269.8	28.97	0.5	0.40	28.2	153025	0	0	0	0.00
Mass	37	250597	216418	34179	4309495	10.6	6.47	3.04	1.69	176	312	358	178	2997	137	60.55	9.81	70162	9.1E-01	268.7	28.97	0.5	0.40	28.2	162527	0	0	0	0.00
Mass	38	248989	214810	34179	4323782	11.3	6.56	3.24	1.70	183	315	364	185	3176	164	59.90	9.81	68574	8.9E-01	267.6	28.97	0.6	0.40	28.2	172398	0	0	0	0.00
Mass	39	247381	213202	34179	4338305	11.9	6.64	3.45	1.71	189	318	370	1																

	Time (s)	Mass		Acceleration									Velocity				Atmosphere										Engine Cutoff			
		Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Space Fixed			Earth	Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)	
									Vert (m/s)	Horz (m/s)	Total (m/s)	Fixed (m/s)																		
Thrust (sea level)	745000 N	59	215229	181050	34179	4645254	24.4	6.93	7.54	1.87	332	430	543	361	8561	1792	52.30	9.79	32858	4.9E-01	232.6	28.97	1.2	0.77	28.2	699942	0	0	0	0.00
Thrust (vacuum)	941000 N	60	213621	179442	34179	4659504	25.0	6.81	7.70	1.86	339	437	553	371	8896	1938	52.22	9.79	31275	4.7E-01	230.4	28.97	1.2	0.82	28.2	753276	0	0	0	0.00
Burn Time	310.2 s	61	212013	177834	34179	4673469	25.5	6.73	7.84	1.86	346	445	563	380	9238	2092	52.16	9.79	29723	4.5E-01	228.2	28.97	1.3	0.87	28.2	799856	0	0	0	0.00
Propellant Mass	94500 kg	62	210406	176227	34179	4687130	26.0	6.67	7.99	1.86	352	453	574	389	9587	2254	52.12	9.79	28205	4.4E-01	225.9	28.97	1.3	0.90	28.2	840294	0	0	0	0.00
Empty Mass	6798 kg	63	208798	174619	34179	4700473	26.5	6.64	8.15	1.87	359	461	584	399	9943	2423	52.09	9.79	26723	4.2E-01	223.6	28.97	1.3	0.94	28.2	874137	0	0	0	0.00
O-Stage (Strap-ons)		64	207190	173011	34179	4714959	27.0	6.67	8.34	1.88	366	469	595	408	10305	2601	52.07	9.79	25114	4.0E-01	221.2	28.97	1.4	0.96	28.2	895195	0	0	0	0.00
No. of Strap-ons	4 ea	65	205583	171404	34179	4729176	27.5	6.74	8.56	1.90	372	478	606	418	10674	2788	52.06	9.79	23534	3.7E-01	218.8	28.97	1.4	0.98	28.2	907652	0	0	0	0.00
Strap-on Diameter	2.68 m	66	203975	169796	34179	4742527	28.0	6.83	8.79	1.91	379	486	617	428	11050	2982	52.06	9.79	22051	3.5E-01	216.7	28.97	1.5	0.99	28.2	912012	0	0	0	0.00
Nozzle Exit Area	1.77 m <sup>2</sup>	67	202367	168188	34179	4753471	28.5	6.95	9.04	1.94	386	495	628	439	11433	3186	52.06	9.79	20835	3.3E-01	216.7	28.97	1.5	1.00	28.2	908087	0	0	0	0.00
Specific Impulse (sl)	257 s	68	200760	166581	34179	4764052	29.0	7.10	9.30	1.96	393	504	639	449	11822	3399	52.07	9.78	19659	3.2E-01	216.7	28.97	1.5	1.00	28.2	898730	0	0	0	0.00
Thrust (sea level)	821000 N	69	199152	164973	34179	4774266	29.5	7.25	9.58	1.99	400	514	651	460	12219	3621	52.08	9.78	18525	3.0E-01	216.7	28.97	1.6	1.00	28.2	886289	0	0	0	0.00
Thrust (vacuum)	1000000 N	70	197545	163366	34179	4784110	30.0	7.42	9.87	2.02	408	524	664	471	12623	3852	52.10	9.78	17431	2.8E-01	216.7	28.97	1.6	0.99	28.2	870985	0	0	0	0.00
Burn Time	121.6 s	71	195937	161758	34179	4793584	30.5	7.59	10.17	2.05	415	534	676	483	13034	4094	52.12	9.78	16378	2.6E-01	216.7	28.97	1.6	0.99	28.2	852760	0	0	0	0.00
Propellant Mass	39600 kg	72	194329	160150	34179	4802686	31.0	7.78	10.49	2.08	423	544	689	495	13453	4345	52.14	9.78	15367	2.5E-01	216.7	28.97	1.7	0.98	28.2	831559	0	0	0	0.00
Empty Mass	3770 kg	73	192722	158543	34179	4811417	31.5	7.99	10.82	2.12	431	555	702	507	13880	4607	52.17	9.78	14397	2.3E-01	216.7	28.97	1.7	0.96	28.2	807332	0	0	0	0.00
		74	191114	156935	34179	4819780	32.0	8.20	11.16	2.16	439	566	716	520	14315	4880	52.20	9.78	13468	2.2E-01	216.7	28.97	1.8	0.95	28.2	780115	0	0	0	0.00
		75	189506	155327	34179	4827776	32.5	8.42	11.51	2.19	447	577	730	533	14758	5164	52.23	9.77	12579	2.0E-01	216.7	28.97	1.8	0.93	28.2	752192	0	0	0	0.00
		76	187899	153720	34179	4835409	33.0	8.63	11.87	2.23	456	589	744	546	15209	5460	52.26	9.77	11731	1.9E-01	216.7	28.97	1.8	0.91	28.2	724642	0	0	0	0.00
		77	186291	152112	34179	4842684	33.5	8.84	12.24	2.27	464	601	759	560	15669	5767	52.30	9.77	10923	1.8E-01	216.7	28.97	1.9	0.90	28.2	697503	0	0	0	0.00
		78	184683	150504	34179	4849604	34.0	9.05	12.61	2.31	473	613	774	575	16138	6087	52.33	9.77	10154	1.6E-01	216.7	28.97	1.9	0.88	28.2	670814	0	0	0	0.00
		79	183076	148897	34179	4856176	34.5	9.25	12.98	2.35	482	626	790	589	16615	6419	52.38	9.77	9424	1.5E-01	216.7	28.97	2.0	0.87	28.2	644611	0	0	0	0.00
		80	181468	147289	34179	4862405	35.0	9.45	13.36	2.38	492	639	806	605	17103	6765	52.42	9.77	8732	1.4E-01	216.7	28.97	2.0	0.85	28.2	618927	0	0	0	0.00
		81	179861	145682	34179	4868298	35.5	9.65	13.75	2.42	501	653	823	620	17599	7123	52.47	9.77	8077	1.3E-01	216.7	28.97	2.1	0.84	28.2	593788	0	0	0	0.00
		82	178253	144074	34179	4873862	36.0	9.84	14.14	2.46	511	667	840	636	18105	7496	52.52	9.76	7459	1.2E-01	216.7	28.97	2.2	0.83	28.2	569218	0	0	0	0.00
		83	176645	142466	34179	4879106	36.5	10.03	14.54	2.50	521	681	857	653	18621	7882	52.58	9.76	6877	1.1E-01	216.7	28.97	2.2	0.82	28.2	545236	0	0	0	0.00
		84	175038	140859	34179	4884038	37.0	10.22	14.94	2.54	531	696	875	670	19147	8283	52.64	9.76	6329	1.0E-01	216.7	28.97	2.3	0.81	28.2	521855	0	0	0	0.00
		85	173430	139251	34179	4888668	37.5	10.40	15.35	2.58	541	711	893	687	19684	8700	52.70	9.76	5814	9.3E-02	216.7	28.97	2.3	0.80	28.2	499083	0	0	0	0.00
		86	171822	137643	34179	4892953	38.0	10.58	15.76	2.62	552	726	912	705	20230	9131	52.77	9.76	5338	8.6E-02	216.9	28.97	2.4	0.79	28.2	477019	0	0	0	0.00
		87	170215	136036	34179	4896898	38.5	10.75	16.18	2.66	563	742	931	724	20787	9578	52.84	9.76	4900	7.8E-02	217.5	28.97	2.4	0.79	28.2	455657	0	0	0	0.00
		88	168607	134428	34179	4900588	39.0	10.92	16.60	2.70	573	759	951	742	21355	10041	52.92	9.75	4490	7.2E-02	218.1	28.97	2.5	0.78	28.2	434845	0	0	0	0.00
		89	167000	132821	34179	4904032	39.5	11.08	17.03	2.74	584	776	971	762	21934	10521	53.00	9.75	4107	6.5E-02	218.6	28.97	2.6	0.77	28.2	414582	0	0	0	0.00
		90	165392	131213	34179	4907240	40.0	11.25	17.46	2.78	596	793	992	781	22524	11018	53.08	9.75	3751	6.0E-02	219.2	28.97	2.6	0.77	28.2	394865	0	0	0	0.00
		91	163784	129605	34179	4910222	40.5	11.41	17.90	2.82	607	810	1012	801	23126	11533	53.17	9.75	3419	5.4E-02	219.8	28.97	2.7	0.77	28.2	375691	0	0	0	0.00
		92	162177	127998	34179	4912989	41.0	11.56	18.35	2.86	618	829	1034	822	23738	12065	53.26	9.75	3112	4.9E-02	220.4	28.97	2.8	0.76	28.2	357052	0	0	0	0.00
		93	160569	126390	34179	4915550	41.5	11.71	18.80	2.91	630	847	1056	843	24362	12616	53.36	9.75	2828	4.5E-02	221.1	28.97	2.8	0.76	28.2	338944	0	0	0	0.00
		94	158961	124782	34179	4917915	42.0	11.86	19.26	2.95	642	866	1078	864	24998	13185	53.46	9.74	2565	4.0E-02	221.7	28.97	2.9	0.76	28.2	321361	0	0	0	0.00
		95	157354	123175	34179	4920096	42.5	12.01	19.73	2.99	654	886	1101	886	25646	13774	53.57	9.74	2322	3.6E-02	222.3	28.97	3.0	0.75	28.2	304298	0	0	0	0.00
		96	155746	121567	34179	4922103	43.0	12.15	20.20	3.03	666	906	1124	909	26306	14382	53.68	9.74	2100	3.3E-02	223.0	28.97	3.0	0.75	28.2	287749	0	0	0	0.00
		97	154138	119959	34179	4923945	43.5	12.29	20.68	3.08	678	926	1148	932	26978	15011	53.79	9.74	1895	3.0E-02	223.7	28.97	3.1	0.75	28.2	271713	0	0	0	0.00
		98	152531	118352	34179	4925633	44.0	12.43	21.16	3.12	690	947	1172	955	27662	15661	53.91	9.74	1707	2.7E-02	224.4	28.97	3.2	0.75	28.2	256186	0	0	0	0.00
		99	150923	116744	34179	4927177	44.5	12.56	21.66	3.17	703	968	1197	979	28359	16331	54.03	9.73	1536	2.4E-02	225.1	28.97	3.3	0.75	28.2	241168	0	0	0	0.00
		100	149316	115137	34179	4928586	45.0	12.69	22.16	3.21	716	990	1222	1003	29068	17023	54.15	9.73	1379	2.1E-02	225.8	28.97	3.3	0.75	28.2	226659	0	0	0	0.

