8 Apr 2019 17:45

:56
Approved AGI Educational Alliance Partner Satellite-CubeSat: Orbit Lifetime

Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Po	Arg of Perigee (deg)	RAAN (deg) He	eight
1 Jan 2021 17:42:50.142	6777.470591	6777.471873	0
.00043499 51.558120	166.876141	34.419482	
1 Jan 2021 17:42:50.142 .00043499 51.558120 402.283038	396.386708	5552.806842	
2 Jan 2021 09:06:20 754	6777.436424	6777.437482	0
.00039510 51.558161	172.493387	31.193850	_
401.978254	396.622710	5552.764577	
10			
3 Jan 2021 00:29:51.149	6777.402268	6777.403120	0
.00035449 51.558239	179.099569	27.968208	
.00035449 51.558239 401.668624	396.863615	5552.722347	
3 Jan 2021 15:53:21.116 .00031349 51.558344 401.356318	6777.368005	6777.368671	0
.00031349 51.558344	186.995989	24.742573	
401.356318	397.107023	5552.680012	
50			
4 Jan 2021 07:16:50.652	6777.333618	6777.334123	0
.00027275 51.558459	196.590963	21.516955	
401.045638	397.348608	5552.637554	
4 Jan 2021 22:40:19.754	6777 200070	6777 200420	0
.00023329 51.558568	208.409791	18 291360	U
400 743548	397 581330	5552 594930	
50 5 Jan 2021 14:03:48.419 .00019693 51.558652 400.462174	337,0301330	33321331330	
5 Jan 2021 14:03:48.419	6777.264276	6777.264539	0
.00019693 51.558652	223.042772	15.065780	_
400.462174	397.792904	5552.552039	
60			
6 Jan 2021 05:27:16.644 .00016645 51.558699	6777.229243	6777.229431	0
.00016645 51.558699	240.861576	11.840205	
400.220530	397.964332	5552.508894	
70			
6 Jan 2021 20:50:44.426	6777.194064	6777.194208	0
.00014570 51.558695			
400.044628	398.069787	5552.465607	
80 7 Jan 2021 12:14:11.764	6777 1E060E	6777 150734	^
.00013837 51.558635	6777.158605 281.405432	6777.158734 5.388988	0
399.959474	398.083995	5.388988	
333.333414	370.003993	JJJE • TEEVIJ	

Page 2			
Time (UTCG) Se	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) On	rbit Co
unt			
90			
	6777 122820	6777 122062	0
8 Jan 2021 03:37:38.656	6///.122820	6///.122962	U
.00014517 51.558529	297.310854	2.163281	
.00014517 51.558529 399.969768	398.002157	5552.378052	
100			
100 8 Jan 2021 19:01:05.100 .00016256 51.558406 400.051737	6777.086865	6777.087045	0
.00016256 51.558406	307.521062	358.937471	
400.051737	397.848352	5552.333912	
9 Jan 2021 10:24:31.095	6777.050689	6777.050924	0
.00018608 51.558296	313.675583	355.711566	
400.174964	397.652884	5552.289523	
120	337.032001	3332.203323	
	6777 014270	6777 014570	0
10 Jan 2021 01:47:56.639	0///.0142/0	0///.0145/0	U
.00021290 51.558221	317.596444	352.485584	
.00021290 51.558221 400.320413	397.434742	5552.244856	
130 10 Jan 2021 17:11:21.730 .00024166 51.558189 400.478782			
10 Jan 2021 17:11:21.730	6776.977647	6776.978043	0
.00024166 51.558189	320.336428	349.259555	
400.478782	397.203304	5552.199958	
11 Jan 2021 08:34:46.365	6776.940785	6776.941285	0
.00027168 51.558199 400.645463	322.418197	346.033506	
400.645463	396.963107	5552.154786	
150			
11 Jan 2021 23:58:10.543	6776.903639	6776.904260	0
.00030260 51.558238	324.116733	342.807458	•
	306 716537	5552 109285	
400.817983 160	330.710337	3332.109203	
12 Jan 2021 15:21:34.259	6776 066376	6776 067122	0
			U
.00033423 51.558290			
400.995193	396.465073	5552.063660	
170			
13 Jan 2021 06:44:57.513	6776.828929	6776.829839	0
.00036645 51.558335		336.355416	
401.176199	396.209480	5552.017830	
180			
13 Jan 2021 22:08:20.302	6776.791338	6776.792418	0
.00039917 51.558357			
		5551.971843	
190		000_00/_000	
14 Jan 2021 13:31:42.625	6776 753617	6776 754994	0
.00043234 51.558344			J
401.547768	395.688000	5551.925717	
200	CBBC B1-000	CDE C = 4 = 6 = 1	_
15 Jan 2021 04:55:04.481			0
.00046594 51.558290	330.335923	326.677405	

Page 3		
Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) Height
of Apogee (km) Height of Pe		
unt	21-900 (, 21-01-04-	
401.737837	395 422705	5551 879496
210	393.422703	3331.079490
210 15 Jan 2021 20:18:25.868 .00049993 51.558197 401.930490 220		
15 Jan 2021 20:18:25.868	6776.677907	6776.679601 0
.00049993 51.558197	331.395586	323.451349
401.930490	395.154711	5551.833203
220		
16 Jan 2021 11:41:46.786		
10 Jan 2021 11:41:40.780	6//6.639980	6//6.641914 0
.00053431 51.558073	332.430292	320.225233
402.125713	394.884116	5551.786891
230		
17 Jan 2021 03:05:07.235	6776 602055	6776 604249 0
17 0dii 2021 03.03.07.233	0770:002033	0770:004249
.00056905 51.557929	333.447307	316.999041
402.323459	394.611039	5551.740605
17 Jan 2021 18:28:27.214 .00060413 51.557780 402.523559	6776.564126	6776.566600 0
00060413 51 557780	224 452120	212 772765
.00060413 51.557780	334.433130	515.772765
402.523559	394.335641	5551.694339
250		
18 Jan 2021 09:51:46.724	6776.526267	6776.529039 0
.00063957 51.557641	335.450301	310.546402
402.726129	204 057049	EEE1 640101
	394.05/946	5551.646161
260		
19 Jan 2021 01:15:05.766	6776.488512	6776.491603 0
.00067536 51.557526	336.441933	307.319954
402.931169	393.778037	5551,602177
270		333277732277
19 Jan 2021 16:38:24.342 .00071147 51.557443	6886 450006	6006 454056
19 Jan 2021 16:38:24.342	6776.450826	6776.454256 0
.00071147 51.557443	337.431178	304.093432
403.138469	393.496044	5551.556283
280		
20 Jan 2021 08:01:42.453	6776 413302	6776 417093 O
	338.418984	
403.348218	393.211968	5551.510615
290		
20 Jan 2021 23:25:00.102	6776.375880	6776.380052 0
.00078465 51.557394		
403.560170	392.925935	5551.465097
300		
21 Jan 2021 14:48:17.289	6776.338670	6776.343245 0
.00082173 51.557423	340.397009	294.413561
403.774537	392.637954	5551.419867
	J94.UJ/3JI	3331.41300/
310		
22 Jan 2021 06:11:34.020	6776.301684	6776.306686 0
.00085911 51.557475	341.388784	291.186889
403.991300	392.348071	
320		
	6776 264848	C77C 270000
22 Jan 2021 21:34:50.295	6776.264842	6776.270292 0

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entricity In of Apogee (km) unt	clination (deg) Height of Po	Arg of Pe erigee (km)	erigee (deg) Sidereal D	i-major Axis (km) RAAN (deg) Period (sec) O	Height rbit Co
.00089679	51.557539	202 056420	342.383798	287.960216	
404.210155 330	•	392.030429		5551.550210	
	58.06.118	6776.22	8243	6776.234164	0
.00093476	51.557599	0770.22	343.382304	284.733548	Ū
404.431328	31.337333	391,763001	313.302301	5551.285823	
340					
24 Jan 2021 04:	21:21.492	6776.19	1890	6776.198305 281.506888	0
.00097303	51.557639		344.384824	281.506888	
404.654771		391.467840		5551.241758	
350					
24 Jan 2021 19:	44:36.419	6776.15	55683	6776.162617	0
.00101156	51.557647		345.391814	278.280231	
	<b>;</b>	391.171101		5551.197903	
360					
25 Jan 2021 11:	07:50.901	6776.11	.9711	6776.127187	0
.00105037	51.557612		346.403431	275.053566	
405.107636	i	390.872738		5551.154365	
370 36 Tan 2021 02.	21.04.042	6776 00	2050	6776.092002	0
26 Jan 2021 02: 	51.557529	6//6.08	347 41002E	0//0.092002	U
.00106945 405 337202	31.337329	390 572801	347.413323	5551 111128	
380	•	330.372001		5551.111120	
	54:18.545	6776.04	8324	6776.056957	0
	51.557400				
405.568457	•	390.271458		5551.068065	
390					
27 Jan 2021 09:	17:31.710	6776.01	.2871	6776.022119 265.373361	0
.00116831	51.557235		349.468037	265.373361	
405.801599		389.968640		5551.025255	
400					
				6775.987470	0
.00120810	51.557050	200 554:55	350.499969		
406.036529	1	389.664411		5550.982677	
410 20 Tan 2021 16.	02.56 720	CDDE 0.4	2227	CTTE 050000	•
				6775.952892	0
	51.556865			258.919534 5550 940187	
406.272870 420	,	303.330AT3		5550.940187	
	27:08.602	6775.90	7187	6775.918433	0
.00128829	51.556705	0,75.90	352,579916	255.692475	J
406.510787				5550.897843	
430					
	50:20.035	6775.87	2044	6775.884006	0
	51.556591				•
406.749909		388.744103			

entricity Inclination (deg) of Apogee (km) Height of Pe	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
30 Jan 2021 14:13:31.038 .00136924 51.556541 406.990373	6775.836925	6775.849628 0
.00136924 51.556541	354.682215	249.238079
406.990373	388.434883	5550.813295
31 Jan 2021 05:36:41.611 .00140998 51.556562	6//5.801/88 355 742304	6//5.815259 U
407.232047	388.124470	5550.771061
460		
31 Jan 2021 20:59:51.754	6775.766571	6775.780834 0
.00145086 51.556650 407.474572	356.808319	242.783428
407.474572 470	387.813096	5550.728760
	6775.731261	6775.746342 0
.00149189 51.556786	357.880631	239.556067
1 Feb 2021 12:23:01.466 .00149189 51.556786 407.718029	387.500656	5550.686377
100		
2 Feb 2021 03:46:10.747 .00153305 51.556943	6775.695817 358.959337	6775.711742 0
407.962264	387.187220	5550.643859
490		
2 Feb 2021 19:09:19.595	6775.660204	6775.676997 0
.00157430 51.557087	0.044187	233.101380
408.206935 500	386.873059	5550.601166
3 Feb 2021 10:32:28.008	6775.624387	6775.642073 0
.00161564 51.557185	1.135430	229.874070
408.452075	386.558072	5550.558251
510		
4 Feb 2021 01:55:35.984 .00165706 51.557213	6775.588329	6775.606933 0
408.697521	2.233014 386.242345	5550.515072
520		
4 Feb 2021 17:18:43.520		6775.571573 0
.00169851 51.557159		223.419469
408.942976 530	385.926170	5550.471621
5 Feb 2021 08:41:50.612	6775.515427	6775.535941 0
.00174001 51.557028		220.192136
409.188440	385.609441	5550.427837
540		
6 Feb 2021 00:04:57.258 .00178152 51.556842		
409.433782	385.292384	216.964748 5550.383776
550		
6 Feb 2021 15:28:03.454		
.00182302 51.556632		213.737289
409.678707	384.975048	5550.339288

rage o			
Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km)    E	CC
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) Heig	ht
of Apogee (km) Height of Pe	erigee (km) Sidereal :	Period (sec) Orbit	Co
unt	3 . , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
560			
7 Feb 2021 06:51:09.196	6775.403788	6775.427342	0
.00186451 51.556432	7.812147	210.509748	
409.923214	384.657470	5550,294394	
7 Feb 2021 06:51:09.196 .00186451 51.556432 409.923214			
7 Feb 2021 22:14:14.479	6775 365906	6775 300500	^
.00190595 51.556276	0775.303090	0775.390309	U
.00190595 51.556276	8.946430	207.282129	
410.167065	384.339953	5550.249135	
580			
8 Feb 2021 13:37:19.302	6775.327633	6775.353326	0
.00194734 51.556188	10.087316	204.054441	
410.410223	384.022430	5550 203446	
0 H-1 0001 05 00 03 650	6775 200006	6885 315801	_
9 Feb 2021 05:00:23.658	6//5.288996	6//5.315/91	U
.00198865 51.556176	11.235007	200.826703	
9 Feb 2021 05:00:23.658 .00198865 51.556176 410.652547	383.705035	5550.157324	
000			
9 Feb 2021 20:23:27.546	6775.250032	6775.277948	0
.00202986 51.556239	12.389351	197.598932	
410.893822	383.388075	5550.110824	
610	303.300073	3330.110021	
	6775 010600	6885 232852	_
10 Feb 2021 11:46:30.961	6//5.210699	6//5.239/58	U
.00207096 51.556362			
411.133978	383.071537	5550.063898	
11 Feb 2021 03:09:33.900	6775.171011	6775.201229	0
.00211191 51.556523	14.719772	191.143361	
11 Feb 2021 03:09:33.900 .00211191 51.556523 411.372864	382.755594	5550 016556	
630	302.733331	3330.010330	
11 Feb 2021 18:32:36.359	CDDE 12101C	6005 160413	_
			U
.00215270 51.556696		187.915578	
411.610277	382.440549	5549.968861	
640			
12 Feb 2021 09:55:38.334	6775.090696	6775.123288	0
.00219329 51.556855	17.079360	184.687799	
411.846118		5549.920786	
650	302.120130	3349.920700	
13 Feb 2021 01:18:39.823	6000 050004	6885 000088	_
			0
.00223368 51.556979			
412.080231	381.813522	5549.872359	
660			
13 Feb 2021 16:41:40.822	6775.009194	6775.044223	0
.00227382 51.557053			
412.312424		5549.823635	
670		5515.025055	
	C774 0C00C0	6777 004333	^
14 Feb 2021 08:04:41.328			0
.00231369 51.557069	20.675579	175.004392	