Time (s)	Mass			Acceleration									Velocity				Atmosphere										Engine Cutoff			
	Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Space Fixed			Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Engine Cutoff						
									Vert (m/s)	Horz (m/s)	Total (m/s)													Fixed (m/s)	Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)		
118	120378	86199	34179	4939495	54.0	14.51	32.61	4.14	962	1479	1764	1531	44114	33794	56.96	9.69	167	2.2E-03	262.6	28.97	4.7	0.75	28.2	54989	0	0	0	0.00		
119	118770	84591	34179	4939668	54.5	14.58	33.28	4.20	976	1512	1799	1566	45083	35002	57.14	9.68	148	1.9E-03	265.3	28.97	4.8	0.75	28.2	50412	0	0	0	0.00		
120	117163	82984	34179	4939820	55.0	14.65	33.98	4.26	991	1545	1836	1601	46067	36244	57.33	9.68	131	1.7E-03	268.1	28.97	4.9	0.75	28.2	46222	0	0	0	0.00		
121	115555	81376	34179	4939955	55.1	14.96	34.52	4.32	1006	1579	1872	1638	47065	37519	57.51	9.68	116	1.5E-03	270.7	28.97	5.0	0.75	28.2	42382	0	0	0	0.00		
122	99435	80336	19099	940803	55.2	-3.95	7.42	0.95	1011	1600	1893	1657	48074	38822	57.71	9.67	102	1.3E-03	270.7	28.97	5.0	0.75	8.8	11908	0	0	0	0.00		
123	99131	80032	19099	940827	55.3	-3.93	7.47	0.96	1007	1608	1897	1661	49083	40139	57.94	9.67	90	1.2E-03	270.7	28.97	5.0	0.75	8.8	10513	0	0	0	0.00		
124	98826	79727	19099	940847	55.4	-3.91	7.51	0.96	1003	1615	1902	1665	50088	41463	58.16	9.67	79	1.0E-03	270.7	28.97	5.0	0.75	8.8	9303	0	0	0	0.00		
125	98522	79423	19099	940865	55.5	-3.90	7.55	0.97	999	1623	1906	1668	51089	42795	58.37	9.66	70	9.0E-04	270.4	28.97	5.1	0.75	8.8	8248	0	0	0	0.00		
126	98217	79118	19099	940882	55.6	-3.88	7.59	0.97	996	1630	1910	1672	52087	44135	58.59	9.66	61	7.9E-04	267.7	28.97	5.1	0.75	8.8	7327	0	0	0	0.00		
127	97912	78813	19099	940897	55.8	-3.87	7.64	0.97	992	1638	1915	1676	53081	45482	58.81	9.66	53	7.0E-04	264.9	28.97	5.1	0.75	8.8	6519	0	0	0	0.00		
128	97608	78509	19099	940909	55.9	-3.86	7.68	0.98	988	1646	1919	1680	54070	46837	59.03	9.66	47	6.2E-04	262.1	28.97	5.2	0.75	8.8	5809	0	0	0	0.00		
129	97303	78204	19099	940920	56.0	-3.85	7.72	0.98	984	1653	1924	1684	55056	48199	59.24	9.65	41	5.5E-04	259.3	28.97	5.2	0.75	8.8	5182	0	0	0	0.00		
130	96998	77899	19099	940930	56.1	-3.83	7.76	0.98	980	1661	1929	1688	56038	49569	59.46	9.65	36	4.9E-04	256.6	28.97	5.3	0.75	8.8	4628	0	0	0	0.00		
131	96694	77595	19099	940938	56.2	-3.82	7.80	0.99	976	1669	1934	1692	57016	50947	59.67	9.65	32	4.4E-04	253.9	28.97	5.3	0.75	8.8	4136	0	0	0	0.00		
132	96389	77290	19099	940946	56.3	-3.81	7.84	0.99	972	1677	1938	1696	57991	52333	59.89	9.64	28	3.9E-04	251.1	28.97	5.3	0.75	8.8	3700	0	0	0	0.00		
133	96085	76986	19099	940952	56.4	-3.80	7.87	1.00	969	1685	1943	1700	58961	53726	60.10	9.64	25	3.5E-04	248.4	28.97	5.4	0.75	8.8	3311	0	0	0	0.00		
134	95780	76681	19099	940958	56.5	-3.79	7.91	1.00	965	1693	1948	1705	59928	55128	60.31	9.64	22	3.1E-04	245.7	28.97	5.4	0.75	8.8	2964	0	0	0	0.00		
135	95475	76376	19099	940963	56.6	-3.78	7.95	1.00	961	1700	1953	1709	60891	56537	60.53	9.64	19	2.7E-04	243.0	28.97	5.5	0.75	8.8	2654	0	0	0	0.00		
136	95171	76072	19099	940967	56.7	-3.77	7.99	1.01	957	1708	1958	1714	61850	57954	60.74	9.63	17	2.4E-04	240.3	28.97	5.5	0.75	8.8	2376	0	0	0	0.00		
137	94866	75767	19099	940971	56.8	-3.76	8.03	1.01	954	1716	1964	1718	62806	59380	60.95	9.63	15	2.2E-04	237.6	28.97	5.6	0.75	8.8	2127	0	0	0	0.00		
138	94561	75462	19099	940975	56.9	-3.75	8.07	1.01	950	1725	1969	1723	63757	60813	61.16	9.63	13	1.9E-04	235.0	28.97	5.6	0.75	8.8	1903	0	0	0	0.00		
139	94257	75158	19099	940978	57.1	-3.74	8.11	1.02	946	1733	1974	1728	64705	62254	61.36	9.62	12	1.7E-04	232.3	28.97	5.6	0.75	8.8	1702	0	0	0	0.00		
140	93952	74853	19099	940980	57.2	-3.73	8.15	1.02	942	1741	1979	1732	65649	63704	61.57	9.62	10	1.5E-04	229.7	28.97	5.7	0.75	8.8	1522	0	0	0	0.00		
141	93648	74549	19099	940983	57.3	-3.72	8.19	1.02	939	1749	1985	1737	66590	65162	61.78	9.62	9	1.4E-04	227.0	28.97	5.7	0.75	8.8	1359	0	0	0	0.00		
142	93343	74244	19099	940985	57.4	-3.71	8.22	1.03	935	1757	1990	1742	67527	66627	61.98	9.62	8	1.2E-04	224.4	28.97	5.8	0.75	8.8	1213	0	0	0	0.00		
143	93038	73939	19099	940987	57.5	-3.70	8.26	1.03	931	1765	1996	1747	68460	68102	62.19	9.61	7	1.1E-04	221.8	28.97	5.8	0.75	8.8	1082	0	0	0	0.00		
144	92734	73635	19099	940988	57.6	-3.69	8.30	1.03	927	1774	2001	1752	69389	69584	62.39	9.61	6	9.5E-05	219.2	28.97	5.9	0.75	8.8	963	0	0	0	0.00		
145	92429	73330	19099	940990	57.7	-3.68	8.34	1.04	924	1782	2007	1757	70314	71074	62.60	9.61	5	8.4E-05	216.6	28.97	6.0	0.75	8.8	857	0	0	0	0.00		
146	92124	73025	19099	940991	57.8	-3.67	8.38	1.04	920	1790	2013	1762	71236	72573	62.80	9.60	5	7.4E-05	214.2	28.97	6.0	0.75	8.8	761	0	0	0	0.00		
147	91820	72721	19099	940992	57.9	-3.66	8.42	1.04	916	1799	2019	1768	72155	74081	63.00	9.60	4	6.5E-05	212.4	28.97	6.0	0.75	8.8	675	0	0	0	0.00		
148	91515	72416	19099	940993	58.0	-3.65	8.46	1.05	913	1807	2025	1773	73069	75596	63.20	9.60	3	5.7E-05	210.6	28.97	6.1	0.75	8.8	597	0	0	0	0.00		
149	91211	72112	19099	940994	58.1	-3.64	8.50	1.05	909	1816	2031	1778	73980	77121	63.40	9.60	3	5.0E-05	208.7	28.97	6.1	0.75	8.8	528	0	0	0	0.00		
150	90906	71807	19099	940995	58.2	-3.63	8.54	1.06	906	1824	2037	1784	74888	78653	63.60	9.59	3	4.4E-05	206.9	28.97	6.2	0.75	8.8	465	0	0	0	0.00		
151	90601	71502	19099	940996	58.4	-3.62	8.58	1.06	902	1833	2043	1789	75791	80195	63.80	9.59	2	3.9E-05	205.1	28.97	6.2	0.75	8.8	410	0	0	0	0.00		
152	90297	71198	19099	940996	58.5	-3.61	8.62	1.06	898	1841	2049	1795	76691	81745	63.99	9.59	2	3.4E-05	203.3	28.97	6.3	0.75	8.8	360	0	0	0	0.00		
153	89992	70893	19099	940997	58.6	-3.60	8.66	1.07	895	1850	2055	1801	77588	83303	64.19	9.59	2	2.9E-05	201.5	28.97	6.3	0.75	8.8	315	0	0	0	0.00		
154	89688	70589	19099	940997	58.7	-3.59	8.70	1.07	891	1859	2061	1807	78481	84870	64.39	9.58	1	2.6E-05	199.7	28.97	6.4	0.75	8.8	276	0	0	0	0.00		
155	89383	70284	19099	940998	58.8	-3.58	8.74	1.07	887	1867	2068	1812	79370	86446	64.58	9.58	1	2.2E-05	198.0	28.97	6.4	0.75	8.8	241	0	0	0	0.00		
156	89078	69979	19099	940998	58.9	-3.58	8.79	1.08	884	1876	2074	1818	80256	88031	64.77	9.58	1	1.9E-05	196.2	28.97	6.5	0.75	8.8	209	0	0	0	0.00		
157	88774	69675	19099	940998	59.0	-3.57	8.83	1.08	880	1885	2080	1824	81138	89624	64.97	9.57	1	1.6E-05	194.4	28.97	6.5	0.75	8.8	179	0	0	0	0.00		
158	88259	69370	16889	940999	59.1	-3.42	9.10	1.11	877	1894	2087	1830	82016	91226	65.16	9.57	1	1.4E-05	192.7	28.97	6.6	0.75	8.8	153	0	0	0	0.00		
159	85954	69065	16889	940999	59.2	-3.41	9.15	1.12	873	1903	2094	1837	82892	92837	65.35	9.57	1	1.2E-05	190.9	28.97	6.6	0.75	8.8	131	0	0	0	0.00		
160	85650	68761	16889	940999	59.3	-3.40	9.19	1.12	870	1912	2101	1843	83763	94458	65.54	9.57	1	1.0E-05	189.2	28.97	6.7	0.75	8.8	113	0	0	0	0.00		
161	85345	68456	16889	940999	59.4	-3.39	9.23	1.12	867	1921	2108	1850	84632	96088	65.72	9.56	0	8.5E-06	187.4	28.94	6.7	0.75	8.8	97	0	0	0	0.00		
162	83666	68152	15514	940999	59.5	-3.28	9.44	1.15	863	1931	2115	1857	85497	97726	65.91	9.56	0	7.3E-06	186.7	28.90	6									

Time (s)	Mass			Velocity									Atmosphere										Engine Cutoff					
	Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Acceleration			Space Fixed			Earth (m/s)	Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Engine Cutoff			
						Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Vert (m/s)	Horz (m/s)	Total (m/s)														Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)
177	79096	63582	15514	941000	61.2	-3.12	10.16	1.21	815	2078	2232	1967	98083	123468	68.57	9.52	0	7.3E-07	186.7	27.90	7.0	0.75	8.8	9	0	0	0	0.00
178	78792	63278	15514	941000	61.3	-3.11	10.21	1.22	812	2088	2240	1975	98896	125264	68.74	9.52	0	6.4E-07	186.7	27.82	7.1	0.75	8.8	8	0	0	0	0.00
179	78487	62973	15514	941000	61.4	-3.10	10.26	1.22	809	2098	2249	1983	99707	127069	68.91	9.52	0	5.5E-07	186.7	27.74	7.1	0.75	8.8	7	0	0	0	0.00
180	78182	62668	15514	941000	61.5	-3.09	10.31	1.23	806	2108	2257	1992	100514	128885	69.08	9.52	0	4.8E-07	186.7	27.66	7.1	0.75	8.8	6	0	0	0	0.00
181	77878	62364	15514	941000	61.6	-3.07	10.37	1.23	803	2119	2266	2000	101319	130712	69.25	9.52	0	4.2E-07	186.7	27.58	7.1	0.75	8.8	6	0	0	0	0.00
182	77573	62059	15514	941000	61.7	-3.06	10.42	1.24	800	2129	2274	2008	102120	132548	69.41	9.51	0	3.6E-07	186.7	27.50	7.1	0.75	8.8	5	0	0	0	0.00
183	77269	61755	15514	941000	61.8	-3.05	10.47	1.24	797	2139	2283	2016	102918	134396	69.57	9.51	0	3.2E-07	186.7	27.42	7.2	0.75	8.8	4	0	0	0	0.00
184	76964	61450	15514	941000	61.9	-3.04	10.52	1.25	794	2150	2292	2025	103714	136253	69.74	9.51	0	2.8E-07	186.7	27.35	7.2	0.75	8.8	4	0	0	0	0.00
185	76659	61145	15514	941000	62.0	-3.03	10.58	1.25	791	2161	2301	2033	104506	138121	69.90	9.51	0	2.4E-07	186.7	27.27	7.2	0.75	8.8	3	0	0	0	0.00
186	76355	60841	15514	941000	62.1	-3.02	10.63	1.26	788	2171	2310	2042	105295	140000	70.06	9.50	0	2.1E-07	186.7	27.19	7.2	0.75	8.8	3	0	0	0	0.00
187	76050	60536	15514	941000	62.2	-3.00	10.69	1.26	785	2182	2319	2051	106081	141889	70.22	9.50	0	1.9E-07	186.7	27.11	7.2	0.75	8.8	3	0	0	0	0.00
188	75745	60231	15514	941000	62.4	-2.99	10.74	1.27	782	2193	2328	2059	106864	143789	70.38	9.50	0	1.7E-07	186.7	27.04	7.3	0.75	8.8	2	0	0	0	0.00
189	75441	59927	15514	941000	62.5	-2.98	10.79	1.27	779	2203	2337	2068	107644	145700	70.54	9.50	0	1.5E-07	186.7	26.96	7.3	0.75	8.8	2	0	0	0	0.00
190	75136	59622	15514	941000	62.6	-2.97	10.85	1.28	776	2214	2346	2077	108422	147621	70.69	9.49	0	1.3E-07	186.7	26.89	7.3	0.75	8.8	2	0	0	0	0.00
191	74832	59318	15514	941000	62.7	-2.96	10.91	1.28	773	2225	2355	2086	109196	149554	70.85	9.49	0	1.1E-07	186.7	26.81	7.3	0.75	8.8	2	0	0	0	0.00
192	74527	59013	15514	941000	62.8	-2.94	10.96	1.29	770	2236	2365	2095	109967	151497	71.00	9.49	0	1.0E-07	186.7	26.74	7.3	0.75	8.8	1	0	0	0	0.00
193	74222	58708	15514	941000	62.9	-2.93	11.02	1.29	767	2247	2374	2104	110735	153451	71.16	9.49	0	9.0E-08	196.3	26.67	7.2	0.75	8.8	1	0	0	0	0.00
194	73918	58404	15514	941000	63.0	-2.92	11.08	1.30	764	2258	2384	2114	111501	155417	71.31	9.49	0	8.0E-08	212.8	26.60	6.9	0.75	8.8	1	0	0	0	0.00
195	73613	58099	15514	941000	63.1	-2.91	11.13	1.30	761	2269	2393	2123	112263	157393	71.46	9.48	0	7.2E-08	229.0	26.53	6.7	0.75	8.8	1	0	0	0	0.00
196	73308	57794	15514	941000	63.2	-2.89	11.19	1.31	758	2280	2403	2132	113023	159380	71.61	9.48	0	6.4E-08	244.8	26.46	6.5	0.75	8.8	1	0	0	0	0.00
197	73004	57490	15514	941000	63.3	-2.88	11.25	1.31	755	2291	2413	2142	113779	161379	71.76	9.48	0	5.7E-08	260.1	26.39	6.3	0.75	8.8	1	0	0	0	0.00
198	72699	57185	15514	941000	63.4	-2.87	11.31	1.32	752	2303	2423	2151	114533	163389	71.91	9.48	0	5.1E-08	275.1	26.33	6.2	0.75	8.8	1	0	0	0	0.00
199	72395	56881	15514	941000	63.5	-2.86	11.37	1.33	749	2314	2432	2161	115284	165410	72.05	9.47	0	4.6E-08	289.8	26.26	6.0	0.75	8.8	1	0	0	0	0.00
200	72090	56576	15514	941000	63.6	-2.84	11.43	1.33	747	2325	2442	2171	116032	167443	72.20	9.47	0	4.1E-08	304.0	26.20	5.9	0.75	8.8	1	0	0	0	0.00
201	71785	56271	15514	941000	63.8	-2.83	11.49	1.34	744	2337	2452	2181	116777	169487	72.35	9.47	0	3.7E-08	318.0	26.14	5.8	0.75	8.8	1	0	0	0	0.00
202	71481	55967	15514	941000	63.9	-2.82	11.55	1.34	741	2348	2463	2190	117520	171542	72.49	9.47	0	3.4E-08	331.6	26.07	5.7	0.75	8.8	1	0	0	0	0.00
203	71176	55662	15514	941000	64.0	-2.81	11.61	1.35	738	2360	2473	2200	118259	173610	72.63	9.47	0	3.1E-08	344.8	26.01	5.6	0.75	8.8	0	0	0	0	0.00
204	70872	55358	15514	941000	64.1	-2.79	11.67	1.35	735	2372	2483	2210	118996	175688	72.77	9.46	0	2.8E-08	357.8	25.95	5.5	0.75	8.8	0	0	0	0	0.00
205	70567	55053	15514	941000	64.2	-2.78	11.74	1.36	733	2383	2493	2221	119730	177779	72.91	9.46	0	2.5E-08	370.4	25.90	5.4	0.75	8.8	0	0	0	0	0.00
206	70262	54748	15514	941000	64.3	-2.77	11.80	1.37	730	2395	2504	2231	120461	179881	73.05	9.46	0	2.3E-08	382.7	25.84	5.4	0.75	8.8	0	0	0	0	0.00
207	69958	54444	15514	941000	64.4	-2.75	11.86	1.37	727	2407	2514	2241	121190	181995	73.19	9.46	0	2.1E-08	394.8	25.78	5.3	0.75	8.8	0	0	0	0	0.00
208	69653	54139	15514	941000	64.5	-2.74	11.93	1.38	724	2419	2525	2251	121915	184120	73.33	9.45	0	1.9E-08	406.5	25.73	5.2	0.75	8.8	0	0	0	0	0.00
209	69348	53834	15514	941000	64.6	-2.73	11.99	1.38	722	2431	2536	2262	122638	186258	73.47	9.45	0	1.7E-08	418.0	25.67	5.2	0.75	8.8	0	0	0	0	0.00
210	69044	53530	15514	941000	64.7	-2.71	12.05	1.39	719	2443	2546	2272	123358	188408	73.60	9.45	0	1.6E-08	429.2	25.62	5.1	0.75	8.8	0	0	0	0	0.00
211	68739	53225	15514	941000	64.8	-2.70	12.12	1.40	716	2455	2557	2283	124076	190569	73.74	9.45	0	1.5E-08	440.2	25.56	5.1	0.75	8.8	0	0	0	0	0.00
212	68435	52921	15514	941000	64.9	-2.69	12.19	1.40	713	2467	2568	2294	124791	192743	73.87	9.45	0	1.3E-08	450.9	25.51	5.1	0.75	8.8	0	0	0	0	0.00
213	68130	52616	15514	941000	65.1	-2.67	12.25	1.41	711	2479	2579	2304	125503	194929	74.00	9.44	0	1.2E-08	461.3	25.46	5.0	0.75	8.8	0	0	0	0	0.00
214	67825	52311	15514	941000	65.2	-2.66	12.32	1.41	708	2492	2590	2315	126212	197128	74.14	9.44	0	1.1E-08	471.6	25.41	5.0	0.75	8.8	0	0	0	0	0.00
215	67521	52007	15514	941000	65.3	-2.64	12.39	1.42	705	2504	2601	2326	126919	199338	74.27	9.44	0	1.1E-08	481.5	25.36	4.9	0.75	8.8	0	0	0	0	0.00
216	67216	51702	15514	941000	65.4	-2.63	12.45	1.43	703	2516	2613	2337	127623	201561	74.40	9.44	0	9.8E-09	491.3	25.31	4.9	0.75	8.8	0	0	0	0	0.00
217	66911	51397	15514	941000	65.5	-2.62	12.52	1.43	700	2529	2624	2348	128324	203797	74.52	9.44	0	9.1E-09	500.8	25.27	4.9	0.75	8.8	0	0	0	0	0.00
218	66607	51093	15514	941000	65.6	-2.60	12.59	1.44	698	2541	2635	2360	129023	206045	74.65	9.43	0	8.5E-09	510.1	25.22	4.9	0.75	8.8	0	0	0	0	0.00
219	66302	50788	15514	941000	65.7	-2.59	12.66	1.45	695	2554	2647	2371	129720	208305	74.78	9.43	0	7.9E-09	519.2	25.17	4.8	0.75	8.8	0	0	0	0	0.00
220	65998	50484	15514	941000	65.8	-2.57	12.73	1.45	692	2567	2658	2382	130413	210578	74.90	9.43	0	7.3E-09	528.1	25.13	4.8	0.75	8.8	0	0	0	0	0.00
221	65693	50179	15514	941000	65.9	-2.56	12.80	1.46	690	2579	2670	2394	131104	212864	75.03	9.43	0	6.9E-09	536.9	25.08	4.8	0.75	8.8	0	0	0	0	

Time (s)	Mass			Velocity									Atmosphere										Engine Cutoff					
	Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Acceleration			Space Fixed			Earth (m/s)	Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Engine Cutoff			
						Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Vert (m/s)	Horz (m/s)	Total (m/s)														Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)
236	61124	45610	15514	941000	67.5	-2.33	13.95	1.57	653	2780	2856	2577	141172	248731	76.78	9.40	0	2.9E-09	646.8	24.47	4.6	0.75	8.8	0	0	0	0	0.00
237	60819	45305	15514	941000	67.6	-2.31	14.03	1.58	651	2794	2869	2590	141824	251231	76.89	9.40	0	2.8E-09	653.0	24.43	4.6	0.75	8.8	0	0	0	0	0.00
238	60514	45000	15514	941000	67.8	-2.30	14.11	1.59	648	2808	2882	2603	142474	253745	77.00	9.40	0	2.7E-09	659.0	24.39	4.6	0.75	8.8	0	0	0	0	0.00
239	60210	44696	15514	941000	67.9	-2.28	14.20	1.59	646	2822	2895	2616	143121	256273	77.10	9.39	0	2.6E-09	664.9	24.35	4.6	0.75	8.8	0	0	0	0	0.00
240	59905	44391	15514	941000	68.0	-2.26	14.28	1.60	644	2836	2909	2629	143766	258815	77.21	9.39	0	2.5E-09	670.7	24.32	4.6	0.75	8.8	0	0	0	0	0.00
241	59601	44087	15514	941000	68.1	-2.25	14.37	1.61	642	2851	2922	2643	144409	261371	77.31	9.39	0	2.4E-09	676.3	24.28	4.6	0.75	8.8	0	0	0	0	0.00