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Time (UTCG) Ser				
entricity Inclination (deg)				
of Apogee (km) Height of Pount	erigee (km) Si	idereai .	Period (sec)	orbit Co
412.542585	381,192075		5549.774618	
680	00000000			
14 Feb 2021 23:27:41.339	6774.92671	7	6774.964236	5 0
14 Feb 2021 23:27:41.339 .00235327 51.557029	23	1.889340	171.776523	
412.770533	380.883938		5549.725353	
690				
15 Feb 2021 14:50:40.853 .00239253 51.556940	6774.885169	9	6774.923950	0
.00239253 51.556940	23	3.110971	168.548598	
412.996145	380.577755		5549.675852	
16 Feb 2021 06:13:39.867	6774.843480	0	6774.883532	2 0
.00243145 51.556817	24	4.340557	165.320609	
16 Feb 2021 06:13:39.867 .00243145 51.556817 413.219296	380.273769		5549.626191	
710				
16 Feb 2021 21:36:38.381				<u> </u>
.00246999 51.556676	25	5.577691	162.092550	
413.439818	379.972170		5549.576381	
720		_		_
17 Feb 2021 12:59:36.393	6774.759754	4	6774.80237	3 0
.00250815 51.556536	26	5.822961	158.864422	
17 Feb 2021 12:59:36.393 .00250815 51.556536 413.657582	379.673165		5549.526469	
730 18 Feb 2021 04:22:33.903				
.00254588 51.556416	0//4./1//0.	)   07 <i>61</i> 02	155 626221	. 0
A12 972A22	270 276055	3.070492	5549 476486	
413.872433 740	379.370933		3349.470400	
18 Feb 2021 19:45:30.910	6774 675738	R	6774.72094	. 0
.00258317 51.556331	20	9.337908	152.407984	,
414.084221	379.083668	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	5549.426417	
750				
19 Feb 2021 11:08:27.415	6774.633666	5	6774.680170	0
.00261999 51.556292	30	0.607889	149.179695	
414.292790	378.793550		5549.376317	
760				
20 Feb 2021 02:31:23.418				2 0
.00265632 51.556306	33	1.886613	145.951377	
414.497975	378.506790		5549.326201	
770				
20 Feb 2021 17:54:18.919	6774.549453	L	6774.598550	0
.00269213 51.556370	33	3.173729	142.723044	
414.699642	378.223458		5549.276030	
780				
21 Feb 2021 09:17:13.919				2 0
.00272739 51.556478		4.469973	139.494706	
414.897593	377.943831		5549.225853	
790	4884 4484		4954 -445-	_
22 Feb 2021 00:40:08.417	6774.465174	4	6774.516858	3 0

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Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Po unt	Arg of Perigee (deg) erigee (km) Sidereal	RAAN (deg) Heig Period (sec) Orbit	ht
.00276208 51.556617	35.775541	136.266370	
.00276208 51.556617 415.091644 800	377.668071	5549.175656	
22 Feb 2021 16:03:02.415	6774.422990	6774.475957	0
.00279619 51.556768	37.090070	133.038038	
415.281672	377.396242	5549.125402	
810 23 Feb 2021 07:25:55.911	6774 380782	6774 435025	٥
.00282967 51.556913	38.414292	129.809705	U
415.467422	377.128629	5549.075110	
820			
23 Feb 2021 22:48:48.907	6774.338507	6774.394016	0
.00286251 51.557031	39.747816	126.581360	
820 23 Feb 2021 22:48:48.907 .00286251 51.557031 415.648779 830	376.865254	5549.024723	
24 Feb 2021 14:11:41.401			
.00289467 51.557106			Ŭ
415.825445	376.606422	5548.974246	
840			
25 Feb 2021 05:34:33.392	6774.253743	6774.311746	0
.00292612 51.557127	42.444968	120.124563	
415.997197 850	376.352295	5548.923639	
25 Feb 2021 20:57:24.880	6774.211188	6774.270415	0
25 Feb 2021 20:57:24.880 .00295685 51.557091	43.808253	116.896067	
416.163949	376.102882	5548.872858	
860			
26 Feb 2021 12:20:15.863	6774.168477	6774.228911	0
.00298683 51.557006	45.181817	113.667480	
416.325351 870	3/3.8384/0	5546.821863	
27 Feb 2021 03:43:06.339	6774.125568	6774.187188	0
.00301601 51.556889		110.438790	
416.481184	375.619193	5548.770600	
880			
27 Feb 2021 19:05:56.305			0
.00304440 51.556762 416.631423	47.959490 375.385037	107.209991 5548.719048	
890	373.363037	3340.719040	
28 Feb 2021 10:28:45.758	6774.039040	6774.102967	0
.00307195 51.556655	49.363751	103.981093	
416.775699	375.156234	5548.667121	
900			_
1 Mar 2021 01:51:34.696	6773.995304		0
.00309866 51.556593 416.913825	374.932868	100.752114 5548.614756	
910	374.932000	JJ40.014/JU	

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Time (UTCG) Set	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Or	bit Co
unt	, , , , , , , , , , , , , , , , , , ,		
1 Mar 2021 17:14:23.114 .00312451 51.556596	6773.951251	6774.017383	0
.00312451 51.556596	52.203713	97.523081	
417.045863	374.714904	5548.561969	
920	3,11,11301	33131301303	
2 Mar 2021 08:37:11.009 .00314947 51.556672 417.171428	6772 006770	6772 072070	^
2 Mar 2021 08:3/:11.009	6//3.906//8	6//3.9/39/0	U
.00314947 51.556672	53.639786	94.294025	
417.171428	374.502512	5548.508630	
930			
2 Mar 2021 23:59:58.375	6773.862012	6773.930235	0
.00317355 51.556815	55.086736	91.064975	
417.290651	27/ 205010	EE40 4E400E	
417.290051	374.293010	3340.434033	
940 3 Mar 2021 15:22:45.210 .00319672 51.557009 417.403056			_
3 Mar 2021 15:22:45.210	6773.816648	6773.885870	0
.00319672 51.557009	56.545077	87.835951	
417.403056	374.094684	5548.400388	
950			
4 Mar 2021 06:45:31.505	6773 770731	6773 840919	0
.00321894 51.557226	E9 01E270	94 606061	Ū
.00321694 51.557226	56.0152/9	04.000901	
417.508496	373.899341	5548.345159	
960			
4 Mar 2021 22:08:17.254	6773.724339	6773.795457	0
.00324023 51.557438	59.497198	81.377997	
417.607083	373.709831	5548.289304	
5 Mar 2021 13:31:02.451 .00326053 51.557619	6772 677222	6773 740335	^
00200052 51.02.431	0773.077323	70 140041	U
.00326053 51.557619 417.698330	60.991636	78.149041	
417.090330	373.526339	5548.232637	
000			
6 Mar 2021 04:53:47.087 .00327982 51.557750	6773.629651	6773.702517	0
.00327982 51.557750	62.498875	74.920063	
417.782029	373.349004	5548.175116	
990	3731313001	33101273120	
	6882 501420	6882 655110	^
6 Mar 2021 20:16:31.156		6//3.655118	0
.00329810 51.557826			
417.858301	373.177935	5548.116881	1
000			
7 Mar 2021 11:39:14.650	6773.532527	6773.606978	0
.00331532 51.557853		68.461931	
417.926628	373.013329	5548.057736	1
	373.013329	3340.037730	
010			
8 Mar 2021 03:01:57.559			0
.00333145 51.557845	67.098413	65.232734	
417.986826	372.855337	5547.997661	1
020			
8 Mar 2021 18:24:39.876	6773.432717	6773.508574	0
.00334649 51.557822		62.003436	·
418.039073		5547.936837	1
410.0350/3	3/2./040/3	JJ4/•33003/	

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal :	RAAN (deg) Period (sec) Or	Height bit Co
030 9 Mar 2021 09:47:21.592	6773 381811	6773 458300	0
.00336041 51.557806	70.231777	58.774044	
.00336041 51.557806 418.082893	372.559707	5547.875070	1
010			
10 Mar 2021 01:10:02.699	6773.330193	6773.407263	0
.00337318 51.557813	71.819298	55.544569	_
418.118167 050	372.422359	5547.812367	1
10 Mar 2021 16:32:43.189	6773.278028	6773.355629	0
10 Mar 2021 16:32:43.189 .00338481 51.557855 418.145140	73.420624	52.315032	· ·
418.145140	372.292118	5547.748931	1
060			
11 Mar 2021 07:55:23.054	6773.225180	6773.303261	0
.00339526 51.557936	75.036315	49.085453	_
418.163397	372.169126	5547.684592	1
070 11 Mar 2021 23:18:02.287	6772 171822	6772 250221	0
.00340455 51.558052			U
418.173205	372.053457	5547.619563	1
000			
12 Mar 2021 14:40:40.880	6773.117836	6773.196717	0
.00341264 51.558195	78.311278	42.626240	
12 Mar 2021 14:40:40.880 .00341264 51.558195 418.174178	371.945256	5547.553695	1
090			
13 Mar 2021 06:03:18.826 .00341951 51.558353	6//3.063261 70 971430	6//3.14246U	0
418.166274	371.844646	5547.487036	1
100			
13 Mar 2021 21:25:56.119	6773.008267	6773.087727	0
.00342518 51.558510	81.646960	36.167022	
418.149759	371.751696	5547.419794	1
110	6880 050880	6882 020426	•
14 Mar 2021 12:48:32.752	83.338439	6773.032436	0
.00342961 51.558654 418.124281		5547.351866	1
120	3,1.000331	3317.331000	_
15 Mar 2021 04:11:08.719	6772.896828	6772.976641	0
.00343278 51.558773	85.046251	29.707789	
	371.589478	5547.283318	1
130	CHEO. 040-00	CBB0 000400	_
15 Mar 2021 19:33:44.015 .00343472 51.558858	6772.840588	6772.920490 26.478139	0
		5547.214334	1
140		-51, 1211001	_
16 Mar 2021 10:56:18.636	6772.783981	6772.863912	0
.00343537 51.558907	88.512452	23.248448	

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Hes Period (sec) Orbit	ight
	254 450422		_
417.994195	371.459630	5547.144827	1
150	6772 727070	6772 806070	0
17 Mar 2021 02:18:52.576 .00343472 51.558921	90 271811	20 018699	U
417.932663	371.407278	5547.074872	1
160	3,11,10,2,0	3317.071072	_
17 Mar 2021 17:41:25.832	6772.669972	6772.749782	0
.00343278 51.558904	92.049337	16.788878	
417.862162	371.363402	5547.004614	1
170 18 Mar 2021 09:03:58.401 .00342952 51.558866 417.782398	6772.612685	6772.692342	0
.00342952 51.558866	93.845464	13.558975	
417.782398	371.328287	5546.934048	1
19 Mar 2021 00:26:30.279	6772.555161	6772.634604	0
.00342491 51.558815			_
417.693281	371.301927	5546.863115	1
190	CEEO 40ECOO	6880 586058	^
19 Mar 2021 15:49:01.466	6//2.49/690	6//2.5/685/ 7.00900E	0
.00341897 51.558763	371 284653	7.096905	1
417.595062 200	371.201033	3310.732173	_
20 Mar 2021 07:11:31.959	6772.440189	6772.519016	0
.00341164 51.558721	99.350831	3.868741	
200 20 Mar 2021 07:11:31.959 .00341164 51.558721 417.487436	371.276597	5546.721115	1
210			
210 20 Mar 2021 22:34:01.759	6772.382706	6772.461132	0
.00340296 51.558695	101.226756	0.638502	
417.370554	371.277710	5546.650003	1
220			
21 Mar 2021 13:56:30.865			0
.00339288 51.558689		357.408200	-
417.244177 230	371.288289	5546.578875	1
22 Mar 2021 05:18:59.277	6772 267920	6772 345353	0
.00338139 51.558702			U
417.108274		5546.507770	1
240		33 23 33 7 7 7 8	_
22 Mar 2021 20:41:26.995	6772.210662	6772.287506	0
.00336851 51.558729	106.984365	350.947463	
416.962996	371.338015	5546.436704	1
250			
23 Mar 2021 12:03:54.021			0
		347.717051	
416.808144	371.377295	5546.365715	1
260	(772 006500	6972 18222	^
24 Mar 2021 03:26:20.353	6772.096528	6772.172007	0

Page 12			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) On	rbit Co
unt			
.00333847 51.558778 416.643711 270	110.937465	344.486621	
416.643711	371.426303	5546.294817	1
270			
24 Mar 2021 18:48:45.994 .00332134 51.558771 416.469880	6772.039649	6772.114354	0
.00332134 51.558771	112.950912	341.256170	
416 469880	271 494929	5546 2230270	1
410.403000	3/1.404020	3340.223992	_
280			_
25 Mar 2021 10:11:10.943	6771.982901	6772.056774	0
.00330279 51.558724	114.989768	338.025688	
416.286480	371.553068	5546.153256	1
200			
26 Mar 2021 01:33:35.201 .00328282 51.558628	6771 926272	6771 999254	0
00328282 51 558628	117 054966	224 705150	ŭ
416 003531	271 620076	554.795159	-
410.093331	3/1.6309/6	5546.082595	1
300			
26 Mar 2021 16:55:58.768 .00326147 51.558479	6771.869734	6771.941769	0
.00326147 51.558479	119.148114	331.564560	
415.891261	371.718276	5546.011977	1
310			
27 Mar 2021 08:18:21.644	6771 813269	6771 884301	0
			U
.00323871 51.558283			_
415.679502	371.815101	5545.941381	1
320			
27 Mar 2021 23:40:43.827	6771.756846	6771.826824	0
.00321459 51.558053	123.421856	325.103055	
415.458500	371.921148		1
3.30			
28 Mar 2021 15:03:05.318 .00318909 51.557812	6771 700425	6771 760306	0
20 Mar 2021 15:05:05.516	6//1./00435	0//1./09300	U
.00318909 51.557812	125.605076	321.872111	
415.228083	372.036529	5545.800116	1
340			
29 Mar 2021 06:25:26.115	6771.643985	6771.711699	0
.00316221 51.557584			
	372.161125		1
350	572.101125	3313.723313	_
	6881 508400	6881 653000	•
29 Mar 2021 21:47:46.215	6771.587488	6771.653999	0
.00313400 51.557392	130.071371		
414.739362	372.294636	5545.658469	1
360			
30 Mar 2021 13:10:05.617	6771.530864	6771.596125	0
.00310444 51.557252			
414.481133	372.437117		1
	3/2.43/11/	3343.30/3/0	Τ.
370	4884 4848		_
31 Mar 2021 04:32:24.319			0
.00307354 51.557172	134.681006	308.947089	
414.213633	372.588421	5545.516006	1
380			

Page 13			
	Semi-parameter (km) Sem		
entricity Inclination (deg	g) Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of	Perigee (km) Sidereal	Period (sec) On	rbit Co
unt			
31 Mar 2021 19:54:42.315 .00304136 51.5571 413.937238	6771.417097	6771.479732	0
.00304136 51.5571	43 137.044078	305.715640	•
413 937238	372 748227	5545 444396	1
390	3724710227	3313.111330	_
	6771 359861	6771 421124	0
1 Apr 2021 11:16:59.604 .00300788 51.5571	50 130 447822	302 494174	U
/12 /51752	272 016406	502.404174 FE4E 272402	1
413.651753	3/2.910490	5545.572402	
400 2 Apr 2021 02:39:16.181 .00297313 51.55710 413.357318	6771 202200	6771 262156	^
2 Apr 2021 02:39:16.181	6//1.302300	6//1.362156	0
.00297313 51.55710	141.893990	299.252712	_
413.357318	373.092993	5545.299965	1
2 Apr 2021 18:01:32.039	6771.244481	6771.302897	0
.00293719 51.5571	58 144.385054	296.021259	
413.054468	373.277325	5545.227171	1
420			
3 Apr 2021 09:23:47.174 .00290004 51.5571 412.743104	6771.186258	6771.243206	0
.00290004 51.5571	31 146.922247	292.789809	
412.743104	373.469308	5545.153847	1
430			
4 Apr 2021 00:46:01.580 .00286175 51.5570	6771.127597	6771.183051	0
.00286175 51.5570	43 149.507539	289.558343	
412.423516	373.668586	5545.079953	1
440			
4 Apr 2021 16:08:15.249	6771.068607	6771.122546	0
.00282241 51.5569	02 152.143641	286.326836	
412.096421	373.874671	5545.005630	1
450			_
5 Apr 2021 07:30:28.177 .00278203 51.5567	6771.009134	6771.061540	0
.00278203 51.5567	17 154.832074	283.095258	•
411.761852	374.087228	5544.930692	1
460	3711037220	33111,33332	_
5 Apr 2021 22:52:40.355	6770 949313	6771 000174	0
.00274073 51.5565	05 157.575724	270 963597	U
		5544.855312	1
411.420642	3/4.305/0/	5544.655312	
6 Apr 2021 14:14:51.777	6770 000004	6770 029201	0
			U
		276.631805	_
	374.529678	5544.779309	1
480			_
7 Apr 2021 05:37:02.437			0
.00265554 51.55608		273.399905	
	374.758586	5544.702693	1
490			
7 Apr 2021 20:59:12.327			0
.00261187 51.55593		270.167888	
410.360679	374.991779	5544.625676	1