242	59296	43782	15514	941000	68.2	-2.23	14.45	1.62	639	2865	2936	2656	145049	263942	77.42	9.39	0	2.3E-09	681.9	24.24	4.6	0.75	8.8	0	0	0	0	0.00
243	58991	43477	15514	941000	68.3	-2.21	14.54	1.63	637	2880	2949	2670	145688	266527	77.52	9.39	0	2.2E-09	687.3	24.21	4.6	0.75	8.8	0	0	0	0	0.00
244	58687	43173	15514	941000	68.4	-2.20	14.63	1.64	635	2894	2963	2683	146324	269127	77.63	9.38	0	2.1E-09	692.6	24.17	4.6	0.75	8.8	0	0	0	0	0.00
245	58382	42868	15514	941000	68.5	-2.18	14.72	1.64	633	2909	2977	2697	146958	271741	77.73	9.38	0	2.0E-09	697.8	24.14	4.6	0.75	8.8	0	0	0	0	0.00
246	58077	42563	15514	941000	68.6	-2.16	14.80	1.65	631	2924	2991	2711	147589	274371	77.83	9.38	0	2.0E-09	702.9	24.10	4.6	0.75	8.8	0	0	0	0	0.00
247	57773	42259	15514	941000	68.7	-2.14	14.89	1.66	628	2938	3005	2725	148219	277014	77.93	9.38	0	1.9E-09	707.9	24.07	4.7	0.75	8.8	0	0	0	0	0.00
248	57468	41954	15514	941000	68.8	-2.13	14.99	1.67	626	2953	3019	2739	148846	279673	78.03	9.38	0	1.8E-09	712.8	24.03	4.7	0.75	8.8	0	0	0	0	0.00
249	57164	41650	15514	941000	68.9	-2.11	15.08	1.68	624	2968	3033	2753	149471	282347	78.12	9.38	0	1.8E-09	717.6	24.00	4.7	0.75	8.8	0	0	0	0	0.00
250	56859	41345	15514	941000	69.1	-2.09	15.17	1.69	622	2984	3048	2767	150095	285036	78.22	9.37	0	1.7E-09	722.3	23.96	4.7	0.75	8.8	0	0	0	0	0.00
251	56554	41040	15514	941000	69.2	-2.07	15.27	1.70	620	2999	3062	2782	150716	287740	78.32	9.37	0	1.7E-09	727.0	23.93	4.7	0.75	8.8	0	0	0	0	0.00
252	56250	40736	15514	941000	69.3	-2.05	15.36	1.71	618	3014	3077	2796	151335	290459	78.41	9.37	0	1.6E-09	731.5	23.89	4.7	0.75	8.8	0	0	0	0	0.00
253	55945	40431	15514	941000	69.4	-2.04	15.46	1.72	616	3030	3092	2811	151952	293194	78.51	9.37	0	1.6E-09	735.9	23.86	4.7	0.75	8.8	0	0	0	0	0.00
254	55641	40127	15514	941000	69.5	-2.02	15.55	1.72	614	3045	3106	2825	152567	295944	78.60	9.37	0	1.5E-09	740.3	23.83	4.7	0.75	8.8	0	0	0	0	0.00
255	55336	39822	15514	941000	69.6	-2.00	15.65	1.73	612	3061	3121	2840	153180	298710	78.69	9.36	0	1.5E-09	744.5	23.79	4.7	0.75	8.8	0	0	0	0	0.00
256	55031	39517	15514	941000	69.7	-1.98	15.75	1.74	610	3076	3136	2855	153790	301491	78.79	9.36	0	1.4E-09	748.7	23.76	4.7	0.75	8.8	0	0	0	0	0.00
257	54727	39213	15514	941000	69.8	-1.96	15.85	1.75	608	3092	3151	2870	154399	304288	78.88	9.36	0	1.4E-09	752.8	23.73	4.7	0.75	8.8	0	0	0	0	0.00
258	54422	38908	15514	941000	69.9	-1.94	15.95	1.76	606	3108	3167	2885	155006	307101	78.97	9.36	0	1.4E-09	756.9	23.69	4.7	0.75	8.8	0	0	0	0	0.00
259	54117	38603	15514	941000	70.0	-1.92	16.05	1.77	604	3124	3182	2900	155611	309930	79.06	9.36	0	1.3E-09	760.8	23.66	4.7	0.75	8.8	0	0	0	0	0.00
260	53813	38299	15514	941000	70.1	-1.90	16.16	1.78	602	3140	3197	2916	156214	312775	79.15	9.36	0	1.3E-09	764.7	23.63	4.7	0.75	8.8	0	0	0	0	0.00
261	53508	37994	15514	941000	70.2	-1.88	16.26	1.79	600	3156	3213	2931	156816	315636	79.23	9.35	0	1.3E-09	768.5	23.59	4.8	0.75	8.8	0	0	0	0	0.00
262	53204	37690	15514	941000	70.3	-1.86	16.37	1.80	598	3173	3229	2947	157415	318513	79.32	9.35	0	1.2E-09	772.2	23.56	4.8	0.75	8.8	0	0	0	0	0.00
263	52899	37385	15514	941000	70.5	-1.84	16.47	1.81	597	3189	3244	2963	158012	321407	79.41	9.35	0	1.2E-09	775.9	23.53	4.8	0.75	8.8	0	0	0	0	0.00
264	52594	37080	15514	941000	70.6	-1.82	16.58	1.82	595	3206	3260	2978	158608	324317	79.49	9.35	0	1.2E-09	779.5	23.50	4.8	0.75	8.8	0	0	0	0	0.00
265	52290	36776	15514	941000	70.7	-1.80	16.69	1.84	593	3222	3276	2994	159202	327244	79.57	9.35	0	1.1E-09	783.0	23.47	4.8	0.75	8.8	0	0	0	0	0.00
266	51985	36471	15514	941000	70.8	-1.78	16.80	1.85	591	3239	3292	3010	159794	330187	79.66	9.35	0	1.1E-09	786.5	23.43	4.8	0.75	8.8	0	0	0	0	0.00
267	51680	36166	15514	941000	70.9	-1.76	16.91	1.86	589	3256	3309	3027	160384	333148	79.74	9.34	0	1.1E-09	789.9	23.40	4.8	0.75	8.8	0	0	0	0	0.00
268	51376	35862	15514	941000	71.0	-1.74	17.02	1.87	588	3273	3325	3043	160972	336125	79.82	9.34	0	1.0E-09	793.2	23.37	4.8	0.75	8.8	0	0	0	0	0.00
269	51071	35557	15514	941000	71.1	-1.72	17.14	1.88	586	3290	3342	3059	161559	339119	79.90	9.34	0	1.0E-09	796.5	23.34	4.9	0.75	8.8	0	0	0	0	0.00
270	50767	35253	15514	941000	71.2	-1.70	17.25	1.89	584	3307	3358	3076	162144	342130	79.98	9.34	0	9.9E-10	799.7	23.31	4.9	0.75	8.8	0	0	0	0	0.00
271	50462	34948	15514	941000	71.3	-1.67	17.37	1.90	582	3324	3375	3093	162727	345159	80.06	9.34	0	9.6E-10	802.9	23.28	4.9	0.75	8.8	0	0	0	0	0.00
272	50157	34643	15514	941000	71.4	-1.65	17.49	1.91	581	3342	3392	3109	163309	348205	80.14	9.34	0	9.4E-10	806.0	23.25	4.9	0.75	8.8	0	0	0	0	0.00
273	49853	34339	15514	941000	71.5	-1.63	17.61	1.92	579	3359	3409	3126	163889	351268	80.22	9.33	0	9.1E-10	809.0	23.21	4.9	0.75	8.8	0	0	0	0	0.00
274	49548	34034	15514	941000	71.6	-1.61	17.73	1.94	578	3377	3426	3143	164467	354349	80.30	9.33	0	8.9E-10	812.0	23.18	4.9	0.75	8.8	0	0	0	0	0.00
275	49244	33730	15514	941000	71.8	-1.58	17.85	1.95	576	3395	3443	3161	165044	357448	80.37	9.33	0	8.7E-10	815.0	23.15	4.9	0.75	8.8	0	0	0	0	0.00
276	48939	33425	15514	941000	71.9	-1.56	17.97	1.96	574	3413	3461	3178	165619	360565	80.45	9.33	0	8.5E-10	817.9	23.12	4.9	0.75	8.8	0	0	0	0	0.00
277	48634	33120	15514	941000	72.0	-1.54	18.10	1.97	573	3431	3478	3195	166193	363699	80.52	9.33	0	8.3E-10	820.7	23.09	5.0	0.75	8.8	0	0	0	0	0.00
278	48330	32816	15514	941000	72.1	-1.51	18.22	1.99	571	3449	3496	3213	166765	366852	80.59	9.33	0	8.1E-10	823.5	23.06	5.0	0.75	8.8	0	0	0	0	0.00
279	48025	32511	15514	941000	72.2	-1.49	18.35	2.00	570	3467	3514	3231	167335	370023	80.67	9.32	0	7.9E-10	826.2	23.03	5.0	0.75	8.8	0	0	0	0	0.00
280	47720	32206	15514	941000	72.3	-1.47	18.48	2.01	568	3486	3532	3249	167904	373212	80.74	9.32	0	7.7E-10	828.9	23.00	5.0	0.75	8.8	0	0	0		

Time (s)	Mass			Velocity									Atmosphere										Engine Cutoff					
	Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Acceleration			Space Fixed			Earth Fixed (m/s)	Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Engine Cutoff			
						Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Vert (m/s)	Horz (m/s)	Total (m/s)														Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)
295	43151	27637	15514	941000	73.9	-1.08	20.64	2.22	549	3779	3818	3534	176278	423346	81.73	9.30	0	5.5E-10	864.2	22.59	5.3	0.75	8.8	0	0	0	0	0.00
296	42846	27332	15514	941000	74.0	-1.05	20.80	2.24	548	3799	3839	3555	176826	426847	81.79	9.30	0	5.4E-10	866.3	22.56	5.3	0.75	8.8	0	0	0	0	0.00
297	42542	27028	15514	941000	74.1	-1.02	20.96	2.26	547	3820	3859	3575	177374	430370	81.85	9.30	0	5.3E-10	868.3	22.53	5.3	0.75	8.8	0	0	0	0	0.00
298	42237	26723	15514	941000	74.2	-0.99	21.12	2.27	546	3841	3880	3596	177920	433913	81.91	9.29	0	5.2E-10	870.3	22.51	5.4	0.75	8.8	0	0	0	0	0.00
299	41933	26419	15514	941000	74.3	-0.96	21.29	2.29	545	3862	3901	3616	178466	437478	81.97	9.29	0	5.1E-10	872.3	22.48	5.4	0.75	8.8	0	0	0	0	0.00
300	41628	26114	15514	941000	74.5	-0.93	21.46	2.31	544	3884	3922	3637	179011	441064	82.02	9.29	0	5.0E-10	874.2	22.46	5.4	0.75	8.8	0	0	0	0	0.00
301	41323	25809	15514	941000	74.6	-0.90	21.63	2.32	543	3905	3943	3659	179554	444671	82.08	9.29	0	4.9E-10	876.1	22.43	5.4	0.75	8.8	0	0	0	0	0.00
302	41019	25505	15514	941000	74.7	-0.87	21.80	2.34	542	3927	3964	3680	180097	448300	82.14	9.29	0	4.8E-10	878.0	22.41	5.4	0.75	8.8	0	0	0	0	0.00
303	40714	25200	15514	941000	74.8	-0.84	21.98	2.36	541	3949	3986	3702	180639	451951	82.19	9.29	0	4.7E-10	879.8	22.38	5.5	0.75	8.8	0	0	0	0	0.00
304	40410	24896	15514	941000	74.9	-0.81	22.15	2.37	541	3971	4008	3723	181180	455623	82.25	9.28	0	4.6E-10	881.6	22.36	5.5	0.75	8.8	0	0	0	0	0.00
305	40105	24591	15514	941000	75.0	-0.78	22.33	2.39	540	3993	4029	3745	181720	459318	82.30	9.28	0	4.5E-10	883.4	22.33	5.5	0.75	8.8	0	0	0	0	0.00