Page 14	_				_
Time (UTCG)	Sem	ni-parameter	(km) Sem:	i-major Axis (km)	Ecc
entricity Inclinati	ion (deg)	Arg of Per	rigee (deg)	RAAN (deg)	Height
of Apogee (km) Hei	ight of Pe	erigee (km)	Sidereal 1	Period (sec) (	orbit Co
unt					
500					
500 8 Apr 2021 12:21:21.4 .00256757 409.997478 510	442	6770.70	5441	6770.750077	7 0
.00256757	51.555818		169.144623	266.935765	
409.997478		375.228676		5544.548103	1
510					
9 Apr 2021 03:43:29.7 .00252278	776	6770.64	3420	6770.686512	2 0
.00252278	51.555765		172.197357	263.703551	
409.630437		375.468586		5544.470023	1
320					
9 Apr 2021 19:05:37.3	324	6770.583	1158	6770.622720	0
.00247762	51.555770		175.319388	260.471264	
409.260718		375.710721		5544.391665	1
530					
10 Apr 2021 10:27:44.0	080	6770.518	8562	6770.558614	. 0
.00243219	51.555823		178.512207	257.238924	
.00243219 408.888894		375.954334		5544.312922	1
540					
11 Apr 2021 01:49:50.0 .00238663 5	041	6770.45	5696	6770.494261	_ 0
.00238663	51.555910	0770010	181.777696	254.006547	_
408.515952	0110000110	376.198570	2020777030	5544.233875	1
550		370.130370		33111233073	_
11 Apr 2021 17:11:55.2	204	6770.39	2731	6770.429838	3 0
.00234112	51 556015	0770.55	185 118072	250 774147	,
408.143204	31.330013	376.442473	103.110072	5544.154744	1
560					
12 Apr 2021 08:33:59.5	565	6770 329	0626	6770 365300	9 0
00220577	505 51 556120	0770.52.	188 533981	247 541730	, ,
407 771400	31.330120	376 695110	100.333301	5544 075492	1
407.771499 570		370.003119		3344.073402	_
12 Apr 2021 23:56:03.1	104	6770 26	6110	6770 200746	
.00225077	144 51 55620 <i>6</i>	6770.20	102 026500	244 200200	, ,
			192.020399	5543.996178	1
407.402112 580		376.925379		3343.9901/0	
13 Apr 2021 15:18:05.8	070	6770 20	2261	6770 026216	5 0
					5 0
.00220627				241.076851	-
407.036313		377.162320		5543.917040	1
590		6550 44		<b>6550 4500</b>	
14 Apr 2021 06:40:07.8			0363		2 0
.00216247				237.844376	_
406.675293		377.394752		5543.838068	1
600					
14 Apr 2021 22:02:08.9		6770.07	7564	6770.107978	3 0
.00211954				234.611863	
406.320519		377.621438		5543.759403	1
610					
15 Apr 2021 13:24:09.3					0
.00207769	51.556152		206.758931	231.379298	

Page 15			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)     Ec	:C
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit C	:o
unt			
			-
405.973246	277 041207	EE/12 601000	1
405.973246	3//.84120/	5543.001090	_
620 16 Apr 2021 04:46:08.879 .00203709 51.556031 405.634892		<b>67.60 0000.40</b>	_
16 Apr 2021 04:46:08.879	6769.952755	6769.980849	O
.00203709 51.556031	210.624550	228.146668	
405.634892	378.052806	5543.603252	1
030			
16 Apr 2021 20:08:07.637	6769.890872	6769.917896	0
.00199796 51.555886	214.557554	224.913960	
405.306907	378.254886	5543,525929	1
640	3701231000	3313 (323)23	_
	6760 920427	6760 055447	0
17 Apr 2021 11:30:05.607	0/09.02942/	0/09.05544/	U
.00196049 51.555732	218.552091	221.681166	_
.00196049 51.555732 404.990660	378.446234	5543.449225	1
CEO			
18 Apr 2021 02:52:02.793	6769.768482	6769.793565	0
18 Apr 2021 02:52:02.793 .00192487 51.555590 404.687547	222.601890	218.448281	
404.687547	378.625584	5543.373218	1
660			
18 Apr 2021 18:13:59.202	6769 708024	6769 732239	0
.00189131 51.555476	226 700444	215 215206	٠
404 200070	220.700111	Z13.Z13300	1
404.398870	3/8./91609	5543.29/894	1
670			
19 Apr 2021 09:35:54.842 .00185997 51.555408	6769.648151	6769.671571	0
.00185997 51.555408	230.838091	211.982247	
404.125931	378.943210	5543.223377	1
20 Apr 2021 00:57:49.720 .00183102 51.555394	6769.588902	6769.611598	0
.00183102 51.555394	235.004951	208.749115	
403.869912	379 079284		1
690	3/3:0/3201	3313.113710	_
20 Apr 2021 16:19:43.845	6760 F30310	C7C0 FF22F7	^
			U
.00180463 51.555438			
	379.198718	5543.076831	1
700			
21 Apr 2021 07:41:37.224	6769.472184	6769.493655	0
.00178092 51.555532	243.384260	202.282687	
403.412579	379.300731	5543.004854	1
710			
21 Apr 2021 23:03:29.866	6760 414732	6760 435701	0
.00176000 51.555661	0/05.414/32	100 040410	٠
			_
	379.384462	JJ42.933674	1
720			
22 Apr 2021 14:25:21.780			0
.00174197 51.555798			
403.033546	379.449435	5542.863406	1
730			
23 Apr 2021 05:47:12.975	6769.301822	6769.322009	0
•	<del></del>		-

Page 10			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) On	rbit Co
unt			
.00172688 51.555916	255.881741	192.582822	
402.874788	379.495230	5542.794034	1
740			
740 23 Apr 2021 21:09:03.460 .00171476 51.555984 402.736802	6769.246231	6769.266135	0
.00171476 51.555984	259.978528	189.349489	
402.736802	379.521469	5542.725410	1
750			
24 Apr 2021 12:30:53.242	6769 . 191241	6769.210934	0
.00170563 51.555979	264 019993	186 116117	·
402.619671	270 520107	5542 657611	1
760	3/9.52619/	3342.037011	
700	CTC0 12C000	6860 156350	0
25 Apr 2021 03:52:42.329	0/09.130809	0/09.130359	U
.00169945 51.555885 402.523214	267.995276	182.882687	_
402.523214	379.515504	5542.590582	1
770			
25 Apr 2021 19:14:30.729 .00169620 51.555704	6769.082805	6769.102281	0
.00169620 51.555704	271.896178	179.649177	
402.447063	379.483499	5542.524163	1
780			
26 Apr 2021 10:36:18.448	6769.029252	6769.048718	0
.00169581 51.555453	275.712824	176.415569	
402.390751	379.432686	5542.458378	1
700			
27 Apr 2021 01:58:05.491	6768.976080	6768.995601	0
.00169819 51.555160	279.438304	173.181847	
402.353635	379.363567		1
800			
27 Apr 2021 17:19:51.865 .00170325 51.554865	6768 923177	6768 942815	0
.00170325 51.554865	283.068694	169.948011	
402.335007	379.276622	5542 328308	1
810	3/9.2/0022	3342.320300	_
28 Apr 2021 08:41:37.573	6760 070510	6769 900331	0
			U
	286.598533		1
	379.172659	5542.263849	1
820			_
29 Apr 2021 00:03:22.619	6768.817814		0
.00172092 51.554415	290.026210		
402.349497	379.052225	5542.199407	1
830			
29 Apr 2021 15:25:07.004			0
.00173330 51.554311	293.350237	160.245940	
402.381064	378.916421	5542.135396	1
840			
30 Apr 2021 06:46:50.732	6768.713015	6768.733694	0
.00174785 51.554296	296.570075		
402.427413		5542.071472	1
850			

Page 17			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Po	erigee (km) Sidereal	Period (sec) On	rbit Co
unt	<b>3</b> • • • • • • • • • • • • • • • • • • •		
30 Apr 2021 22:08:33.805 .00176445 51.554355	6768.660591	6768.681664	0
.00176445 51.554355	299.688203	153.777648	
402.487692	378.601635	5542.007571	1
860			
860 1 May 2021 13:30:16.223 .00178297 51.554465	6768,608036	6768.629554	0
00178297 51 554465	302 705231	150 543485	•
402 560795	270 424222	EE41 042E71	1
402.560785	3/0.424322	5541.943571	Τ.
870		4-466	_
2 May 2021 04:51:57.986	6768.555275	6768.577285	0
2 May 2021 04:51:57.986 .00180325 51.554593	305.623949	147.309316	
402.645719	378.234850	5541.879377	1
880			
2 May 2021 20:13:39.090	6768.502307	6768.524855	0
.00182520 51.554710	308.448971	144.075134	
.00182520 51.554710 402.741758	378 033953	5541 814986	1
890	370.033333	3341.014300	_
3 May 2021 11:35:19.535 .00184867 51.554789 402.847823	6860 440005	6860 480128	•
3 May 2021 11:35:19.535	6768.449005	6768.472137	0
.00184867 51.554789	311.182806	140.840923	
402.847823	377.822450	5541.750241	1
300			
4 May 2021 02:56:59.317	6768.395308	6768.419066	0
.00187355 51.554817	313.829586	137.606664	
402.963064			1
910	000	33121133333	_
4 May 2021 18:18:38.431	6769 341265	6768 365692	0
1 May 2021 10:10:30:431	216 204745	124 272220	U
.00189975 51.554788	310.394/45	134.3/2338	_
403.086909	377.370475	5541.619512	1
u 7n			
5 May 2021 09:40:16.873 .00192714 51.554707	6768.286733	6768.311870	0
.00192714 51.554707	318.881507	131.137929	
403.218380	377.131360	5541.553412	1
930			
6 May 2021 01:01:54.638	6768.231673	6768.257558	0
.00195563 51.554590			J
		5541.486711	1
	3/0.004340	5541.466/11	
940			_
6 May 2021 16:23:31.720	6768.176174	6768.202846	0
.00198514 51.554453	323.638441	124.668825	
403.501661	376.630032	5541.419518	1
950			
7 May 2021 07:45:08.114	6768.120096	6768.147591	0
.00201556 51.554317	325.917163	121.434130	
	376.368978	5541.351658	1
960	5,0.500570	2241.221020	_
	6769 063549	CTC0 001000	^
7 May 2021 23:06:43.814			0
	328.135512		
403.808078	376.101729	5541.283268	1

Page 18	-		
Time (UTCG) Ser			
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe			
unt			
970			
8 May 2021 14:28:18.814 .00207887 51.554120	6768.006401	6768.035651	0
.00207887 51.554120	330.296492	114.964493	
403.968524	375.828778	5541,214184	1
980 9 May 2021 05:49:53.108 .00211160 51.554083 404.133072 990			
9 May 2021 05:49:53.108	6767.948659	6767.978836	0
.00211160 51.554083	332,403920	111.729582	
404 133072	375 550600	5541 144410	1
990	373.330000	2241.144410	_
990	CECE 000451	6868 001500	•
9 May 2021 21:11:26.690	6767.890451	6767.921589	0
.00214496 51.554095	334.462255	108.494629	
404.301498	375.267680	5541.074105	2
000			
10 May 2021 12:32:59.554	6767.831677	6767.863807	0
.00217888 51.554154	336.474063	105.259650	
404.473196	374.980419	5541.003144	2
010			
11 May 2021 03:54:31.695 .00221332 51.554252 404.647818	6767 772368	6767 805522	0
00221222 03.54.51.095	330 443505	102 024655	· ·
.00221332 31.354252	330.442393	102.024655	•
404.647818	374.689227	5540.931565	2
020			
11 May 2021 19:16:03.108	6767.712655	6767.746862	0
.00224821 51.554378	340.371644	98.789653	
404.825193	374.394531	5540.859526	2
0.3.0			
12 May 2021 10:37:33.787 .00228351 51.554516	6767.652482	6767.687771	0
.00228351 51.554516	342.263292	95.554644	
405.004882	374.096660	5540.786958	2
040		33 23 1 1 3 3 2 3	_
13 May 2021 01:59:03.729	6767 501002	6767 628303	0
.00231918 51.554652			U
			•
405.186645	373.795960	5540.713927	2
050			
13 May 2021 17:20:32.930			0
.00235517 51.554770	345.945590	89.084582	
405.370328	373.492804	5540.640567	2
060			
14 May 2021 08:42:01.386	6767.469856	6767.508560	0
.00239144 51.554858			
405.555666		5540.566876	2
070		-5-10-500070	
15 May 2021 00:03:29.094	6767 100376	6767 440070	0
			U
.00242796 51.554909		82.614378	_
405.742391	372.880149	5540.492837	2
080			
15 May 2021 15:24:56.053			0
.00246471 51.554918	351.251646	79.379179	