306	39800	24286	15514	941000	75.1	-0.74	22.52	2.41	539	4016	4052	3767	182260	463036	82.35	9.28	0	4.4E-10	885.2	22.31	5.5	0.75	8.8	0	0	0	0	0.00
307	39496	23982	15514	941000	75.2	-0.71	22.70	2.43	538	4038	4074	3789	182798	466775	82.41	9.28	0	4.3E-10	886.9	22.28	5.6	0.75	8.8	0	0	0	0	0.00
308	39191	23677	15514	941000	75.3	-0.68	22.89	2.45	538	4061	4096	3812	183336	470538	82.46	9.28	0	4.2E-10	888.6	22.26	5.6	0.75	8.8	0	0	0	0	0.00
309	38886	23372	15514	941000	75.4	-0.64	23.09	2.47	537	4084	4119	3835	183874	474323	82.51	9.28	0	4.2E-10	890.3	22.23	5.6	0.75	8.8	0	0	0	0	0.00
310	38582	23068	15514	941000	75.5	-0.61	23.28	2.49	536	4107	4142	3857	184410	478131	82.56	9.28	0	4.1E-10	891.9	22.21	5.6	0.75	8.8	0	0	0	0	0.00
311	31644	22928	8716	298000	75.6	-4.35	8.79	0.96	534	4123	4158	3873	184946	481960	82.62	9.27	0	4.0E-10	893.6	22.19	5.7	0.75	8.8	0	0	0	0	0.00
312	31552	22836	8716	298000	75.8	-4.34	8.82	0.96	530	4132	4166	3881	185477	485800	82.70	9.27	0	3.9E-10	895.2	22.16	5.7	0.75	8.8	0	0	0	0	0.00
313	31460	22744	8716	298000	75.9	-4.34	8.85	0.97	525	4141	4174	3889	186005	489649	82.77	9.27	0	3.9E-10	896.7	22.14	5.7	0.75	8.8	0	0	0	0	0.00
314	31368	22652	8716	298000	76.0	-4.34	8.89	0.97	521	4150	4182	3898	186528	493507	82.85	9.27	0	3.8E-10	898.2	22.12	5.7	0.75	8.8	0	0	0	0	0.00
315	31276	22560	8716	298000	76.1	-4.34	8.92	0.97	517	4159	4191	3906	187046	497374	82.92	9.27	0	3.7E-10	899.7	22.09	5.7	0.75	8.8	0	0	0	0	0.00
316	31184	22468	8716	298000	76.2	-4.34	8.95	0.97	512	4168	4199	3914	187561	501250	82.99	9.27	0	3.7E-10	901.2	22.07	5.7	0.75	8.8	0	0	0	0	0.00
317	31092	22376	8716	298000	76.3	-4.33	8.99	0.98	508	4177	4207	3922	188071	505135	83.07	9.27	0	3.6E-10	902.6	22.05	5.7	0.75	8.8	0	0	0	0	0.00
318	31000	22284	8716	298000	76.4	-4.33	9.02	0.98	504	4186	4216	3931	188577	509029	83.14	9.26	0	3.5E-10	904.0	22.03	5.7	0.75	8.8	0	0	0	0	0.00
319	30908	22192	8716	298000	76.5	-4.33	9.06	0.98	499	4195	4224	3939	189078	512932	83.21	9.26	0	3.5E-10	905.4	22.00	5.7	0.75	8.8	0	0	0	0	0.00
320	30816	22100	8716	298000	76.6	-4.33	9.09	0.99	495	4204	4233	3948	189575	516844	83.29	9.26	0	3.4E-10	906.7	21.98	5.7	0.75	8.8	0	0	0	0	0.00
321	30724	22008	8716	298000	76.7	-4.33	9.13	0.99	491	4213	4241	3956	190068	520765	83.36	9.26	0	3.3E-10	908.0	21.96	5.7	0.75	8.8	0	0	0	0	0.00
322	30631	21915	8716	298000	76.8	-4.33	9.16	0.99	486	4222	4250	3965	190566	524695	83.43	9.26	0	3.3E-10	909.3	21.94	5.7	0.75	8.8	0	0	0	0	0.00
323	30539	21823	8716	298000	76.9	-4.32	9.19	1.00	482	4231	4258	3973	191040	528634	83.50	9.26	0	3.2E-10	910.6	21.92	5.7	0.75	8.8	0	0	0	0	0.00
324	30447	21731	8716	298000	77.1	-4.32	9.23	1.00	478	4240	4267	3982	191520	532583	83.57	9.26	0	3.2E-10	911.8	21.89	5.7	0.75	8.8	0	0	0	0	0.00
325	30355	21639	8716	298000	77.2	-4.32	9.27	1.00	473	4250	4276	3991	191995	536541	83.65	9.25	0	3.1E-10	913.0	21.87	5.7	0.75	8.8	0	0	0	0	0.00
326	30263	21547	8716	298000	77.3	-4.32	9.30	1.00	469	4259	4285	3999	192466	540508	83.72	9.25	0	3.1E-10	914.2	21.85	5.7	0.75	8.8	0	0	0	0	0.00
327	30171	21455	8716	298000	77.4	-4.32	9.34	1.01	465	4268	4293	4008	192933	544484	83.79	9.25	0	3.0E-10	915.3	21.83	5.7	0.75	8.8	0	0	0	0	0.00
328	30079	21363	8716	298000	77.5	-4.32	9.37	1.01	460	4277	4302	4017	193395	548470	83.86	9.25	0	3.0E-10	916.5	21.81	5.7	0.75	8.8	0	0	0	0	0.00
329	29987	21271	8716	298000	77.6	-4.31	9.41	1.01	456	4287	4311	4026	193854	552465	83.93	9.25	0	2.9E-10	917.6	21.79	5.7	0.75	8.8	0	0	0	0	0.00
330	29895	21179	8716	298000	77.7	-4.31	9.44	1.02	452	4296	4320	4035	194307	556469	84.00	9.25	0	2.9E-10	918.7	21.77	5.8	0.75	8.8	0	0	0	0	0.00
331	29803	21087	8716	298000	77.8	-4.31	9.48	1.02	447	4306	4329	4043	194757	560483	84.07	9.25	0	2.9E-10	919.7	21.74	5.8	0.75	8.8	0	0	0	0	0.00
332	29711	20995	8716	298000	77.9	-4.31	9.52	1.02	443	4315	4338	4052	195202	564506	84.14	9.25	0	2.8E-10	920.8	21.72	5.8	0.75	8.8	0	0	0	0	0.00
333	29619	20903	8716	298000	78.0	-4.31	9.55	1.03	439	4325	4347	4061	195643	568539	84.21	9.24	0	2.8E-10	921.8	21.70	5.8	0.75	8.8	0	0	0	0	0.00
334	29526	20810	8716	298000	78.1	-4.31	9.59	1.03	434	4334	4356	4070	196080	572582	84.28	9.24	0	2.7E-10	922.8	21.68	5.8	0.75	8.8	0	0	0	0	0.00
335	29434	20718	8716	298000	78.2	-4.30	9.63	1.03	430	4344	4365	4080	196512	576634	84.35	9.24	0	2.7E-10	923.7	21.66	5.8	0.75	8.8	0	0	0	0	0.00
336	29342	20626	8716	298000	78.3	-4.30	9.66	1.04	426	4354	4374	4089	196940	580695	84.41	9.24	0	2.7E-10	924.7	21.64	5.8	0.75	8.8	0	0	0	0	0.00
337	29250	20534	8716	298000	78.5	-4.30	9.70	1.04	422	4363	4384	4098	197363	584767	84.48	9.24	0	2.6E-10	925.6	21.62	5.8	0.75	8.8	0	0	0	0	0.00
338	29158	20442	8716	298000	78.6	-4.30	9.74	1.04	417	4373	4393	4107	197783	588848	84.55	9.24	0	2.6E-10	926.5	21.59	5.8	0.75	8.8	0	0	0	0	0.00
339	29066	20350	8716	298000	78.7	-4.30	9.78	1.05	413	4383	4402	4116	198198	592939	84.62	9.24	0	2.6E-10	927.4	21.57	5.8	0.75	8.8	0	0	0	0	0.00
340	28974	20258	8716																									

Time (s)	Mass			Acceleration					Velocity				Atmosphere										Engine Cutoff					
	Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Space Fixed			Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Engine Cutoff				
									Vert (m/s)	Horz (m/s)	Total (m/s)													Fixed (m/s)	Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)
354	27685	18969	8716	298000	79.3	-4.09	10.34	1.10	350	4534	4547	4261	203915	655494	85.59	9.22	0	2.1E-10	938.8	21.30	5.9	0.75	8.8	0	0	0	0	0.00
355	27593	18877	8716	298000	79.3	-4.08	10.37	1.10	346	4544	4557	4271	204262	659745	85.65	9.22	0	2.1E-10	939.5	21.28	6.0	0.75	8.8	0	0	0	0	0.00
356	27501	18785	8716	298000	79.4	-4.06	10.41	1.10	342	4554	4567	4281	204606	664007	85.71	9.22	0	2.1E-10	940.1	21.27	6.0	0.75	8.8	0	0	0	0	0.00
357	27409	18693	8716	298000	79.4	-4.05	10.45	1.11	338	4565	4577	4291	204946	668280	85.77	9.22	0	2.1E-10	940.7	21.25	6.0	0.75	8.8	0	0	0	0	0.00
358	27316	18600	8716	298000	79.4	-4.03	10.49	1.11	334	4575	4587	4301	205281	672563	85.83	9.22	0	2.0E-10	941.3	21.24	6.0	0.75	8.8	0	0	0	0	0.00
359	27224	18508	8716	298000	79.5	-4.02	10.53	1.12	330	4586	4598	4311	205613	676856	85.89	9.22	0	2.0E-10	941.9	21.22	6.0	0.75	8.8	0	0	0	0	0.00
360	27132	18416	8716	298000	79.5	-4.00	10.57	1.12	326	4596	4608	4321	205941	681160	85.95	9.21	0	2.0E-10	942.5	21.21	6.0	0.75	8.8	0	0	0	0	0.00
361	27040	18324	8716	298000	79.5	-3.99	10.61	1.12	322	4607	4618	4332	206264	685474	86.01	9.21	0	2.0E-10	943.1	21.20	6.0	0.75	8.8	0	0	0	0	0.00
362	26948	18232	8716	298000	79.6	-3.97	10.65	1.13	318	4618	4628	4342	206584	689799	86.07	9.21	0	2.0E-10	943.6	21.18	6.0	0.75	8.8	0	0	0	0	0.00
363	26856	18140	8716	298000	79.6	-3.96	10.69	1.13	314	4628	4639	4352	206899	694135	86.12	9.21	0	1.9E-10	944.2	21.17	6.0	0.75	8.8	0	0	0	0	0.00
364	26764	18048	8716	298000	79.7	-3.94	10.73	1.14	310	4639	4649	4363	207211	698481	86.18	9.21	0	1.9E-10	944.7	21.15	6.0	0.75	8.8	0	0	0	0	0.00
365	26672	17956	8716	298000	79.7	-3.92	10.78	1.14	306	4650	4660	4373	207519	702839	86.24	9.21	0	1.9E-10	945.2	21.14	6.1	0.75	8.8	0	0	0	0	0.00
366	26580	17864	8716	298000	79.7	-3.91	10.82	1.14	302	4660	4670	4384	207822	707206	86.29	9.21	0	1.9E-10	945.7	21.13	6.1	0.75	8.8	0	0	0	0	0.00
367	26488	17772	8716	298000	79.8	-3.89	10.86	1.15	298	4671	4681	4394	208122	711585	86.35	9.21	0	1.9E-10	946.2	21.11	6.1	0.75	8.8	0	0	0	0	0.00
368	26396	17680	8716	298000	79.8	-3.88	10.90	1.15	294	4682	4691	4405	208418	715975	86.41	9.21	0	1.9E-10	946.7	21.10	6.1	0.75	8.8	0	0	0	0	0.00
369	26304	17588	8716	298000	79.8	-3.86	10.94	1.16	290	4693	4702	4416	208710	720375	86.46	9.21	0	1.8E-10	947.2	21.09	6.1	0.75	8.8	0	0	0	0	0.00
370	26211	17495	8716	298000	79.9	-3.84	10.99	1.16	286	4704	4713	4426	208999	724787	86.52	9.21	0	1.8E-10	947.7	21.08	6.1	0.75	8.8	0	0	0	0	0.00