Page 19		
		i-major Axis (km)    Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
405.930562	372.571307	5540.418743 2
090		
16 May 2021 06:46:22.262 .00250164 51.554890	6767.285174	6767.327525 0
00250164 51 554890	352 970470	76 143893
40C 1100CF	372 261005	5540.344557 2
406.119965	3/2.261085	5540.34455/
100		
16 May 2021 22:07:47.720 .00253874 51.554832 406.310394	6767.223469	6767.267086 0
.00253874 51.554832	354.667857	72.908505
406.310394	371.949777	5540.270336 2
110		
17 May 2021 13:29:12.429	6767 161706	6767.206701 0
1/ May 2021 13:29:12.429	0707.101790	6767.206701 0
.00257597 51.554758		
406.501845	371.637557	5540.196182 2
120		
18 May 2021 04:50:36.388	6767.100228	6767.146444 0
18 May 2021 04:50:36.388 .00261333 51.554684 406.694249	358,003272	66.437399
406 694249	371 324639	5540.122185 2
130	3/1:321033	3310:122103
130		6767 AA6AAA
18 May 2021 20:11:59.601	6767.038758	6767.086308 0
18 May 2021 20:11:59.601 .00265077 51.554627	359.644969	63.201686
406.887315	371.011301	5540.048337 2
140		
19 May 2021 11:33:22.069	6766.977514	6767.026419 0
.00268829 51.554603		
407 001152	270 607695	5539.974792 2
407.081152	370.097003	5559.974792
150		
20 May 2021 02:54:43.797	6766.916556	6766.966837 0
20 May 2021 02:54:43.797 .00272587 51.554621	2.882582	56.730010
407.275678	370.383996	5539.901626 2
160		
20 May 2021 18:16:04.789	6766 855828	6766.907504 0
.00276345 51.554685		53.494091
407.470487	370.070522	5539.828765 2
170		
21 May 2021 09:37:25.048	6766.795481	6766.848572 0
.00280103 51.554790	6.069003	50.258149
407.665745		5539.756396 2
180	3031,3,333	
20 35 2021 00 50 44 502	6866 835550	6766 700003
22 May 2021 00:58:44.582	6/66./35559	6766.790083 0
.00283860 51.554921	7.645700	47.022200
407.861322	369.444844	5539.684573 2
190		
22 May 2021 16:20:03.394	6766.675957	6766.731931 0
.00287609 51.555060		43.786254
408.056692		5539.613163 2
200	303.1331.0	2007.010100
	6766 616000	6766 674077
23 May 2021 07:41:21.491	0/00.010838	6766.674277 0

Page 20			
Time (UTCG) Ser			
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbi	it Co
unt			
.00291351 51.555184	10.772169	40.550306	
408.252048	368.822506	5539.542366	2
210			
23 May 2021 23:02:38.878	6766.558073	6766.616991	0
.00295078 51.555273	12.323700	37.314342	
408.446815	368.513167	5539.472019	2
220			
24 Mars 2021 14.22.55 561	6766 400921	6766 560221	0
24 May 2021 14:23:55.561 .00298793 51.555316	12 060107	24 070241	U
.00298793 51.555316	13.86819/	34.078341	_
408.641210	368.205252	5539.402320	2
230			
25 May 2021 05:45:11.548	6766.442088	6766.504002	0
.00302491 51.555307	15.406354	30.842273	
408.835062	367.898943	5539.333273	2
240			
25 May 2021 21:06:26.842 .00306167 51.555256 409.027774	6766 384721	6766.448148	0
00206167 E1 EEE2E6	16 020152	27 606116	U
.0030010/ 51.555250	10.939132	27.606116	•
409.027774	367.594522	5539.264687	2
<b>45</b> 0			
26 May 2021 12:27:41.452	6766.327861	6766.392812	0
.00309822 51.555178	18.466847	24.369851	
409.219611	367.292013	5539.196736	2
260			
27 May 2021 03:48:55.382	6766.271493	6766.337975	0
.00313455 51.555094	19 990062	21 133473	•
400 410412	266 001539	EE30 130400	2
409.410413			
270 27 May 2021 19:10:08.639 .00317059 51.555025			_
27 May 2021 19:10:08.639	6766.215456	6766.283475	0
409.599599	366.693351	5539.062476	2
280			
28 May 2021 10:31:21.228	6766.159865	6766.229427	0
.00320636 51.554986		14.660416	
		5538.996109	2
290	3001337127	33301330203	_
	6766 104699	6766 175709	0
29 May 2021 01:52:33.156			U
.00324185 51.554985		11.423776	_
409.973715	366.103880	5538.930256	2
300			
29 May 2021 17:13:44.426			0
.00327698 51.555022	26.052440	8.187094	
410.157867	365.812995	5538.864725	2
310		-	-
30 May 2021 08:34:55.043	6765 995204	6766 069413	0
.00331177 51.555087		4.950392	U
			•
410.340067	365.524759	5538.799623	2
320			

Time (ITTCC) Co.	mi-parameter (km) Sem	i-maior Avia (km)	Faa
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Or	bit Co
unt			
30 May 2021 23:56:05.011 .00334616 51.555166 410.519691	6765 040750	6766 016517	^
30 May 2021 23:50:05.011	0/05.940/59	0/00.01051/	U
.00334616 51.555166	29.074247	1.713681	
410.519691	365.239342	5538.734671	2
330			
31 May 2021 15:17:14.334	6765.886672	6765.963975	0
.00338014 51.555242	30.585121	358.476966	
410.696888	364.957063	5538 670155	2
340	301.337003	3330.070133	_
	CECE 02001E	CECE 011CC0	•
1 Jun 2021 06:38:23.015	6765.832817	6765.911662	0
.00341369 51.555299	32.096626	355.240244	
410.871372	364.677952	5538.605918	2
350			
1 Jun 2021 21:59:31.057	6765.779081	6765.859459	0
00344673 51 555328	33 609478	352 003502	-
411 040541	364 402270	552.005502 FF30 F41010	2
1 Jun 2021 21:59:31.057 .00344673 51.555328 411.042541	304.402376	3536.541619	2
2 Jun 2021 13:20:38.462	6765.725507	6765.807409	0
.00347927 51.555322	35.123963	348.766724	
411.210454	364.130364	5538.477906	2
370 3 Jun 2021 04:41:45.232 .00351127 51.555281	6765 672055	6765 755470	0
0001107	36 640530	345 530903	U
.00351127 51.555281	30.040339	345.529693	
411.3/4831	363.862109	5538.414131	2
3 Jun 2021 20:02:51.369 .00354266 51.555212	6765.618644	6765.703557	0
.00354266 51.555212	38.159764	342.292992	
411.535125	363.597988	5538.350387	2
390			_
	6765 565309	6765 651600	0
4 Jun 2021 11:23:56.873	0/05.505290	0/05.051092	U
.00357344 51.555123	39.681884	339.056009	
411.691370	363.338014	5538.286703	2
400			
5 Jun 2021 02:45:01.745	6765.511989	6765.599846	0
.00360359 51.555028		335.818936	
411.843318	363.082374	5538.223043	2
410	303.002374	3330.223043	
			_
5 Jun 2021 18:06:05.987			0
.00363304 51.554939		332.581772	
411.990501	362.831425	5538.159336	2
420			
6 Jun 2021 09:27:09.597	6765.405342	6765.496059	0
.00366180 51.554868		329.344520	·
			•
412.132950	362.585167	5538.095604	2
430			
7 Jun 2021 00:48:12.577	6765.352009	6765.444119	0
.00368983 51.554824		326.107189	
412.270463	362.343775	5538.031830	2
		-	

Page 22			
Time (UTCG) Se	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Ork	oit Co
unt			
440			
7 Jun 2021 16:09:14.927	6765 298635	6765 392111	0
.00371708 51.554812	47 349540	322 860703	Ū
412 402642	262 107570	522.009793	2
412.402643	302.107376	3337.907970	2
450 8 Jun 2021 07:30:16.646 .00374356 51.554832 412.529529 460	676E 24E24E	C7CE 2400EC	0
8 Jun 2021 07:30:16.646	6/65.245245	6/65.340056	U
.00374356 51.554832	48.897080	319.632348	
412.529529	361.876584	5537.904055	2
460			
8 Jun 2021 22:51:17.734	6765.191818	6765.287932	0
.00376922 51.554881	50.450177	316.394868	
412.650757	361.651107	5537.840054	2
470			
9 Jun 2021 14:12:18.193	6765.138388	6765.235772	0
.00379404 51.554949	52,009255	313.157368	
412.766373	361.431171	5537.776009	2
10 Jun 2021 05:33:18.021 .00381802 51.555025 412.876224	6765.084972	6765.183590	0
.00381802 51.555025	53.574759	309.919859	
412.876224	361.216956	5537.711938	2
490	301.110330	33371711333	_
10 Jun 2021 20:54:17.219	6765 031554	6765 131367	0
.00384111 51.555096	55.147060	206 692247	U
412 070070	361 000757	500.002347	2
412.979978	301.006737	3537.047617	4
500	6864 080100	6865 080160	•
11 Jun 2021 12:15:15.788 .00386330 51.555145	6/64.9/8192	6/65.0/9162	0
.00386330 51.555145	56.726695	303.444834	
413.077680	360.806643	5537.583717	2
510			
12 Jun 2021 03:36:13.729			0
.00388457 51.555162	58.314149	300.207313	
413.169191	360.610815	5537.519676	2
520			
12 Jun 2021 18:57:11.042	6764.871713	6764.974865	0
.00390487 51.555134	59.909762	296.969773	
413.254181	360.421550	5537.455660	2
530			
13 Jun 2021 10:18:07.729	6764.818660	6764.922835	0
.00392419 51.555059		293.732197	
413.332693		5537.391776	2
540			_
14 Jun 2021 01:39:03.791	6764.765799	6764 870948	0
.00394252 51.554937		290.494565	
413.404582		5537.328068	2
550	200.0033T±	3337.320000	4
14 Jun 2021 16:59:59.231	6764 713007	6764 010150	0
			U
.00395980 51.554777	64./51139	287.256858	

Page 23		
		i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
413.469504	359.894815	5537.264482
560	333,633,1613	333, 1201101
15 Jun 2021 08:20:54.051	6764 660652	6764 767595 0
.00397603 51.554594	66 384680	284 019056
412 527510	250 722671	5537.201171 2
413.527519	359./336/1	5537.201171 2
15 Jun 2021 23:41:48.253 .00399116 51.554408 413.578250	6764.608406	6764.716164 0
.00399116 51.554408	68.028720	280.781146
413.578250	359.580079	5537.138024 2
580		
16 Jun 2021 15:02:41.841	6764.556454	6764.664970 0
.00400519 51.554241	69.683887	277.543124
413.621710	359.434230	5537.075167 2
590		
17 Jun 2021 06:23:34.818	6764 504838	6764.614052 0
00401807 51 554111	71 350664	274 304994
.00401807 51.554111	71.550007	5537.012651 2
413.657774	359.296330	5557.012651
600	6564 450450	4544 543333 A
17 Jun 2021 21:44:27.188 .00402979 51.554034	6764.453478	6764.563330 0
.00402979 51.554034	73.029135	271.066770
413.686116	359.166543	5536.950375 2
610		
18 Jun 2021 13:05:18.955		
.00404033 51.554013	74.720034	267.828474
413.706813	359.045054	5536.888499 2
620		
19 Jun 2021 04:26:10.122 .00404967 51.554041	6764.351949	6764.462885 0
.00404967 51.554041	76.423781	264.590136
413.719758	358.932012	5536.827051 2
630	330.332012	3330.027031
19 Jun 2021 19:47:00.696	6764 201704	6764 412095 0
.00405779 51.554099		261.351781
	358.827500	5536.765907 2
640		
20 Jun 2021 11:07:50.679		
.00406468 51.554160		
413.721659	358.731662	5536.705226 2
650		
21 Jun 2021 02:28:40.077	6764.202551	6764.314620 0
.00407034 51.554191	81.615333	254.875097
		5536.645016 2
660		
21 Jun 2021 17:49:28.895	6764 153544	6764.265854 0
.00407473 51.554165		
413.691402	358.566305	5536.585142 2
670	CDC4 104000	CDC4 015454
22 Jun 2021 09:10:17.136	6764.104992	6764.217474 0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
00407786 51 554062	85 148406	249 209457	
.00407786 51.554062 413.664017	358.496931	5536.525744	2
23 Jun 2021 00:31:04.806 .00407972 51.553879	6764.056911	6764.169494	0
413.628416	86.938495 358 436573	245.160111 5536 466837	2
690	330.430373	3330.400037	_
23 Jun 2021 15:51:51.908	6764.009148	6764.121763	0
.00408029 51.553627	88.744672	241.921711	
413.584355 700	358.385170	5536.408234	2
24 Jun 2021 07:12:38.447	6763.961813	6764.074386	0
24 Jun 2021 07:12:38.447 .00407957 51.553329	90.567997	238.683230	
413.531892 710	358.342881	5536.350069	2
24 Jun 2021 22:33:24.425	6763.914801	6764.027261	0
.00407753 51.553019	92.408617	235.444647	
413.470788	358.309734	5536.292211	2
720			
25 Jun 2021 13:54:09.846	6763.868179	6763.980453	0
.00407417 51.552731	94.267598	232.205953	•
413.401067 730	358.285840	5536.234744	2
26 Jun 2021 05:14:54.716	6763.821919	6763.933934	0
26 Jun 2021 05:14:54.716 .00406948 51.552495	96.145530	228.967151	J
413.322612	358.271256	5536.177630	2
740			
26 Jun 2021 20:35:39.036	6763.775935	6763.887617	0
.00406343 51.552330	98.042516	225.728253	
413.235220 750	358.266014	5536.120766	2
27 Jun 2021 11:56:22.809	6763.730259	6763.841534	0
.00405603 51.552243	99.959603	222.489279	· ·
413.138897		5536.064189	2
760			
28 Jun 2021 03:17:06.040			0
.00404727 51.552230		219.250250	•
413.033553 770	358.283742	5536.007854	2
28 Jun 2021 18:37:48.729	6763.639663	6763.749901	0
.00403713 51.552276			•
412.919068	358.306735		2
780			
29 Jun 2021 09:58:30.879			0
.00402563 51.552358		212.772101	_
412.795457 790	358.339122	5535.895692	2
130			

Page 25			
Time (UTCG) S	emi-parameter (km)     Sem	i-major Axis (km)	Ecc
entricity Inclination (deg	) Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of			
	religee (KM) Sidereal	Period (sec) Or	.DIC CO
unt			
30 Jun 2021 01:19:12.492 .00401276 51.55245	6763.549863	6763.658773	0
00401276	1 107 030503	200 E33008	Ū
.004012/6 51.55245	107.639303	209.555006	
412.662683	358.380863	5535.839811	2
.00401276 51.55245 412.662683 800			
30 Jun 2021 16:39:53.567 .00399851 51.55253	6763 505191	6763 613328	0
0000001	4 100 005350	0,000.015520	J
.00399851 51.55253	4 109.865352	206.293907	
412.520721	358.431936	5535.784019	2
810			
1 Jul 2021 08:00:34.106	6762 460622	6762 E67017	0
1 Jul 2021 08:00:34.106	0/03.400023	6/63.56/91/	U
.00398291 51.55258	5 111.915164	203.054795	
412.369596	358.492239	5535.728268	2
820			
020			_
1 Jul 2021 23:21:14.108	6763.416153	6763.522535	0
1 Jul 2021 23:21:14.108 .00396595 51.55259 412.209323	1 113.989236	199.815661	
412 209323	358 561747	5535 672553	2
112.209323	330.301747	3333.072333	_
2 Jul 2021 14:41:53.574 .00394765 51.55254	6763.371732	6763.477134	0
.00394765 51.55254	9 116.088850	196.576497	
410 020000	250 640060	EE3E 616014	2
412.039999	358.640268	5535.616814	2
840			
3 Jul 2021 06:02:32.501	6763.327326	6763.431682	0
.00392803 51.55246	0 119 214922	102 227288	_
.00392003 51.55240	110.214033	193.337200	_
411.861668	358.727696	5535.561014	2
3 Jul 2021 21:23:10.890 .00390710 51.55233	6763 282967	6763 386213	0
5 041 2021 21.25.10.090	0703.202307	0703.300213	U
.00390710 51.55233	2 120.367631	190.098025	
.00390710 51.55233 411.674431	358.823995	5535.505192	2
860			
4 Jul 2021 12:43:48.738 .00388487 51.55218	6762 220500	6762 2406E2	^
4 Jul 2021 12:43:48.738	0/03.230500	6/63.340653	U
.00388487 51.55218	0 122.548539	186.858696	
411.478328	358.928978	5535.449259	2
870			
5 Jul 2021 04:04:26.044	6763.194144	6763.294985	0
.00386135 51.55202	0 124.758467	183.619299	
411.273445		5535.393194	2
	339.042323	3333.333134	2
880			
5 Jul 2021 19:25:02.807	6763.149718	6763.249268	0
.00383657 51.55187		180 379832	
			_
411.059942	359.164593	5535.337068	2
890			
6 Jul 2021 10:45:39.025	6763.105218	6763.203421	0
			J
.00381054 51.55175			
410.837874	359.294969	5535.280785	2
900			
7 Jul 2021 02:06:14.694	6763 060637	6763.157440	0
			U
.00378328 51.55167		173.900709	
410.607360	359.433520	5535.224335	2