371	26119	17403	8716	298000	79.9	-3.83	11.03	1.16	282	4715	4724	4437	209283	729209	86.57	9.21	0	1.8E-10	948.1	21.06	6.1	0.75	8.8	0	0	0	0	0.00
372	26027	17311	8716	298000	79.9	-3.81	11.07	1.17	279	4726	4734	4448	209564	733643	86.63	9.20	0	1.8E-10	948.6	21.05	6.1	0.75	8.8	0	0	0	0	0.00
373	25935	17219	8716	298000	80.0	-3.79	11.12	1.17	275	4737	4745	4459	209840	738087	86.68	9.20	0	1.8E-10	949.0	21.04	6.1	0.75	8.8	0	0	0	0	0.00
374	25843	17127	8716	298000	80.0	-3.78	11.16	1.18	271	4748	4756	4469	210113	742543	86.73	9.20	0	1.8E-10	949.5	21.03	6.2	0.75	8.8	0	0	0	0	0.00
375	25751	17035	8716	298000	80.1	-3.76	11.21	1.18	267	4760	4767	4480	210383	747010	86.79	9.20	0	1.7E-10	949.9	21.02	6.2	0.75	8.8	0	0	0	0	0.00
376	25659	16943	8716	298000	80.1	-3.74	11.25	1.18	264	4771	4778	4491	210648	751488	86.84	9.20	0	1.7E-10	950.3	21.00	6.2	0.75	8.8	0	0	0	0	0.00
377	25567	16851	8716	298000	80.1	-3.73	11.29	1.19	260	4782	4789	4502	210910	755977	86.89	9.20	0	1.7E-10	950.7	20.99	6.2	0.75	8.8	0	0	0	0	0.00
378	25475	16759	8716	298000	80.2	-3.71	11.34	1.19	256	4793	4800	4513	211168	760477	86.94	9.20	0	1.7E-10	951.1	20.98	6.2	0.75	8.8	0	0	0	0	0.00
379	25383	16667	8716	298000	80.2	-3.69	11.38	1.20	252	4805	4811	4525	211422	764989	86.99	9.20	0	1.7E-10	951.5	20.97	6.2	0.75	8.8	0	0	0	0	0.00
380	25291	16575	8716	298000	80.2	-3.68	11.43	1.20	249	4816	4823	4536	211672	769513	87.04	9.20	0	1.7E-10	951.9	20.96	6.2	0.75	8.8	0	0	0	0	0.00
381	25199	16483	8716	298000	80.3	-3.66	11.48	1.21	245	4828	4834	4547	211919	774047	87.09	9.20	0	1.7E-10	952.2	20.95	6.2	0.75	8.8	0	0	0	0	0.00
382	25106	16390	8716	298000	80.3	-3.64	11.52	1.21	241	4839	4845	4558	212163	778594	87.14	9.20	0	1.7E-10	952.6	20.94	6.3	0.75	8.8	0	0	0	0	0.00
383	25014	16298	8716	298000	80.3	-3.62	11.57	1.21	238	4851	4856	4570	212402	783151	87.19	9.20	0	1.6E-10	953.0	20.93	6.3	0.75	8.8	0	0	0	0	0.00
384	24922	16206	8716	298000	80.4	-3.61	11.62	1.22	234	4862	4868	4581	212638	787721	87.24	9.20	0	1.6E-10	953.3	20.92	6.3	0.75	8.8	0	0	0	0	0.00
385	24830	16114	8716	298000	80.4	-3.59	11.66	1.22	231	4874	4879	4593	212870	792301	87.29	9.20	0	1.6E-10	953.7	20.91	6.3	0.75	8.8	0	0	0	0	0.00
386	24738	16022	8716	298000	80.5	-3.57	11.71	1.23	227	4886	4891	4604	213099	796894	87.34	9.19	0	1.6E-10	954.0	20.90	6.3	0.75	8.8	0	0	0	0	0.00
387	24646	15930	8716	298000	80.5	-3.55	11.76	1.23	223	4897	4902	4616	213324	801498	87.39	9.19	0	1.6E-10	954.3	20.89	6.3	0.75	8.8	0	0	0	0	0.00
388	24554	15838	8716	298000	80.5	-3.54	11.81	1.24	220	4909	4914	4627	213546	806114	87.44	9.19	0	1.6E-10	954.6	20.88	6.3	0.75	8.8	0	0	0	0	0.00
389	24462	15746	8716	298000	80.6	-3.52	11.86	1.24	216	4921	4926	4639	213764	810742	87.48	9.19	0	1.6E-10	955.0	20.87	6.4	0.75	8.8	0	0	0	0	0.00
390	24370	15654	8716	298000	80.6	-3.50	11.90	1.25	213	4933	4937	4651	213979	815382	87.53	9.19	0	1.6E-10	955.3	20.86	6.4	0.75	8.8	0	0	0	0	0.00
391	24278	15562	8716	298000	80.6	-3.48	11.95	1.25	209	4945	4949	4662	214190	820033	87.58	9.19	0	1.6E-10	955.6	20.85	6.4	0.75	8.8	0	0	0	0	0.00
392	24186	15470	8716	298000	80.7	-3.46	12.00	1.26	206	4957	4961	4674	214397	824697	87.62	9.19	0	1.6E-10	955.9	20.84	6.4	0.75	8.8	0	0	0	0	0.00
393	24094	15378	8716	298000	80.7	-3.44	12.05	1.26	202	4969	4973	4686	214601	829373	87.67	9.19	0	1.5E-10	956.2	20.84	6.4	0.75	8.8	0	0	0	0	0.00
394	24001	15285	8716	298000	80.7	-3.43	12.10	1.27	199	4981	4985	4698	214802	834060	87.71	9.19	0	1.5E-10	956.4	20.83	6.4	0.75	8.8	0	0	0	0	0.00
395	23909	15193	8716	298000	80.8	-3.41	12.15	1.27	196	4993	4997	4710	214999	838760	87.76	9.19	0	1.5E-10	956.7	20.82	6.4	0.75	8.8	0	0	0	0	0.00
396	23817	15101	8716	298000	80.8	-3.39	12.21	1.28	192	5005	5009	4722	215193	843472	87.80	9.19	0	1.5E-10	957.0	20.81	6.4	0.75	8.8	0	0	0	0	0.00
397	23725	15009	8716	298000	80.9	-3.37	12.26	1.28	189	5017	5021	4734	215384	848196	87.85	9.19	0	1.5E-10	957.2	20.80	6.5	0.75	8.8	0	0	0	0	0.00
398	23633	14917	8716	298000	80.9	-3.35	12.31	1.29	185	5030	5033	4746	215571	852932	87.89	9.19	0	1.5E-10	957.5	20.79	6.5	0.75	8.8	0	0	0	0	0.00
399	23541	1																										

Time (s)	Mass			Acceleration									Velocity				Atmosphere										Engine Cutoff			
	Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Space Fixed			Earth (m/s)	Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Engine Cutoff					
									Vert (m/s)	Horz (m/s)	Total (m/s)														Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)		
413	22252	13536	8716	298000	81.4	-3.05	13.13	1.37	137	5220	5222	4935	217986	925484	88.49	9.18	0	1.4E-10	960.7	20.69	6.7	0.75	8.8	0	0	0	0	0.00		
414	22160	13444	8716	298000	81.5	-3.03	13.19	1.37	134	5233	5235	4948	218122	930424	88.53	9.18	0	1.4E-10	960.9	20.69	6.7	0.75	8.8	0	0	0	0	0.00		
415	22068	13352	8716	298000	81.5	-3.01	13.25	1.38	131	5247	5248	4961	218255	935377	88.57	9.18	0	1.4E-10	961.1	20.68	6.7	0.75	8.8	0	0	0	0	0.00		
416	21976	13260	8716	298000	81.5	-2.99	13.31	1.38	128	5260	5262	4974	218385	940343	88.60	9.18	0	1.4E-10	961.2	20.68	6.8	0.75	8.8	0	0	0	0	0.00		
417	21884	13168	8716	298000	81.6	-2.97	13.37	1.39	125	5273	5275	4988	218512	945323	88.64	9.18	0	1.4E-10	961.4	20.67	6.8	0.75	8.8	0	0	0	0	0.00		
418	21791	13075	8716	298000	81.6	-2.94	13.43	1.39	122	5287	5288	5001	218635	950315	88.67	9.18	0	1.4E-10	961.6	20.67	6.8	0.75	8.8	0	0	0	0	0.00		
419	21699	12983	8716	298000	81.7	-2.92	13.49	1.40	119	5300	5302	5014	218756	955322	88.71	9.18	0	1.4E-10	961.7	20.66	6.8	0.75	8.8	0	0	0	0	0.00		
420	21607	12891	8716	298000	81.7	-2.90	13.55	1.41	117	5314	5315	5028	218874	960342	88.74	9.18	0	1.4E-10	961.9	20.66	6.8	0.75	8.8	0	0	0	0	0.00		
421	21515	12799	8716	298000	81.7	-2.88	13.61	1.41	114	5327	5329	5041	218989	965375	88.78	9.18	0	1.4E-10	962.0	20.65	6.8	0.75	8.8	0	0	0	0	0.00		
422	21423	12707	8716	298000	81.8	-2.86	13.68	1.42	111	5341	5342	5055	219102	970422	88.81	9.18	0	1.4E-10	962.1	20.65	6.9	0.75	8.8	0	0	0	0	0.00		
423	21331	12615	8716	298000	81.8	-2.83	13.74	1.42	108	5355	5356	5069	219211	975483	88.85	9.18	0	1.4E-10	962.3	20.64	6.9	0.75	8.8	0	0	0	0	0.00		
424	21239	12523	8716	298000	81.8	-2.81	13.80	1.43	105	5368	5369	5082	219318	980557	88.88	9.18	0	1.3E-10	962.4	20.64	6.9	0.75	8.8	0	0	0	0	0.00		
425	21147	12431	8716	298000	81.9	-2.79	13.87	1.44	102	5382	5383	5096	219421	985645	88.91	9.18	0	1.3E-10	962.5	20.63	6.9	0.75	8.8	0	0	0	0	0.00		
426	21055	12339	8716	298000	81.9	-2.77	13.93	1.44	100	5396	5397	5110	219522	990747	88.94	9.18	0	1.3E-10	962.7	20.63	6.9	0.75	8.8	0	0	0	0	0.00		
427	20963	12247	8716	298000	81.9	-2.74	14.00	1.45	97	5410	5411	5124	219620	995863	88.98	9.18	0	1.3E-10	962.8	20.63	6.9	0.75	8.8	0	0	0	0	0.00		
428	20871	12155	8716	298000	82.0	-2.72	14.06	1.46	94	5424	5425	5138	219716	1000993	89.01	9.18	0	1.3E-10	962.9	20.62	7.0	0.75	8.8	0	0	0	0	0.00		
429	20779	12063	8716	298000	82.0	-2.70	14.13	1.46	91	5438	5439	5152	219808	1006137	89.04	9.18	0	1.3E-10	963.0	20.62	7.0	0.75	8.8	0	0	0	0	0.00		
430	20686	11970	8716	298000	82.1	-2.67	14.19	1.47	89	5452	5453	5166	219898	1011295	89.07	9.18	0	1.3E-10	963.1	20.61	7.0	0.75	8.8	0	0	0	0	0.00		
431	20594	11878	8716	298000	82.1	-2.65	14.26	1.48	86	5467	5467	5180	219986	1016468	89.10	9.18	0	1.3E-10	963.2	20.61	7.0	0.75	8.8	0	0	0	0	0.00		
432	20502	11786	8716	298000	82.1	-2.63	14.33	1.48	83	5481	5482	5194	220070	1021654	89.13	9.18	0	1.3E-10	963.3	20.61	7.0	0.75	8.8	0	0	0	0	0.00		
433	20410	11694	8716	298000	82.2	-2.60	14.40	1.49	81	5495	5496	5209	220152	1026855	89.16	9.18	0	1.3E-10	963.4	20.60	7.1	0.75	8.8	0	0	0	0	0.00		
434	20318	11602	8716	298000	82.2	-2.58	14.47	1.50	78	5510	5510	5223	220232	1032071	89.19	9.17	0	1.3E-10	963.5	20.60	7.1	0.75	8.8	0	0	0	0	0.00		
435	20226	11510	8716	298000	82.2	-2.55	14.54	1.50	76	5524	5525	5238	220309	1037301	89.22	9.17	0	1.3E-10	963.6	20.60	7.1	0.75	8.8	0	0	0	0	0.00		
436	20134	11418	8716	298000	82.3	-2.53	14.61	1.51	73	5539	5539	5252	220383	1042545	89.24	9.17	0	1.3E-10	963.7	20.59	7.1	0.75	8.8	0	0	0	0	0.00		
437	20042	11326	8716	298000	82.3	-2.51	14.68	1.52	71	5553	5554	5267	220455	1047804	89.27	9.17	0	1.3E-10	963.8	20.59	7.1	0.75	8.8	0	0	0	0	0.00		
438	19950	11234	8716	298000	82.3	-2.48	14.75	1.52	68	5568	5569	5281	220524	1053077	89.30	9.17	0	1.3E-10	963.9	20.59	7.1	0.75	8.8	0	0	0	0	0.00		
439	19858	11142	8716	298000	82.4	-2.46	14.82	1.53	66	5583	5583	5296	220591	1058366	89.33	9.17	0	1.3E-10	964.0	20.59	7.2	0.75	8.8	0	0	0	0	0.00		
440	19766	11050	8716	298000	82.4	-2.43	14.89	1.54	63	5598	5598	5311	220665	1063669	89.35	9.17	0	1.3E-10	964.1	20.58	7.2	0.75	8.8	0	0	0	0	0.00		
441	19674	10958	8716	298000	82.5	-2.41	14.96	1.54	61	5613	5613	5326	220717	1068987	89.38	9.17	0	1.3E-10	964.1	20.58	7.2	0.75	8.8	0	0	0	0	0.00		
442	19581	10865	8716	298000	82.5	-2.38	15.04	1.55	58	5628	5628	5341	220777	1074320	89.41	9.17	0	1.3E-10	964.2	20.58	7.2	0.75	8.8	0	0	0	0	0.00		
443	19489	10773	8716	298000	82.5	-2.35	15.11	1.56	56	5643	5643	5356	220834	1079668	89.43	9.17	0	1.3E-10	964.3	20.58	7.2	0.75	8.8	0	0	0	0	0.00		
444	19397	10681	8716	298000	82.6	-2.33	15.19	1.57	54	5658	5658	5371	220889	1085032	89.46	9.17	0	1.3E-10	964.3	20.57	7.3	0.75	8.8	0	0	0	0	0.00		
445	19305	10589	8716	298000	82.6	-2.30	15.26	1.57	51	5673	5673	5386	220941	1090410	89.48	9.17	0	1.3E-10	964.4	20.57	7.3	0.75	8.8	0	0	0	0	0.00		
446	19213	10497	8716	298000	82.6	-2.28	15.34	1.58	49	5688	5689	5402	220991	1095804	89.51	9.17	0	1.3E-10	964.5	20.57	7.3	0.75	8.8	0	0	0	0	0.00		
447	19121	10405	8716	298000	82.7	-2.25	15.42	1.59	47	5704	5704	5417	221039	1101213	89.53	9.17	0	1.3E-10	964.5	20.57	7.3	0.75	8.8	0	0	0	0	0.00		
448	19029	10313	8716	298000	82.7	-2.22	15.50	1.60	45	5719	5719	5432	221085	1106637	89.55	9.17	0	1.3E-10	964.6	20.57	7.3	0.75	8.8	0	0	0	0	0.00		
449	18937	10221	8716	298000	82.7	-2.20	15.57	1.60	42	5735	5735	5448	221128	1112077	89.58	9.17	0	1.3E-10	964.6	20.56	7.4	0.75	8.8	0	0	0	0	0.00		
450	18845	10129	8716	298000	82.8	-2.17	15.65	1.61	40	5750	5751	5463	221169	1117532	89.60	9.17	0	1.3E-10	964.7	20.56	7.4	0.75	8.8	0	0	0	0	0.00		
451	18753	10037	8716	298000	82.8	-2.14	15.73	1.62	38	5766	5766	5479	221208	1123004	89.62	9.17	0	1.3E-10	964.7	20.56	7.4	0.75	8.8	0	0	0	0	0.00		
452	18661	9945	8716	298000	82.9	-2.11	15.81	1.63	36	5782	5782	5495	221245	1128490	89.64	9.17	0	1.3E-10	964.8	20.56	7.4	0.75	8.8	0	0	0	0	0.00		
453	18569	9853	8716	298000	82.9	-2.09	15.90	1.64	34	5798	5798	5511	221280	1133993	89.67	9.17	0	1.3E-10	964.8	20.56	7.5	0.75	8.8	0	0	0	0	0.00		
454	18476	9760	8716	298000	82.9	-2.06	15.98	1.64	32	5814	5814	5527	221313	1139512	89.69	9.17	0	1.3E-10	964.8	20.56	7.5	0.75	8.8	0	0	0	0	0.00		
455	18384	9668	8716	298000	83.0	-2.03	16.06	1.65	30	5830	5830	5543	221343	1145046	89.71	9.17	0	1.3E-10	964.9	20.55	7.5	0.75	8.8	0	0	0	0	0.00		
456	18292	9576	8716	298000	83.0	-2.00	16.15	1.66	28	5846	5846	5559	221372	1150597	89.73	9.17	0	1.3E-10	964.9	20.55	7.5	0.75	8.8	0	0	0	0	0.00		
457	18200	9484	8716	298000	83.0	-1.97	16.23	1.67	26	5862	5862	5575	221399	1156164	89.75	9.17	0	1.3E-10	964.9	20.55	7.5	0.75	8.8	0	0	0	0	0.00		
458	18108	9392</																												



Time (s)	Mass			Velocity									Atmosphere										Engine Cutoff					
	Total (kg)	Fuel (kg)	Dry (kg)	Thrust (N)	Pitch (deg)	Acceleration			Space Fixed			Earth (m/s)	Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)	Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Drag (N)	Engine Cutoff			
						Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Vert (m/s)	Horz (m/s)	Total (m/s)														Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)
472	16819	8103	8716	298000	83.6	-1.52	17.61	1.81	-1	6116	6116	5828	221577	1241662	90.01	9.17	0	1.3E-10	965.1	20.55	7.9	0.75	8.8	0	0	0	0	0.00
473	16727	8011	8716	298000	83.6	-1.48	17.71	1.82	-2	6133	6133	5846	221576	1247500	90.02	9.17	0	1.3E-10	965.1	20.55	7.9	0.75	8.8	0	0	0	0	0.00
474	16635	7919	8716	298000	83.7	-1.45	17.81	1.83	-4	6151	6151	5864	221573	1253355	90.03	9.17	0	1.3E-10	965.1	20.55	7.9	0.75	8.8	0	0	0	0	0.00
475	16543	7827	8716	298000	83.7	-1.42	17.91	1.84	-5	6169	6169	5882	221569	1259227	90.05	9.17	0	1.3E-10	965.1	20.55	7.9	0.75	8.8	0	0	0	0	0.00
476	16451	7735	8716	298000	83.7	-1.39	18.01	1.85	-6	6187	6187	5900	221563	1265118	90.06	9.17	0	1.3E-10	965.1	20.55	8.0	0.75	8.8	0	0	0	0	0.00
477	16359	7643	8716	298000	83.8	-1.35	18.12	1.86	-8	6205	6205	5918	221556	1271027	90.07	9.17	0	1.3E-10	965.1	20.55	8.0	0.75	8.8	0	0	0	0	0.00
478	16266	7550	8716	298000	83.8	-1.32	18.22	1.87	-9	6223	6223	5936	221547	1276953	90.08	9.17	0	1.3E-10	965.1	20.55	8.0	0.75	8.8	0	0	0	0	0.00
479	16174	7458	8716	298000	83.8	-1.28	18.33	1.88	-10	6241	6241	5954	221538	1282898	90.10	9.17	0	1.3E-10	965.1	20.55	8.0	0.75	8.8	0	0	0	0	0.00
480	16082	7366	8716	298000	83.9	-1.25	18.43	1.89	-12	6260	6260	5973	221526	1288862	90.11	9.17	0	1.3E-10	965.1	20.55	8.1	0.75	8.8	0	0	0	0	0.00
481	15990	7274	8716	298000	83.9	-1.21	18.54	1.90	-13	6278	6278	5991	221514	1294843	90.12	9.17	0	1.3E-10	965.1	20.55	8.1	0.75	8.8	0	0	0	0	0.00
482	15898	7182	8716	298000	83.9	-1.18	18.65	1.91	-14	6297	6297	6010	221501	1300844	90.13	9.17	0	1.3E-10	965.1	20.55	8.1	0.75	8.8	0	0	0	0	0.00
483	15806	7090	8716	298000	84.0	-1.14	18.76	1.92	-15	6315	6315	6028	221486	1306863	90.14	9.17	0	1.3E-10	965.0	20.55	8.1	0.75	8.8	0	0	0	0	0.00
484	15714	6998	8716	298000	84.0	-1.11	18.88	1.93	-16	6334	6334	6047	221470	1312900	90.15	9.17	0	1.3E-10	965.0	20.55	8.2	0.75	8.8	0	0	0	0	0.00
485	15622	6906	8716	298000	84.1	-1.07	18.99	1.95	-18	6353	6353	6066	221453	1318957	90.16	9.17	0	1.3E-10	965.0	20.55	8.2	0.75	8.8	0	0	0	0	0.00
486	15530	6814	8716	298000	84.1	-1.04	19.10	1.96	-19	6372	6372	6085	221435	1325033	90.17	9.17	0	1.3E-10	965.0	20.55	8.2	0.75	8.8	0	0	0	0	0.00
487	15438	6722	8716	298000	84.1	-1.00	19.22	1.97	-20	6391	6391	6104	221416	1331127	90.18	9.17	0	1.3E-10	965.0	20.55	8.3	0.75	8.8	0	0	0	0	0.00
488	15346	6630	8716	298000	84.2	-0.96	19.34	1.98	-21	6411	6411	6124	221396	1337241	90.18	9.17	0	1.3E-10	964.9	20.55	8.3	0.75	8.8	0	0	0	0	0.00
489	15254	6538	8716	298000	84.2	-0.93	19.46	1.99	-22	6430	6430	6143	221375	1343374	90.19	9.17	0	1.3E-10	964.9	20.55	8.3	0.75	8.8	0	0	0	0	0.00
490	15161	6445	8716	298000	84.2	-0.89	19.58	2.00	-22	6450	6450	6163	221353	1349527	90.20	9.17	0	1.3E-10	964.9	20.55	8.3	0.75	8.8	0	0	0	0	0.00
491	15069	6353	8716	298000	84.3	-0.85	19.70	2.02	-23	6469	6469	6182	221330	1355699	90.21	9.17	0	1.3E-10	964.9	20.56	8.4	0.75	8.8	0	0	0	0	0.00
492	14977	6261	8716	298000	84.3	-0.81	19.82	2.03	-24	6489	6489	6202	221306	1361891	90.21	9.17	0	1.3E-10	964.8	20.56	8.4	0.75	8.8	0	0	0	0	0.00
493	14885	6169	8716	298000	84.3	-0.77	19.95	2.04	-25	6509	6509	6222	221282	1368103	90.22	9.17	0	1.3E-10	964.8	20.56	8.4	0.75	8.8	0	0	0	0	0.00
494	14793	6077	8716	298000	84.4	-0.73	20.07	2.05	-26	6529	6529	6242	221256	1374335	90.23	9.17	0	1.3E-10	964.8	20.56	8.4	0.75	8.8	0	0	0	0	0.00
495	14701	5985	8716	298000	84.4	-0.69	20.20	2.07	-26	6549	6549	6262	221230	1380587	90.23	9.17	0	1.3E-10	964.7	20.56	8.5	0.75	8.8	0	0	0	0	0.00
496	14609	5893	8716	298000	84.5	-0.65	20.33	2.08	-27	6569	6569	6282	221204	1386859	90.24	9.17	0	1.3E-10	964.7	20.56	8.5	0.75	8.8	0	0	0	0	0.00
497	14517	5801	8716	298000	84.5	-0.61	20.46	2.09	-28	6590	6590	6303	221176	1393151	90.24	9.17	0	1.3E-10	964.7	20.56	8.5	0.75	8.8	0	0	0	0	0.00