Page 26			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe			
	srigee (Am) bracicar	reriod (Bec) or	DIC CO
unt			
010			
910 7 Jul 2021 17:26:49.815 .00375481 51.551653			_
7 Jul 2021 17:26:49.815	6763.016052	6763.111402	0
.00375481 51.551653	133.906122	170.661071	
410.368624	359.580180	5535.167816	2
920			
8 Jul 2021 08:47:24.384	6762 971381	6763 065231	0
.00372516 51.551689	0702.571301	165 401305	U
.003/2516 51.551689	136.2/5254	16/.42139/	
410.121762	359.734700	5535.111134	2
930			
9 Jul 2021 00:07:58.401	6762.926761	6763.019064	0
.00369436 51.551780	138 679183	164 181701	_
100 00 00 00 00 00 00 00 00 00 00 00 00	250.0079103	5525 054450	•
409.867086	359.89/042	5535.054458	2
940			
9 Jul 2021 15:28:31.863	6762.882014	6762.972729	0
.00366243 51.551918	141.119128	160.941993	
9 Jul 2021 15:28:31.863 .00366243 51.551918 409.604674	360 066783	5534 997574	2
950	300:000703	3334.337374	
950			
10 Jul 2021 06:49:04.769	6762.837202	6762.926288	0
.00362942 51.552087	143.596256	157.702278	
409.334812	360.243765	5534.940562	2
960			
	6762 702411	6762 970922	0
10 Jul 2021 22:09:37.116			U
.00359537 51.552268	146.111341	154.462560	
409.057883	360.427783	5534.883532	2
970 11 Jul 2021 13:30:08.903 .00356031 51.552438	6762.747581	6762.833306	0
00356031 51 552438	149 665796	151 222222	•
.00330031 31.332430	140.003/90	131.222033	_
408.774122	360.618489	5534.826414	2
980			
12 Jul 2021 04:50:40.128	6762.702730	6762.786729	0
.00352431 51.552575			
408.483891	360.815566		2
	360.813366	3534.769235	2
990			
12 Jul 2021 20:11:10.789	6762.657936	6762.740185	0
.00348742 51.552662	153.896900	144.743304	
408.187697		5534.712097	3
000			_
13 Jul 2021 11:31:40.886	6860 613158	6760 603636	•
			0
.00344970 51.552687	156.575722	141.503466	
407.885882	361.227390	5534.654952	3
010			
14 Jul 2021 02:52:10.417	6762.568414	6762 647107	0
			3
.00341121 51.552648			_
407.578921	361.441292	5534.597833	3
020			
14 Jul 2021 18:12:39.380	6762.523769	6762.600664	0
.00337204 51.552555	162.065193	135.023545	
3=:33,4000			

Time (UTCG) Ser	oi-parameter (lm) Sem	i-maior Aria (km)	Fac
Time (UICG) Ser	mr-parameter (km) sem	I-major Axis (km)	E.C.C.
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Ori	bit Co
unt			
407.267440	361.659888	5534.540819	3
030			
15 Jul 2021 09:33:07.776 .00333226 51.552427	6762.479180	6762.554271	0
00333226 51 552427	164 877863	131 783435	•
406 051050	261 002604	5524 402067	2
406.951858	301.882084	5534.463667	3
040			
16 Jul 2021 00:53:35.604	6762.434702	6762.507987	0
.00329194 51.552290 406.632789	167.737179	128.543218	
406.632789	362.109185	5534.427049	3
16 Jul 2021 16:14:02.864 .00325120 51.552175 406.310953	<b>6760 20027</b>	6560 461056	
16 Jul 2021 16:14:02.864	6762.390375	6762.461856	0
.00325120 51.552175	170.643749	125.302906	
406.310953	362.338759	5534.370419	3
060			
17 Jul 2021 07:34:29.556	6762 346183	6762 415867	0
17 001 2021 07:54:29:550	0702.540105	100 060510	U
.00321009 51.552109	1/3.598651	122.062518	
405.986861	362.570874	5534.313963	3
070			
17 Jul 2021 22:54:55.681	6762.302152	6762.370053	0
.00316875 51.552111	176.602303	118.822081	
			3
405.661299	362.804806	5554.25//22	3
405.661299 080 18 Jul 2021 14:15:21.240 .00312724 51.552190 405.334829 090			
18 Jul 2021 14:15:21.240	6762.258273	6762.324406	0
.00312724 51.552190	179.655549	115.581624	
405.334829	363.039983	5534.201686	3
090			_
090 19 Jul 2021 05:35:46.234	6762 214551	6762 279029	0
19 Jul 2021 05:35:46.234	6/62.214551	0/02.2/0930	U
.00308568 51.552337	182.758791	112.341174	
405.008169	363.275707	5534.145871	3
100			
19 Jul 2021 20:56:10.664	6762.170995	6762.233662	0
.00304420 51.552531	185 911910	109.100746	
	262 511000	FF34 000301	3
404.682224	363.511099	5534.090291	3
110			
20 Jul 2021 12:16:34.531			0
.00300289 51.552743	189.115137	105.860344	
404.357649		5534.034941	3
120	30347 13137	33317031312	•
	CTC0 0040T0	6560 440650	_
21 Jul 2021 03:36:57.835			0
.00296187 51.552942	192.368120	102.619957	
404.035281	363.978063	5533.979822	3
130			
21 Jul 2021 18:57:20.578	6762 041251	6762.098959	0
	105 ((002)	0,02.050555	J
.00292131 51.553100			_
403.716162	364.207757	5533.924935	3
140			
22 Jul 2021 10:17:42.761	6761.998286	6762.054424	0

Page 28 Time (UTCG)	Cor	m:	(lem) Com	i majam Auja (lum)	Egg
entricity Inclination of Apogee (km)	tion (deg)	Arg of Pe	rigee (deg)	RAAN (deg)	Height
unt					
00288132	51 553201		199 019575	96 139137	
.00288132 403.401045	31.333201	364.433804	100.010010	5533.870266	3
150		301.133001		3333.070200	J
23 Jul 2021 01:38:04	.383	6761.95	5439	6762.010057	0
.00284203	51.553238		202.415946	92.898648	
.00284203 403.090876		364.655238		5533.815802	3
160 23 Jul 2021 16:58:25 .00280362 402.786808	.445	6761.91	.2702	6761.965853	0
.00280362	51.553221		205.856740	89.658073	
402.786808		364.870898		5533.761540	3
1/0					
24 Jul 2021 08:18:45	.949	6761.87	0049	6761.921790	0
.00276621	51.553165		209.340122	86.417399	
		365.079925		5533.707450	3
180					
24 Jul 2021 23:39:05	.894	6761.82	7574	6761.877969	0
.00272996 402.200641	51.553093		212.863174	83.176622	
402.200641		365.281296		5533.653657	3
190					_
25 Jul 2021 14:59:25 .00269503	.281	6761.78	5037	6761.834149	0
.00269503	51.553026	265 452500	216.422865	79.935751	2
401.920516		365.473782		5533.599868	3
200 26 Jul 2021 06:19:44	110	6761 71	2506	6761 700406	0
.00266156	• TTO	0/01./4	2200 220 015012	76 604700	U
401.650294	31.332904	365 656518	220.013612	70.034733 5533 546171	3
210		303.030310		3333.340171	3
	. 381	6761.69	9983	6761 746742	0
26 Jul 2021 21:40:02 .00262971	51.552979	0,01.03	223.637471	73.453788	ŭ
401.391145					3
220		00000			
27 Jul 2021 13:00:20	.093	6761.65	7403	6761.703098	0
.00259960	51.553018		227.283847	70.212740	
401.143794		365.988401		5533.438997	3
230					
28 Jul 2021 04:20:37	.247	6761.61	4730	6761.659437	0
.00257136	51.553099		230.950017	66.971674	
400.909130		366.135745		5533.385404	3
240					
28 Jul 2021 19:40:53	.841	6761.57	1978	6761.615779	0
.00254516 400.688196	51.553213		234.630064	63.730606	
		366.269362		5533.331812	3
250					_
29 Jul 2021 11:01:09	.874	6761.52	9065	6761.572040	0
.00252109					_
400.481546		366.388535		5533.278122	3
260					

Page 29			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Po	erigee (km) Sidereal :	Period (sec) Oı	rbit Co
unt			
30 Jul 2021 02:21:25.346 .00249924 51.553492	6761.485951	6761 - 528185	0
.00249924 51.553492	242.010381	57.248494	·
400 280871	366 492498	5533 224280	3
400.289871	300.492490	3333.224209	3
270 30 Jul 2021 17:41:40.253 .00247974 51.553628 400.113992	CEC1 440CE0	6761 404047	•
30 Jul 2021 17:41:40.253	6761.442670	6761.484247	0
.00247974 51.553628	245.697815	54.007448	
400.113992	366.580502	5533.170355	3
31 Jul 2021 09:01:54.596 .00246265 51.553745	6761.399122	6761.440128	0
.00246265 51.553745	249.375422	50.766400	
399.954208	366.652048	5533.116199	3
290			
1 Aug 2021 00:22:08.370	6761 355315	6761 395836	0
00244004 E1 EE202E	252 026652	47 525335	U
.00244804 51.553835	253.030052	47.525555 FF32 061830	3
399.810975	300.700097	2233.061830	3
300			
1 Aug 2021 15:42:21.575	6761.311222	6761.351343	0
.00243596 51.553891	256.674887	44.284239	
1 Aug 2021 15:42:21.575 .00243596 51.553891 399.684743	366.743943	5533.007216	3
310			
2 Aug 2021 07:02:34.206 .00242645 51.553914	6761.266775	6761.306583	0
.00242645 51.553914	260.284455	41.043096	•
300 575552	366 763614	5532 952273	3
399.575552 320	300.703014	5552.552275	3
	6861 222041	6861 061600	^
2 Aug 2021 22:22:46.262	6/61.222041	6/61.261622	0
.00241953 51.553908	263.858834	37.801892	
399.483714	366.765531	5532.897084	3
3 Aug 2021 13:42:57.738	6761.176914	6761.216353	0
3 Aug 2021 13:42:57.738 .00241520 51.553881	267.393150	34.560615	
399.409030	366.749676	5532.841518	3
340			
4 Aug 2021 05:03:08.631	6761.131378	6761 . 170759	0
	270.882316		·
		5532.785552	3
	300.710100	5532.765552	3
350			
4 Aug 2021 20:23:18.939	6761.085514	6761.124921	0
.00241423 51.553805	274.321141		
399.310861	366.664982	5532.729287	3
360			
5 Aug 2021 11:43:28.657	6761.039221	6761.078737	0
.00241754 51.553779	277.706226	24.836317	
399.286913		5532.672597	3
370		<del> </del>	•
6 Aug 2021 03:03:37.782	6760 992497	6761 022201	0
.00242330 51.553773			U
			_
399.279216	366.511185	3334.0154/5	3

entricity	Inclinat	tion (deg)	Arg of Pe	erigee (deg)	i-major Axis (km) RAAN (deg)	Height
unt					Period (sec) (	
380						
	19.22.46	211	6760 9/	15/22	6760.985404	1
00043147		E1 EE3704		204 201460	10 252112	
300 28'	7531	31.333794	366 409276	201.301109	5532.558034	
390	7551		300.409270		3332.330034	•
7 Aug 2021	09.43.54	240	6760 80	7044	6760.938260 15.111443 5532.500167	)
00244196	09.43.34	.240 51 5520 <i>4</i> 1	0700.03	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	15 111442	
200 31.	1106	21.333641	366 201324	207.500595	13.111113	:
400	LIJO		300.291324		5552.500107	•
					6760.890779	
0 Aug 2021	01:04:01	.30/ E1 EE3010	6/60.63	00041 200 647865	11.869751	,
.00245469	2604	51.553912	266 155054	290.04/805	11.009/31	
399.343 410	9004		300.13/8/4		5532.441886	•
410	16.24.00	206	6760 00	1014	6760 043046	3 (
0 Aug 2021	10:24:00	.200 E1 EE2007	6/60.60	)TOT#	0/00.043040	,
200 40	0501	31.333997	366 000504	293./23/32	6760.843048 8.628046 5532.383299	:
399.40	259I		366.009504		5534.363499	•
420	07.44.14	207	6760 75	2200	C7C0 70E00	2 (
9 Aug 2021	0/:44:14	.39/	6/60./5	200 724220	6760.795002 5.386337	2 (
.00248656	2140	51.554083	3CE 04C0EE	296./34228	5.38633/	3
399.46	9149		365.846855		5532.324326	-
430	22.04.10	906	6760 70	11222	6760 74670	3 (
9 Aug 2021	23:04:19	.090 	6/60./(	14202 200 6700E2	6760.746723 2.144623	,
.UUZ3U33Z	2000	51.554155	265 670540	299.0/0052	2.1440 <i>23</i>	3
399.540 440	0090		303.070349		5532.265066	-
440 10 3 2021	14.24.24	770	6760 6	E013	6760.698163	3 (
10 Aug 2021	14:24:24	•// <del>/</del> E1 EE/100	6/60.63	303 EE0E00 3013		
.00252635	1043	31.334196	265 401202	302.556500	358.902897 5532.205461	3
399.04.	1043		365.461262		5532.205461	-
450	05.44.00	0.45	6760 60	NE 41 O	6760.649345	- ,
11 Aug 2021	05:44:29	.045	6/60.60	15419	355.661143	, (
399.74	1949		365.279740		5532.145540	3
460	01 - 04 - 20	CO1	6860 55		6860 60022	
					6760.600331	L (
.00257326					352.419341	
399.860	0178		365.066534		5532.085379	3
470			6 <b>7</b> 60 <b>7</b> 6	- 400	6860 88440	
			6760.50			) (
.00259915		51.554071	264 242412		349.177466	
399.98!	5790		364.842410		5532.024952	:
480	00 44 00	114			<b>2820 -5</b> 12-	
					6760.501674	<u> </u>
					345.935497	
	L297		364.608051		5531.964286	3
490						
					6760.452091	L (
.00265531		51.553817		316.021577	342.693418	

entricity Inclination (deg) of Apogee (km) Height of Pe		RAAN (deg) I	Height
unt			
400.266170	364.364012	5531.903427	3
14 Aug 2021 10:24:41.031 .00268538 51.553689	6760.353595	6760.402347	0
.00268538 51.553689	318.539406	339.451225	
400.419621	364.111072	5531.842370	3
510			
15 Aug 2021 01:44:41.547	6760.302564	6760.352457	0
.00271666 51.553587	321.004014	336.208925	
400.581019	363.849895	5531.781136	3
520	6860 051240	6860 200420	•
15 Aug 2021 17:04:41.432 .00274906 51.553525 400.749892	6760.251342	6760.302432	0
.002/4906 51.553525	323.41/559	332.96653/ EE31 710734	3
530	363.3609/1	5531./19/34	3
16 Aug 2021 08:24:40.685			
.00278247 51.553510	325.782572	329.724089	Ū
400.925448	363.305099	5531.658170	3
540	303.303033	3331.030170	•
16 Aug 2021 23:44:39.306	6760.148385	6760.202023	0
.00281681 51.553534	328.101304	326.481607	
401.107232	363.022813	5531.596493	3
17 Aug 2021 15:04:37.294	6760.096599	6760.151585	0
.00285199 51.553583	330.376072	323.239118	
17 Aug 2021 15:04:37.294 .00285199 51.553583 401.294466	362.734705	5531.534587	3
56()			
18 Aug 2021 06:24:34.646	6760.044620	6760.101000	0
.00288791 51.553635	332.609137	319.996636	
401.486542	362.441457	5531.472499	3
570 18 Aug 2021 21:44:31.363	6750 002422	6760.050240	•
.00292451 51.553666	0/59.992423		0
	334.802572 362.143394	5531.410198	3
580	302.143394	3331.410190	3
19 Aug 2021 13:04:27.441	6759.939997	6759.999293	0
.00296169 51.553657			·
401.883339	361.841247		3
590			
20 Aug 2021 04:24:22.878	6759.887315	6759.948129	0
.00299938 51.553599			
402.086764	361.535494	5531.284870	3
600			
20 Aug 2021 19:44:17.673	6759.834344	6759.896715	0
.00303753 51.553488	341.166057	307.026657	
	361.226334	5531.221766	3
610	CREO 501015	CDE0 045005	_
21 Aug 2021 11:04:11.821	6759.781045	6759.845007	0