498	14425	5709	8716	298000	84.5	-0.57	20.59	2.11	-28	6610	6610	6323	221148	1399464	90.25	9.17	0	1.3E-10	964.6	20.56	8.6	0.75	8.8	0	0	0	0	0.00
499	14333	5617	8716	298000	84.6	-0.53	20.73	2.12	-29	6631	6631	6344	221120	1405797	90.25	9.17	0	1.3E-10	964.6	20.56	8.6	0.75	8.8	0	0	0	0	0.00
500	14241	5525	8716	298000	84.6	-0.49	20.86	2.13	-29	6652	6652	6365	221091	1412152	90.25	9.17	0	1.3E-10	964.6	20.57	8.6	0.75	8.8	0	0	0	0	0.00
501	14149	5433	8716	298000	84.6	-0.45	21.00	2.15	-30	6673	6673	6386	221061	1418527	90.26	9.17	0	1.3E-10	964.5	20.57	8.6	0.75	8.8	0	0	0	0	0.00
502	14056	5340	8716	298000	84.7	-0.41	21.14	2.16	-30	6694	6694	6407	221031	1424923	90.26	9.17	0	1.3E-10	964.5	20.57	8.7	0.75	8.8	0	0	0	0	0.00
503	13964	5248	8716	298000	84.7	-0.36	21.28	2.18	-31	6715	6715	6428	221001	1431340	90.26	9.17	0	1.3E-10	964.5	20.57	8.7	0.75	8.8	0	0	0	0	0.00
504	13872	5156	8716	298000	84.7	-0.32	21.42	2.19	-31	6736	6736	6449	220970	1437778	90.26	9.17	0	1.3E-10	964.4	20.57	8.7	0.75	8.8	0	0	0	0	0.00
505	13780	5064	8716	298000	84.8	-0.28	21.57	2.21	-31	6758	6758	6471	220939	1444238	90.27	9.17	0	1.3E-10	964.4	20.57	8.8	0.75	8.8	0	0	0	0	0.00
506	13688	4972	8716	298000	84.8	-0.23	21.71	2.22	-32	6779	6779	6492	220907	1450719	90.27	9.17	0	1.3E-10	964.4	20.57	8.8	0.75	8.8	0	0	0	0	0.00
507	13596	4880	8716	298000	84.9	-0.19	21.86	2.24	-32	6801	6801	6514	220876	1457222	90.27	9.17	0	1.3E-10	964.3	20.57	8.8	0.75	8.8	0	0	0	0	0.00
508	13504	4788	8716	298000	84.9	-0.14	22.01	2.25	-32	6823	6823	6536	220844	1463747	90.27	9.17	0	1.3E-10	964.3	20.58	8.8	0.75	8.8	0	0	0	0	0.00
509	13412	4696	8716	298000	84.9	-0.10	22.17	2.27	-32	6845	6845	6558	220812	1470294	90.27	9.17	0	1.3E-10	964.2	20.58	8.9	0.75	8.8	0	0	0	0	0.00
510	13320	4604	8716	298000	85.0	-0.05	22.32	2.28	-32	6867	6868	6580	220780	1476864	90.27	9.17	0	1.3E-10	964.2	20.58	8.9	0.75	8.8	0	0	0	0	0.00
511	13228	4512	8716	298000	85.0	-0.01	22.48	2.30	-32	6890	6890	6603	220748	1483455	90.27	9.17	0	1.3E-10	964.2	20.58	8.9	0.75	8.8	0	0	0	0	0.00
512	13136	4420	8716	298000	85.0	0.04	22.63	2.31	-32	6912	6912	6625	220715	1490069	90.27	9.17	0	1.3E-10	964.1	20.58	9.0	0.75	8.8	0	0	0	0	0.00
513	13044	4328	8716	298000	85.1	0.09	22.80	2.33	-32	6935	6935	6648	220683	1496706	90.26	9.17	0	1.3E-10	964.1	20.58	9.0	0.75	8.8	0	0	0	0	0.00
514	12951	4235	8716	298000	85.1	0.13	22.96	2.35	-32	6958	6958	6671	220651	1503365	90.26	9.17	0	1.3E-10	964.0	20.58	9.0	0.75	8.8	0	0	0	0	0.00
515	12859	4143	8716	298000	85.1	0.18	23.12	2.36	-32	6981	6981	6694	220619	1510047	90.26	9.17	0	1.3E-10	964.0	20.58	9.1	0.75	8.8	0	0	0	0	0.00
516	12767	4051	8716	298000	85.2	0.23	23.29	2.38	-32	7004	7004	6717	220588	1516753	90.26	9.17	0	1.3E-10	964.0	20.59	9.1	0.75	8.8	0	0	0	0	0.00
517	12675	3959	8716	298000	85.2	0.28	23.46	2.																				

Time (s)	Mass			Thrust (N)	Pitch (deg)	Acceleration			Velocity			Altitude (m)	Range (m)	Gamma (deg)	G (m/s <sup>2</sup> )	Atmosphere					Drag (N)	Engine Cutoff							
	Total (kg)	Fuel (kg)	Dry (kg)			Vert (m/s <sup>2</sup> )	Horz (m/s <sup>2</sup> )	Load (g)	Vert (m/s)	Horz (m/s)	Total (m/s)					Space Fixed	Earth Fixed	Press (Pa)	Density (kg/m <sup>3</sup> )	Temp (K)		Mol Wt (g/mol)	Nm	Cd	Area (m <sup>2</sup> )	Time (s)	Velocity (m/s)	Altitude (m)	Gamma (deg)
531	11386	2670	8716	298000	85.7	1.03	26.12	2.67	-22	7374	7374	7087	220168	1620230	90.17	9.18	0	1.3E-10	963.5	20.60	9.6	0.75	8.8	0	0	0	0	0.00	
532	11294	2578	8716	298000	85.8	1.08	26.34	2.69	-21	7400	7400	7113	220147	1627330	90.16	9.18	0	1.3E-10	963.4	20.60	9.6	0.75	8.8	0	0	0	0	0.00	
533	11202	2486	8716	298000	85.8	1.14	26.55	2.71	-20	7427	7427	7140	220126	1634457	90.16	9.18	0	1.3E-10	963.4	20.60	9.7	0.75	8.8	0	0	0	0	0.00	
534	11110	2394	8716	298000	85.8	1.20	26.77	2.74	-19	7453	7453	7166	220106	1641610	90.15	9.18	0	1.3E-10	963.4	20.61	9.7	0.75	8.8	0	0	0	0	0.00	
535	11018	2302	8716	298000	85.9	1.26	27.00	2.76	-18	7480	7480	7193	220088	1648789	90.14	9.18	0	1.3E-10	963.4	20.61	9.7	0.75	8.8	0	0	0	0	0.00	
536	10926	2210	8716	298000	85.9	1.32	27.22	2.78	-16	7507	7507	7220	220071	1655996	90.13	9.18	0	1.3E-10	963.3	20.61	9.8	0.75	8.8	0	0	0	0	0.00	
537	10834	2118	8716	298000	85.9	1.38	27.46	2.80	-15	7535	7535	7248	220055	1663230	90.12	9.18	0	1.3E-10	963.3	20.61	9.8	0.75	8.8	0	0	0	0	0.00	
538	10741	2025	8716	298000	86.0	1.45	27.69	2.83	-14	7562	7562	7275	220041	1670491	90.10	9.18	0	1.3E-10	963.3	20.61	9.9	0.75	8.8	0	0	0	0	0.00	
539	10649	1933	8716	298000	86.0	1.51	27.93	2.85	-12	7590	7590	7303	220028	1677780	90.09	9.18	0	1.3E-10	963.3	20.61	9.9	0.75	8.8	0	0	0	0	0.00	
540	10557	1841	8716	298000	86.1	1.57	28.17	2.88	-11	7618	7618	7331	220016	1685097	90.08	9.18	0	1.3E-10	963.3	20.61	9.9	0.75	8.8	0	0	0	0	0.00	
541	10465	1749	8716	298000	86.1	1.64	28.42	2.90	-9	7646	7646	7359	220006	1692443	90.07	9.18	0	1.3E-10	963.3	20.61	10.0	0.75	8.8	0	0	0	0	0.00	
542	10373	1657	8716	298000	86.1	1.70	28.67	2.93	-7	7675	7675	7388	219998	1699816	90.06	9.18	0	1.3E-10	963.3	20.61	10.0	0.75	8.8	0	0	0	0	0.00	
543	10281	1565	8716	298000	86.2	1.77	28.93	2.96	-6	7704	7704	7417	219991	1707219	90.04	9.18	0	1.3E-10	963.2	20.61	10.0	0.75	8.8	0	0	0	0	0.00	
544	10189	1473	8716	298000	86.2	1.84	29.19	2.98	-4	7733	7733	7446	219987	1714650	90.03	9.18	0	1.3E-10	963.2	20.61	10.1	0.75	8.8	0	0	0	0	0.00	
545	10097	1381	8716	298000	86.2	1.90	29.45	3.01	-2	7762	7762	7475	219984	1722110	90.01	9.18	0	1.3E-10	963.2	20.61	10.1	0.75	8.8	0	0	0	0	0.00	
546	10005	1289	8716	298000	86.3	1.97	29.72	3.04	0	7792	7792	7505	219983	1729600	90.00	9.18	0	1.3E-10	963.2	20.61	10.2	0.75	8.8	0	546	7792	219983	90.00	
547	9913	1197	8716	298000	86.3	2.04	30.00	3.07	2	7822	7822	7535	219984	1737120	89.99	9.18	0	1.3E-10	963.2	20.61	10.2	0.75	8.8	0	0	0	0	0.00	
548	9821	1105	8716	298000	86.3	2.11	30.28	3.09	4	7852	7852	7565	219987	1744669	89.97	9.18	0	1.3E-10	963.2	20.61	10.2	0.75	8.8	0	0	0	0	0.00	
549	9729	1013	8716	298000	86.4	2.18	30.56	3.12	6	7882	7882	7595	219992	1752249	89.96	9.18	0	1.3E-10	963.2	20.61	10.3	0.75	8.8	0	0	0	0	0.00	
550	9636	920	8716	298000	86.4	2.26	30.85	3.15	8	7913	7913	7626	219999	1759859	89.94	9.18	0	1.3E-10	963.3	20.61	10.3	0.75	8.8	0	0	0	0	0.00	
551	9544	828	8716	298000	86.5	2.33	31.15	3.18	11	7944	7944	7657	220008	1767501	89.92	9.18	0	1.3E-10	963.3	20.61	10.4	0.75	8.8	0	0	0	0	0.00	
552	9452	736	8716	298000	86.5	2.41	31.45	3.21	13	7975	7975	7688	220020	1775173	89.91	9.18	0	1.3E-10	963.3	20.61	10.4	0.75	8.8	0	0	0	0	0.00	
553	9360	644	8716	298000	86.5	2.48	31.76	3.25	15	8007	8007	7720	220035	1782877	89.89	9.18	0	1.3E-10	963.3	20.61	10.5	0.75	8.8	0	0	0	0	0.00	
554	9268	552	8716	298000	86.6	2.56	32.07	3.28	18	8039	8039	7752	220051	1790613	89.87	9.18	0	1.3E-10	963.3	20.61	10.5	0.75	8.8	0	0	0	0	0.00	
555	9176	460	8716	298000	86.6	2.63	32.39	3.31	21	8071	8071	7784	220071	1798380	89.85	9.18	0	1.3E-10	963.3	20.61	10.5	0.75	8.8	0	0	0	0	0.00	
556	9084	368	8716	298000	86.6	2.71	32.72	3.35	23	8104	8104	7816	220093	1806180	89.84	9.18	0	1.3E-10	963.4	20.61	10.6	0.75	8.8	0	0	0	0	0.00	
557	8992	276	8716	298000	86.7	2.79	33.05	3.38	26	8136	8136	7849	220117	1814013	89.82	9.18	0	1.3E-10	963.4	20.61	10.6	0.75	8.8	0	0	0	0	0.00	
558	8900	184	8716	298000	86.7	2.87	33.39	3.41	29	8170	8170	7883	220145	1821879	89.80	9.18	0	1.3E-10	963.4	20.60	10.7	0.75	8.8	0	0	0	0	0.00	
559	8808	92	8716	298000	86.7	2.96	33.74	3.45	32	8203	8203	7916	220175	1829778	89.78	9.18	0	1.3E-10	963.5	20.60	10.7	0.75	8.8	0	0	0	0	0.00	
560	6740	0	6740	0	86.8	1.08	-0.04	0.00	34	8220	8220	7933	220208	1837703	89.76	9.18	0	1.3E-10	963.5	20.60	10.7	0.75	8.8	0	0	0	0	0.00	