Page 32		
Time (UTCG) Serentricity Inclination (deg) of Apogee (km) Height of Po	Arg of Perigee (deg)	
unt		
.00307605 51.553334	343.221506	303.784045
.00307605 51.553334 402.501603 620	360.914411	5531.158302
22 Aug 2021 02:24:05.320	6759.727369	6759.792955 0
.00311487 51.553152 402.711810	345.247283	300.541338
402.711810	360.600101	5531.094416 3
630 22 Aug 2021 17:43:58.166 .00315397 51.552961 402.923554	6750 673200	6759.740532 0
00315397 51 552961	347 245219	297 298521
402.923554	360.283511	5531.030075
23 Aug 2021 09:03:50.353 .00319326 51.552783	6759.618729	6759.687657 0
.00319326 51.552783	349.217127	294.055590
403.136103	359.965210	5530.965179 3
650		
24 Aug 2021 00:23:41.877	6759.563514	6759.634154 0
.00323269 51.552633 403.348984	351.164900	290.812546
403.348984	359.645324	5530.899513 3
24 Aug 2021 15:43:32.730	6759.507851	6759.580229 0
24 Aug 2021 15:43:32.730 .00327224 51.552527	353.089915	287.569401
403.562177	359.324282	5530.833329 3
670		
25 Aug 2021 07:03:22.908	6759.451507	6759.525646 0
.00331181 51.552469	354.993944	284.326171
403.774880	359.002412	5530.766337 3
680	6750 204409	6750 470410 0
25 Aug 2021 22:23:12.402 .00335139 51.552458	0/39.394490 356 878538	281 082874
403.987065		
690	330,073772	
26 Aug 2021 13:43:01.206	6759.336664	6759.414385 0
.00339091 51.552489	358.745162	277.839529
404.197932	358.356838	5530.629784 3
700		
27 Aug 2021 05:02:49.308		
.00343030 51.552548 404.407062		274.596153 5530.559920 3
710	336.033639	3330.339920
27 Aug 2021 20:22:36.699	6759.218334	6759.299702 0
.00346956 51.552622	2.429971	271.352756
		5530.489032 3
720		
28 Aug 2021 11:42:23.369		
.00350861 51.552693		268.109345
404.819411	357.388390	5530.416864 3
730		

1496 55			_
Time (UTCG) Seentricity Inclination (deg) of Apogee (km) Height of F		RAAN (deg)	Height
unt			
29 Aug 2021 03:02:09.305 .00354739 51.552745 405.021393	6759.095918	6759.180975	0
.00354739 51.552745	6.058540	264.865921	
405.021393	357.066557	5530.343319	3
/ 40			
29 Aug 2021 18:21:54.493	6759.033117	6759.120031	0
.00358590 51.552767	7.854596	261.622478	
405.220576			3
750			
30 Aug 2021 09:41:38.921 .00362407 51.552749 405.416095	6758,969052	6759.057824	0
.00362407 51.552749	9.639877	258.379006	·
405 416095	356 425553	5530 192177	3
760	330.423333	5550.192177	3
7 D U			
31 Aug 2021 01:01:22.574 .00366183 51.552687	6/58.903656	6/58.994288	0
.00366183 51.552687	11.415339	255.135490	_
405.607596	356.106980	5530.114199	3
770			
31 Aug 2021 16:21:05.435	6758.837084	6758.929574	0
.00369921 51.552584	13.181920	251.891914	
405.795286			3
700			
1 Sep 2021 07:40:47.491 .00373611 51.552448	6758.769079	6758.863423	0
.00373611 51.552448	14.940453	248.648260	_
405.978310	355 474536	5529 953593	3
1 Sep 2021 23:00:28.725 .00377255 51.552293	6759 600925	6759 796017	0
1 Sep 2021 25:00:20.725	16 601702	0/56./9001/	U
.003//255 51.552293	16.691/93	245.404512	•
406.156930	355.161103	5529.870867	3
800			_
2 Sep 2021 14:20:09.120	6758.629064	6758.727094	0
.00380844 51.552135	18.436681	242.160660	
406.330320	354.849869	5529.786282	3
810			
3 Sep 2021 05:39:48.659	6758.556772	6758.656627	0
.00384375 51.551995	20.175851	238.916694	
406.498232	354.541022	5529.699801	3
820			
3 Sep 2021 20:59:27.324	6758.483167	6758.584834	0
.00387850 51.551890		235.672614	-
406.661003		5529.611693	3
830	331.231000	3323.011033	•
4 Sep 2021 12:19:05.100	6759 409000	6750 511472	0
			U
.00391261 51.551838		232.428424	_
406.817881	353.931063	5529.521660	3
840		4884 4445:-	_
5 Sep 2021 03:38:41.967	6758.331307		0
.00394605 51.551847		229.184135	
406.968700	353.630389	5529.429707	3

rage 34			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) He	eight
of Apogee (km) Height of Pe			
	erigee (km) Sidereal	Period (sec) Orbi	LE CO
unt			
850			
5 Sep 2021 18:58:17.909 .00397886 51.551922 407.113838	6759 252207	6759 360300	^
5 Sep 2021 10:50:17.909	0/30.23329/	6/56.360290	U
.00397886 51.551922	27.089651	225.939761	
407.113838	353.332743	5529.336126	3
860			
6 0 0001 10-15-50 000	6850 183800	6750 000506	•
6 Sep 2021 10:17:52.909	6/58.1/3/80	6/58.282506	0
.00401095 51.552053	28.810620	222.695319	
407.252636	353.038375	5529.240667	3
870			
7 Sep 2021 01:37:26.949	6758.092797	6758.203228	0
.00404231 51.552226	30.529763	219.450828	
407.384988	352.747468	5529.143377	3
000	332.717100	3323.113377	-
880			
7 Sep 2021 16:57:00.015	6758.010587	6758.122697	0
.00407296 51.552414	32.247809	216,206299	
407 F112F0	352 460145	EE20 044E40	3
7 Sep 2021 16:57:00.015 .00407296 51.552414 407.511250	332.400143	3329.044349	3
890			
8 Sep 2021 08:16:32.089	6757.927008	6758.040768	0
.00410283 51.552589	33 965096	212 961740	
400 (2000)	250 150000	5500 044005	_
407.630850	352.1/6686	5528.944005	3
900			
8 Sep 2021 23:36:03.158 .00413193 51.552720	6757.842287	6757.957665	0
00/12102	25 602217	200 717150	_
.00413193 51.552720	35.002317	209.717150	_
407.744091	351.897239	5528.842023	3
9 Sep 2021 14.55.33 207	6757 756334	6757 873295	0
00416001	37.750334	0757.075255	U
.00416021 51.552/85	3/.399695	206.4/2519	
9 Sep 2021 14:55:33.207 .00416021 51.552785 407.850462	351.622128	5528.738486	3
920			
10 Sep 2021 06:15:02.221	6757 660225	6757 707740	0
			U
.00418763 51.552769	39.117592	203.227830	
407.949880	351.351604	5528.633497	3
930			
			•
10 Sep 2021 21:34:30.187	6757.581184	6757.701198	0
.00421421 51.552675	40.836685	199.983062	
	351.085843	5528.527293	3
940	332,003013	33231327233	•
11 Sep 2021 12:53:57.094			0
.00423988 51.552518	42.556982	196.738195	
408.128096		5528.419845	3
	550.025105	5520.115015	-
950			
12 Sep 2021 04:13:22.931	6757.402271	6757.525170	0
.00426462 51.552329		193.493213	
408.206471			
	350.569869	5528.311280	3
960			
12 Sep 2021 19:32:47.688	6757.311650	6757.435925	0
.00428845 51.552144		190.248110	•
	10.002/01	T) 0 + 2 TO TTO	

Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) Height
of Apogee (km) Height of Pe	erigee (km) Sidereal :	Period (sec) Orbit Co
unt		
408.277822	350.320028	5528.201763
4.70		
13 Sep 2021 10:52:11.356 .00431131 51.551998	6757.220352	6757.345953 0
.00431131 51.551998	47.728889	187.002889
408.341953	350.075953	5528.091356 3
980		
14 Sep 2021 02:11:33.928	6757.128482	6757.255360 0
00433320 51 551918	49 457383	183 757562
.00433320 51.551918 408.398895	349 837826	5527.980187 3
000		
14 Sep 2021 17:30:55.398 .00435412 51.551919 408.448719	6757 036106	6757.164211 0
14 Sep 2021 17:30:55.396	6/5/.036106	100 512140
.00435412 51.551919	51.189114	180.512149
408.448/19	349.605/02	5527.868336 4
000		
15 Sep 2021 08:50:15.760	6756.943337	6757.072615 0
.00437405 51.551997	52.923876	177.266669
408.491388	349.379843	5527.755938 4
010		
16 Sep 2021 00:09:35.010	6756.850015	6756.980412 0
.00439297 51.552136	54.662402	174.021138
408.526614	349.160210	5527.642796 4
16 Sep 2021 15:28:53.143 .00441088 51.552307	6756.756627	6756.888088 0
.00441088 51.552307	56.404817	170.775566
408.554943	348.947234	5527.529507 4
0.3.0		
17 Sep 2021 06:48:10.158	6756.663073	6756.795541 0
.00442777 51.552479	58.151240	167.529954
408.576081	348.741000	5527.415943 4
040		
17 Sep 2021 22:07:26.053	6756.569299	6756.702714 0
.00444361 51.552620	59.902691	164.284293
408.589843		5527.302038 4
050		
18 Sep 2021 13:26:40.826	6756.475463	6756.609765 0
.00445837 51.552708		
408.596252		5527.187983 4
060	3100313170	552, (25,) 55
19 Sep 2021 04:45:54.476	6756 381608	6756.516733 0
.00447205 51.552729		
		5527.073828 4
070	540.104202	3327.073020
19 Sep 2021 20:05:07.002	6756.287621	6756.423504 0
.00448460 51.552680		154.546858 5526.959430 4
408.586376	347.986632	5526.959430 4
080	6756 103651	6756 220205
20 Sep 2021 11:24:18.402	6756.193651	6756.330225 0

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Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal :	Period (sec) Orbit Co
unt		
.00449602 51.552569	66.959702	151.300835
408.569800	347.816649	5526.844973 4
000		
21 Sep 2021 02:43:28.677 .00450627 51.552412	6756.099700	6756.236896 0
00450627 51 552412	68 738318	148 054685
400 545324	247 (54467	5526.730455 4
408.545324	347.034407	5526./30455 4
100		
21 Sep 2021 18:02:37.824 .00451533 51.552228	6756.005616	6756.143361 0
.00451533 51.552228	70.523986	144.808402
408.512558	347.500164	5526.615686 4
110		
22 Sep 2021 09:21:45.844	67EE 011E14	6756.049737 0
22 Sep 2021 09:21:45.644	6/55.911514	0/50.049/5/
.00452318 51.552039	72.316211	141.561986
408.471548	347.353926	5526.500808 4
120		
23 Sep 2021 00:40:52.734 .00452980 51.551867 408.422118	6755.817357	6755.955983 0
.00452980 51.551867	74,115329	138.315446
408 422118	347 215849	5526.385771 4
120	347.213049	3320:303771
130		
23 Sep 2021 15:59:58.493	6755.722979	6755.861932 0
.00453516 51.551728	75.922550	135.068792
408.363869	347.085995	5526.270370 4
140		
24 Sep 2021 07:19:03.118	6755.628443	6755.767645 0
.00453926 51.551634		
400 000034	246 064455	TS1.022030
408.296834	346.964455	5526.154681 4
150		
24 Sep 2021 22:38:06.605	6755.533588	6755.672959 0
.00454206 51.551591	79.561092	128.575198
24 Sep 2021 22:38:06.605 .00454206 51.551591 408.220627	346.851292	5526.038504 4
160		
25 Sep 2021 13:57:08.951	67EE 420420	6755.577899 0
.00454356 51.551598		125.328287
408.135258	346.746540	5525.921868 4
170		
26 Sep 2021 05:16:10.150	6755.342908	6755.482378 0
.00454374 51.551648		
		5525.804667 4
	340.030224	3323.004007
180		
26 Sep 2021 20:35:10.198		
.00454257 51.551729		
407.936099	346.562429	5525.686739 4
190		
27 Sep 2021 11:54:09.085	6755.150280	6755.289521 0
.00454006 51.551828		115.587209
407.821921	346.483121	
	740.403T7T	3323.300040 4
200		

Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Pe		RAAN (deg)	Height
28 Sep 2021 03:13:06.806	6755.053053	6755.192054	0
28 Sep 2021 03:13:06.806 .00453618 51.551929 407.697798	88.817366	112.340073	J
407.697798	346.412310	5525.448455	4
210			
28 Sep 2021 18:32:03.349	6754.955104	6755.093780	0
.00453090 51.552015 407.563431	90.700233	109.092871	4
220	340.330130	3323.327079	-
29 Sep 2021 09:50:58.705	6754.856351	6754.994616	0
29 Sep 2021 09:50:58.705 .00452423 51.552075 407.418739	92.594501	105.845589	
407.418739	346.296493	5525.206213	4
230	6754 756700	6754 004470	•
30 Sep 2021 01:09:52.863 .00451614 51.552098 407.263539	6/54./56/08 94 500769	6/54.8944/8 102 598210	U
407.263539	346.251417	5525.083352	4
240			_
30 Sep 2021 16:28:45.810	6754.656150	6754.793337	0
.00450661 51.552083	96.420458	99.350716	
407.097588	346.215085	5524.959262	4
250 1 Oct 2021 07:47:37.533	6754 554569	6754 691087	0
.00449565 51.552031	98.353398	96.103091	· ·
406.920797	346.187376	5524.833812	4
1 Oct 2021 23:06:28.019 .00448321 51.551952	6754.451974	6754.587736	0
.00448321 51.551952 406.732968	100.301020	92.855321	4
270	340.100304	3324.707013	7
2 Oct 2021 14:25:17.252	6754.348259	6754.483177	0
.00446931 51.551861	102.263212	89.607399	
406.534030	346.158324	5524.578732	4
280	6854 042208	6854 288288	•
3 Oct 2021 05:44:05.218 .00445393 51.551774		6754.377377 86.359323	0
406.323887		5524.448929	4
290			
3 Oct 2021 21:02:51.901			0
.00443705 51.551712			
406.102412 300	346.164366	5524.317671	4
4 Oct 2021 12:21:37.287	6754 . 030261	6754.162134	0
.00441868 51.551693		79.862749	J
405.869626		5524.184859	4
310			
5 Oct 2021 03:40:21.360	6753.921934	6754.052622	0
.00439883 51.551728 405.625539	110.273591 346.205706	76.614290 5524.050506	4
103.02333	J=0.20J/00	3324.030300	-

Page 30		
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Po	erigee (km) Sidereal :	Period (sec) Orbit Co
unt		
320		
5 Oct 2021 18:59:04.104 .00437747 51.551822 405.370108	6753.812517	6753.941937 0
.00437747 51.551822	112.320389	73.365747
405.370108	346.239767	73.365747 5523.914715 4
330		
6 Oct 2021 10:17:45.506	6753 701983	6753 830055 0
.00435464 51.551971	114 206012	70 117146
.00435464 51.5519/1	114.386012	/0.11/146
405.103521	346.282589	5523.777456 4
340		
7 Oct 2021 01:36:25.549	6753.590390	6753.717035 0
.00433034 51.552158	116.471264	66.868503
404.825943	346.334126	5523.638802 4
250		
7 Oct 2021 16:55:04.221 .00430458 51.552364 404.537397	6752 477021	6752 602062 0
7 OCC 2021 10:55:04.221	0/33.4//021	6753.602962
.00430458 51.552364	118.5//520	63.619827
404.537397	346.394526	5523.498858 4
300		
8 Oct 2021 08:13:41.508	6753.364333	6753.487896 0
.00427741 51.552562	120.705151	60.371114
404.238305	346.463487	5523.357697 4
370		
8 Oct 2021 23:32:17.398	6753 240860	6753.371784 0
0 000 2021 23:32:17.390	0/33.249009	0/33.3/1/04 0
.00424882 51.552729	122.855395	57.122348
403.928642	346.540925	5523.215254 4
9 Oct 2021 14:50:51.878 .00421887 51.552846	6753.134795	6753.254995 0
.00421887 51.552846	125.029239	53.873502
403.609108	346.626883	5523.071982 4
390		
10 Oct 2021 06:09:24.940	6753 019107	6753 137530 0
.00418761 51.552908		
403.280009	346.721051	5522.927881 4
400		
10 Oct 2021 21:27:56.575	6752.902829	6753.019414 0
.00415502 51.552917		47.375450
		5522.782984 4
410		
11 Oct 2021 12:46:26.774	6752 796175	6752.900867 0
.00412119 51.552888		
402.593833	346.933902	5522.637559 4
420		
12 Oct 2021 04:04:55.533	6752.669286	6752.782035 0
.00408615 51.552841	133.983103	40.876767
	347.052138	
430		•
12 Oct 2021 19:23:22.847	6752.552112	6752.662867 0
.00404990 51.552798	136.292412	37.627173

entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) He Period (sec) Orbi	eight
401 973497	247 170240	EE22 34E600	4
401.873487 440	347.176246	5522.345600	4
13 Oct 2021 10:41:48.712	6752.434957	6752 543675	0
.00401253 51.552777	138.632427	34.377426	Ū
401.501447	347.311904	5522.199388	4
450			
14 Oct 2021 02:00:13.129	6752.317958	6752.424602	0
.00397408 51.552787	141.004395	31 127547	
401.122268	347.452935	5522.053321	4
460			
14 Oct 2021 17:18:36.097	6752.200979	6752.305509	0
.00393454 51.552832	143.409628	27.877557	
14 Oct 2021 17:18:36.097 .00393454 51.552832 400.735710	347.601308	5521.907233	4
470 15 Oct 2021 08:36:57.616			
.00389402 51.552904	0/32.004388	24 627479	U
400 342939	347 756609	5521 761585	4
400.342939 480	347.730009	3321.701303	-
15 Oct 2021 23:55:17.690	6751.967975	6752.068190	0
.00385254 51.552992	148.324303	21.377325	
399.943794	347.918586	5521.616123	4
16 Oct 2021 15:13:36.321 .00381018 51.553079 399.539353	6751.852154	6751.950176	0
.00381018 51.553079	150.836022	18.127102	
399.539353	348.086999	5521.471362	4
17 Oct 2021 06:31:53.516	6751.737002	6751.832815	0
.00376705 51.553152	153.385492	14.876806	
399.130305 510	348.261326	5521.327403	4
17 Oct 2021 21:50:09.279	6751 622240	6751 715830	0
.00372313 51.553198	155.973777	11.626428	Ū
398.716339		5521.183907	4
520			
18 Oct 2021 13:08:23.617	6751.508267	6751.599629	0
.00367858 51.553209		8.375953	
398.298939	348.626320	5521.041374	4
530			
19 Oct 2021 04:26:36.538			0
.00363349 51.553185			
397.878725	348.815794	5520.899861	4
540	6851 000480	6751 260201	•
19 Oct 2021 19:44:48.048 .00358786 51.553128			0
397.455368		1.874649 5520.758951	4
550	313.003334	JJ20 • / JUJJI	-1
20 Oct 2021 11:02:58.155	6751.170679	6751.255373	0
	<del> </del>		•

Page 40			
Time (UTCG) Ser entricity Inclination (deg)	Arg of Perigee (deg	g) RAAN (deg)	Height
of Apogee (km) Height of Pount			
.00354187 51.553047	166.73590	358.623792	
397.030448 560	349.206298	5520.619111	4
	6751 050727	6751 142222	0
21 Oct 2021 02:21:06.867	160 5222	7/ 255 272705	U
.00349561 51.552952 396.604607	349 405857	5520 480335	4
570	349.403037	3320.400333	-
570 21 Oct 2021 17:39:14.192 .00344910 51.552856	6750.949276	6751.029588	0
.00344910 51.552856	172.3751	352.121626	
330.177332	349.607643	5520.342171	4
22 Oct 2021 08:57:20.135	6750.839605	6750.917761	0
.00340251 51.552770	175.26193	16 348.870318	
395.750838 590	349.810685	5520.205010	4
23 Oct 2021 00:15:24.707	6750.730729	6750.806759	0
.00335596 51.552704	178.19404	19 345.618868	
395.325180	350.014339	5520.068862	4
600			
23 Oct 2021 15:33:27.912 .00330946 51.552664	6750.622142	6750.696080	0
.00330946 51.552664	181.1719	26 342.367289	
394.900272	350.217888	5519.933110	4
910			
24 Oct 2021 06:51:29.755			
.00326323 51.552654			
394.477707 620	350.420333	5519.798119	4
	6750 406349	6750 476222	0
24 Oct 2021 22:09:30.239 .00321726 51.552671	187 2650	11 335 863798	U
394.057278			4
630	3301022200	33131003131	-
25 Oct 2021 13:27:29.369	6750.298950	6750.366860	0
.00317178 51.552709	190.37970	05 332.611916	
		5519.529319	4
640			
26 Oct 2021 04:45:27.147	6750.191817	6750.257817	0
.00312689 51.552759			
393.228122	351.013513	5519.395579	4
650			
26 Oct 2021 20:03:23.573	6750.084645	6750.148789	0
.00308262 51.552810	196.7422	43 326.107930	
392.819962	351.203616	5519.261857	4
660	<b></b>		_
27 Oct 2021 11:21:18.648	6749.977512	6750.039860	0
.00303919 51.552849			
	351.388211	5519.128259	4
670			

rage 41			
Time (UTCG) Ser	mi-parameter (km)    Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe			
unt	origed (imi) bracient	101100 (500)	
28 Oct 2021 02:39:12.371 .00299670 51.552863	6740 070000	6840 030006	•
28 OCT 2021 02:39:12.3/1	6/49.8/0290	6/49.930906	U
.00299670 51.552863	203.274435	319.603664	
.00299670 51.552863 392.021433 680	351.566380	5518.994632	4
680			
28 Oct 2021 17:57:04.738 .00295520 51.552845	6749 762750	6740 921609	0
20 OCC 2021 17:57:04.736	0749.702750	0/49.021090	U
.00295520 51.552845	206.600057	316.351411	
391.631770	351.737626	5518.860693	4
690			
29 Oct 2021 09:14:55.745	6749 654903	6749 712253	0
29 000 2021 09.14.33.743	0749.054905	0/49./12255	U
.00291488 51.552790	209.962319	313.099058	
391.249874	351.900632	5518.726465	4
700			
30 Oat 2021 00+32+45 388	6749 546695	6749 602518	0
00000000	0749.540095	0749.002510	U
30 Oct 2021 00:32:45.388 .00287586 51.552698 390.876422	213.358466	309.846587	
390.876422	352.054614	5518.591883	4
710			
30 Oct 2021 15:50:33.661	6749 437869	6749 492239	0
30 000 2021 13:30:33:001	0/49.43/009	0/49.492239	U
.00283819 51.552578	216.785751	306.593977	
390.511559	352.198919	5518.456634	4
720			
31 Oct 2021 07:08:20.555	6749 328456	6749 381448	0
00000004 51 550443	0749.320430	202 241010	U
.00280204 51.552443	220.240468	303.341210	
390.156518	352.332379	5518.320760	4
720			
31 Oct 2021 22:26:06.063 .00276748 51.552312	6749 218371	6749.270063	0
00076740	222 710041	200 000276	Ū
.00276748 51.552312 389.811506	223./19041	300.088276	
389.811506	352.454620	5518.184157	4
1 Nov 2021 13:43:50.178 .00273465 51.552205	6749.107582	6749.158055	0
.00273465 51.552205	227 217050	206 935171	·
.002/3403 31.552205	227.217050	290.0331/1	
389.477664	352.564445	5518.046791	4
750			
2 Nov 2021 05:01:32.890	6748.996045	6749.045380	0
.00270368 51.552141	230.729993	202 501000	_
389.155621	352.661139	5517.908609	4
760			
2 Nov 2021 20:19:14.191	6748.883746	6748.932024	0
.00267458 51.552134		290 328479	
200 045502			4
388.845593	352.744454	5517.769592	4
770			
3 Nov 2021 11:36:54.072	6748.770656	6748.817961	0
.00264751 51.552188	237.781908	287.074935	
			4
388.548546	352.813375	22T/.07A/TO	4
780			
4 Nov 2021 02:54:32.525	6748.656775	6748.703191	0
.00262255 51.552298		283.821296	
388.265002		5517.488962	4
300.203002	332.00/300	JJI / • 40030Z	4

Page 42			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal 1	Period (sec) Or	bit Co
unt			
700			
790	CE40 E40100	6840 508830	•
4 Nov 2021 18:12:09.540	6748.542128	6748.587738	0
.00259971 51.552444	244.834069	280.567591	
387.995089	352.906386	5517.347377	4
800			
5 Nov 2021 09:29:45.109 .00257910 51.552601	6748.426727	6748.471616	0
.00257910 51.552601	248.347179	277.313843	
387.739586	352.929646	5517.204974	4
387.739586 810	3321323013	331/12013/1	-
6 Nov 2021 00:47:19.225			٥
6 NOV 2021 00:47:19.225	0/40.310010	0/40.3540/1	U
.00256077 51.552737			
387.498861	352.936881	5517.061807	4
820			
6 Nov 2021 16:04:51.880	6748.193838	6748.237537	0
.00254471 51.552826	255.321453	270.806251	
387.272870	352.928203	5516.917919	4
020			
7 Nov 2021 07:22:23.066 .00253100 51.552847 387.062214	6748 076467	6748 119696	0
00053100	0/40.0/040/	267 552300	U
.00253100 51.55284/	250.//20/3	207.552388	
387.062214	352.903177	5516.773411	4
040			
7 Nov 2021 22:39:52.779	6747.958533	6748.001372	0
	262.193642		
386.866698	352.862046	5516.628313	4
850			
8 Nov 2021 13:57:21.013	6747.840169	6747.882701	0
.00251058 51.552676	265.580062	261 044396	
306 606022	263.300002		4
386.686823	352.604579	3310.402/09	-
860 9 Nov 2021 05:14:47.763			_
			0
.00250392 51.552512	268.927971	257.790205	
386.522663	352.730913	5516.336970	4
870			
9 Nov 2021 20:32:13.029	6747.602461	6747.644619	0
.00249956 51.552330			
		5516.190839	4
880	3321012102	3320127003	-
10 Nov 2021 11:49:36.807	6747.483329	C747 F0F417	0
			U
.00249753 51.552160			_
386.240557	352.536278	5516.044669	4
890			
11 Nov 2021 03:06:59.099			0
.00249779 51.552029	278.705717	248.026618	
386.122920	352.415690	5515.898610	4
900		<del>-</del>	-
11 Nov 2021 18:24:19.906	6747 - 245027	6747,287206	0
.00250026 51.551953		244.771749	J
.00230020 31.331333	201.000/95	477./11/4J	

Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal :	Period (sec) Orbit Co
unt		
386.020178	352.280234	5515.752568 4
910		
12 Nov 2021 09:41:39.230 .00250494 51.551939	6747.126077	6747.168413 0
.00250494 51.551939	284.975461	241.516733
385.932674	352.130152	5515.606903 4
920	3311130131	33131000303
13 Nov 2021 00:58:57.078	6747 007474	6747.050042 0
00251170 E1 E51001	200 020260	220 261 E 01
.00251179 51.551981	200.030209	230.201391
385.860194	351.965890	5515.461756 4
930		
13 Nov 2021 16:16:13.453 .00252069 51.552067 385.801843	6746.889074	6746.931943 0
.00252069 51.552067	291.029504	235.006343
385.801843	351.788042	5515.316944 4
340		
14 Nov 2021 07:33:28.361	6746.771213	6746.814455 0
.00253164 51.552175	293.973201	231.751007
385.757958	351.596952	5515.172883 4
950		
14 Nov 2021 22:50:41.811	6746.653700	6746.697383 0
.00254453 51.552283	296.860331	228.495592
385.727536	351 393230	5515.029333 4
960	331.333230	3313.023333
960 15 Nov 2021 14:07:53.809 .00255935 51.552369	6746 536997	6746.581079 0
15 NOV 2021 14:07:55.809	200 601767	0740.301079 0
.00255955 51.552369	299.091/0/	225.240101
385.710917	351.1//241	5514.886727 4
16 Nov 2021 05:25:04.366	6746.420841	6746.465610 0
.00257604 51.552415	302.467929	221.984533
385.707748	350.949472	5514.745145 4
980		
16 Nov 2021 20:42:13.490	6746.305302	6746.350714 0
.00259447 51.552411	305.188598	218.728877
385.716893	350.710534	5514.604266 4
990		
17 Nov 2021 11:59:21.191	6746.190617	6746.236736 0
.00261464 51.552351	307.855602	215.473123
385.738690		5514.464515 5
000		
18 Nov 2021 03:16:27.481	6746 . 076810	6746.123702 0
.00263648 51.552238		
	350.200686	
010	330.20000	3311.323723
	6745 063590	6746.011316 0
18 Nov 2021 18:33:32.371	0/40.905089	6746.011316 0
.00265986 51.552081		
385.817766	349.930867	5514.188126 5
020		
19 Nov 2021 09:50:35.869	6745.851259	6745.899884 0

Page 44	-	
Time (UTCG) Ser	ni-parameter (km) Sen	ni-major Axis (km) Ecc
entricity Inclination (deg)	Arg of Perigee (deg	RAAN (deg) Height
of Apogee (km) Height of Pe		
unt	_	
.00268478 51.551894		
385.874133	349.651635	5514.051500 5
0.3.0		
20 Nov 2021 01:07:37.988	6745.739802	6745.789386 0
00271117 51 551695	319 00012	202 448874
.00271117 51.551695	240 262425	5513.916020 5
385.941338	349.303433	5513.916020
20 Nov 2021 16:24:38.738 .00273888 51.551503	6745.628915	6745.679518 0
.00273888 51.551503	320.425869	9 199.192461
386.018135	349.066901	5513.781313 5
050		
21 Nov 2021 07:41:38.128	6745 518841	6745.570521 0
00076700 E1 EE1 227	222 70770	105 035007
.00276793 51.551337	322.79778	195.935907
386.104761	348.762282	5513.647676 5
060		
21 Nov 2021 22:58:36.169 .00279816 51.551211 386.199978	6745.409287	6745.462102 0
.00279816 51.551211	325.125720	192.679216
386.199978	348.450227	5513.514748 5
070		
22 Nov 2021 14:15:32.869	6745 200449	6745.354455 0
22 NOV 2021 14:15:32.669	6/45.300449	6/45.354455
.00282958 51.551137	327.412410	189.422399
386.303973	348.130938	5513.382769 5
080		
23 Nov 2021 05:32:28.236	6745.192254	6745.247509 0
.00286212 51.551120	329.659689	9 186.165469
386.416196	347.804822	5513.251649 5
23 Nov 2021 20:49:22.281 .00289563 51.551158	6745 004454	CE4E 141010 0
23 NOV 2021 20:49:22.281	0/45.084454	6745.141010 0 182.908438
.00289563 51.551158	331.868480	
.00289563 51.551158 386.535470	347.472550	5513.121078 5
100		
24 Nov 2021 12:06:15.008	6744.977165	6745.035075 0
.00293013 51.551244		
		5512.991200 5
	547.154255	5512.551200
110		
25 Nov 2021 03:23:06.425		
.00296553 51.551361		
386.794924	346.790310	5512.861908 5
120		
25 Nov 2021 18:39:56.537	6744.763669	6744.824442 0
.00300171 51.551490		
386.933478	346.441405	5512.732963 5
130		
26 Nov 2021 09:56:45.348		
.00303867 51.551609	340.36150	3 169.879501
387.077584	346.087596	5512.604417 5
140		

Page 45			
Time (UTCG) Sea			
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal 1	Period (sec) On	rbit Co
unt			
unt			
27 Nov 2021 01:13:32.863	6744.551145	6744.614975	0
.00307634 51.551695	342 407684	166 622071	Ū
387 226717	345 729233	5512 476161	5
387.226717 150	343.723233	3312.470101	5
130			0
27 Nov 2021 16:30:19.083	0/44.445045	0/44.5104/2	U
.00311460 51.551731	344.425053	163.364547	_
387.379944	345.367001	5512.348044	5
387.379944 160 28 Nov 2021 07:47:04.010 .00315345 51.551703 387.537199 170			_
28 Nov 2021 07:47:04.010	6744.338993	6744.406061	0
.00315345 51.551703	346.417645	160.106911	
387.537199	345.000923	5512.220039	5
170			
28 Nov 2021 23:03:47.646	6744.232915	6744.301665	0
.00319278 51.551611	348.384360	156.849147	
387.697721			5
180			
29 Nov 2021 14:20:29.989 .00323259 51.551464	6744.126766	6744.197240	0
.00323259 51.551464	350.327893	153.591241	_
387.861442	344.259039	5511.964038	5
190	311.233033	3311.301030	3
20 Nov. 2021 05.27.11 041	6744 020495	6744 092724	0
30 Nov 2021 05:37:11.041 .00327282 51.551281	0/44.020405	150 222102	U
.0032/282 51.551281	352.24961/	150.333182	_
388.027914	343.883533	5511.835907	5
200			
30 Nov 2021 20:53:50.800	6743.914065	6743.988104	0
.00331337 51.551090	354.150272	147.074968	
388.196444	343.505764	5511.707652	5
210			
1 Dec 2021 12:10:29.264	6743.807435	6743.883310	0
1 Dec 2021 12:10:29.264 .00335424 51.550922	356.031858	143.816608	
388.366914	343.125706	5511.579184	5
220			
2 Dec 2021 03:27:06.432	6743.700562	6743.778307	0
.00339537 51.550806		140.558119	
		5511.450461	5
230	0-1-17-1-0000		•
2 Dec 2021 18:43:42.304	6743 503480	6743 673137	0
.00343666 51.550764			J
		5511.321533	5
240	342.300400	5511.521555	3
	CE42 40C142	6843 568831	•
3 Dec 2021 10:00:16.875			0
.00347810 51.550803		134.040854	
	341.975901	5511.192306	5
250			
4 Dec 2021 01:16:50.146			0
.00351963 51.550917	3.392953	130.782126	
389.059523	341.590588	5511.062773	5

entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
260 4 Dec 2021 16:33:22.113	6743 270695	6742 256212	0
.00356115 51.551085	5.198007		
389.233307	341.205119	5510.933025	5
270			
5 Dec 2021 07:49:52.775	6743.162614	6743.250135	0
.00360264 51.551276	6.991594	124.264552	
389.406645	340.819625	5510.802989	5
280 5 Dec 2021 23:06:22 131	6743 054363	6743 143905	0
.00364402 51.551457	8.774179	121.005699	· ·
5 Dec 2021 23:06:22.131 .00364402 51.551457 389.579089	340.434721	5510.672767	5
290			
6 Dec 2021 14:22:50.179 .00368527 51.551599	6742.945903	6743.037482	0
.00368527 51.551599	10.547261	117.746778	
389.750392	340.050571	5510.542310	5
300 7 Dec 2021 05:39:16.917	6742 837270	6742 030800	0
.00372632 51.551680			U
389.920232	339.667566	5510.411659	5
7 Dec 2021 20:55:42.344 .00376712 51.551696	6742.728550	6742.824238	0
.00376712 51.551696	14.067780	111.228628	
390.000200	339.286209	5510.280912	5
320 8 Dog 2021 12:12:06 460	6742 610739	6742 717494	0
8 Dec 2021 12:12:06.460 .00380763 51.551650	15.816822	107.969348	U
390.254277	338.906711	5510.150065	5
330			
9 Dec 2021 03:28:29.265	6742.510885	6742.610714	0
.00384781 51.551560	17.559616	104.709910	
390.417998	338.529429	5510.019174	5
340 9 Dec 2021 18:44:50.758	6742 402052	6742 503055	0
.00388761 51.551449			U
390.579166	338.154743	5509.888310	5
350			
10 Dec 2021 10:01:10.942			0
.00392699 51.551339			
390.737554	337.782928	5509.757503	5
360	C742 1945CC	6742 200612	•
11 Dec 2021 01:17:29.818 .00396591 51.551253		6742.290612 94.930659	0
390.892905		5509.626801	5
370			3
11 Dec 2021 16:33:47.387	6742.075981	6742.184089	0
.00400432 51.551206	24.480914	91.670643	

Time (UTCG) Ser entricity Inclination (deg)		i-major Axis (km) Ecc RAAN (deg) Height
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
391.044985	337.049194	5509.496230 5
380		
12 Dec 2021 07:50:03.652 .00404220 51.551205	6741.967548	6742.077709 0
.00404220 51.551205	26.202998	88.410528
391.193515	336.687903	5509.365834 5
330		
12 Dec 2021 23:06:18.616	6741.859269	6741.971471 0
.00407949 51.551251	27.922890	85.150334
391.338276	336.330666	5509.235615 5
400		
13 Dec 2021 14:22:32.283 .00411615 51.551337 391.478944	6741.751186	6741.865411 0
.00411615 51.551337	29.641988	81.890077
391.478944	335.977879	5509.105614 5
410		
14 Dec 2021 05:38:44.654	6741.643309	6741.759538 0
.00415213 51.551451	31.361019	78.629768
391.615223	335.629854	5508.975844 5
420		
14 Dec 2021 20:54:55.733	6741.535621	6741.653832 0
.00418741 51.551578		
391.746933	335.286730	5508.846278 5
15 Dec 2021 12:11:05.523	6741.428143	6741.548309 0
.00422193 51.551703	34.800242	72.109000
15 Dec 2021 12:11:05.523 .00422193 51.551703 391.873672	334.948946	5508.716940 5
<b>11</b> 0		
16 Dec 2021 03:27:14.027	6741.320865	6741.442956 0
.00425564 51.551812	36.522388	68.848531
391.995128	334.616783	5508.587809 5
450		
16 Dec 2021 18:43:21.248	6741.213757	6741.337740 0
.00428853 51.551894	38.246304	65.587989
392.111174	334.290306	5508.458848 5
460		
17 Dec 2021 09:59:27.188	6741.106807	6741.232645 0
.00432053 51.551942		62.327359
392.221335	333.969955	5508.330037 5
470		
18 Dec 2021 01:15:31.850		
.00435160 51.551954		
392.325300	333.655962	5508.201325 5
480		
18 Dec 2021 16:31:35.234		
.00438173 51.551932	43.437504	55.805770
392.423027	333.348329	5508.072689 5
490		
19 Dec 2021 07:47:37.342	6740.786569	6740.917719 0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
00441086 51 551884	45 175776	52 544785	
.00441086 51.551884 392.513982 500	333.047455	5507.944047	5
19 Dec 2021 23:03:38.174			
.00443900 51.551818	46.918254	49.283659	J
392.598189 510	332.753310	5507.815393	5
20 Dec 2021 14:19:37.731	6740.573221	6740.707669	0
.00446606 51.551747	48.666096	46.022391	
392.675091	332.466247	5507.686604	
21 Dec 2021 05:35:36.012	6740.466395	6740.602409	0
.00449203 51.551683	50.419717	42.760983	
21 Dec 2021 05:35:36.012 .00449203 51.551683 392.744423	332.186396	5507.557596	5
21 Dec 2021 20:51:33.015	6740.359482	6740.497005	0
.00451692 51.551638	52.178809	39.499442	
392.806321 540	331.913690	5507.428413	5
22 Dec 2021 12:07:28.738	6740.252328	6740.391299	0
.00454067 51.551621	53.944514	36.237780	-
392.860196 550	331.648403	5507.298860	5
23 Dec 2021 03:23:23 180	6740 144864	6740 285218	0
23 Dec 2021 03:23:23.180 .00456325 51.551634	55.717248	32.976013	J
392.905825	331.390612	5507.168849	5
560			
23 Dec 2021 18:39:16.335 .00458469 51.551678	6740.037175	6740.178849	0
.00458469 51.551678	57.496737	29.714156	
392.943453 570			5
24 Dec 2021 09:55:08.201	6739.929057	6740.071982	0
.00460492 51.551746	59.284139	26.452224	
392.972455	330.897509	5506.907514	5
580			
25 Dec 2021 01:10:58.771			0
.00462392 51.551829			_
392.992640 590	330.662462	5506.775851	5
25 Dec 2021 16:26:48.041	6720 711495	6730 956700	0
.00464173 51.551911		19.928166	U
393.004328		5506.643674	5
600			J
26 Dec 2021 07:42:36.005	6739.601930	6739.748180	0
.00465828 51.551978	64.697138	16.666041	
393.006842	330.215518	5506.510680	5
610			

1496 17			_
entricity Inclination (deg) of Apogee (km) Height of Po		RAAN (deg)	Height
unt			
26 Dec 2021 22:58:22.656 .00467360 51.552017 393.000524 620			
26 Dec 2021 22:58:22.656	6739.491963	6739.639174	0
303 000524	66.519612	13.403839	5
620	330:003623	3300.377003	3
27 Dec 2021 14:14:07.986	6739.381324	6739.529416	0
.00468760 51.552018	68.352428	10.141542	
392.984661	329.800171	5506.242580	5
630 28 Dec 2021 05:29:51.988	6739 269979	6739 418871	0
.00470028 51.551981	70.196054	6.879128	U
.00470028 51.551981 392.959051	329.604691	5506.107106	5
640			
28 Dec 2021 20:45:34.654	6739.158160	6739.307770	0
640 28 Dec 2021 20:45:34.654 .00471165 51.551912 392.924049 650	72.050340	3.616576	_
392.924049 650	329.417491	5505.970953	5
29 Dec 2021 12:01:15.975			
.00472164 51.551823	73.916305	0.353869	•
392.878912			5
CC0			
30 Dec 2021 03:16:55.942 .00473022 51.551733	6738.932292	6739.083079	0
302 823456	75.794308	357.090998	5
392.823456 670			
30 Dec 2021 18:32:34.547 .00473742 51.551662	6738.818504	6738.969748	0
.00473742 51.551662	77.684135	353.827969	
392.758084	328.907413	5505.556715	5
680 31 Dec 2021 09:48:11.782	6738 703086	6739 955505	0
.00474317 51.551626	79.586620	350.564795	U
392.682113	328.755076	5505.416825	5
690			
1 Jan 2022 01:03:47.637	6738.588760	6738.740639	0
.00474745 51.551631		347.301498	-
392.595458 700	328.611820	5505.275954	5
1 Jan 2022 16:19:22.106	6738.473109	6738.625168	0
.00475029 51.551676		344.038106	
392.498614	328.477721	5505.134451	5
710	6500 056014	<b>4700 500050</b>	
2 Jan 2022 07:34:55.180			0
.00475165 51.551749 392.391027	328.352889	340.774643 5504.992045	5
720			3
2 Jan 2022 22:50:26.853	6738.240156	6738.392291	0
.00475157 51.551831		337.511123	
392.273234	328.237349	5504.849080	5

Page 50			
Time (UTCG) Se	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of P			
	erigee (km) Sidereal	Period (sec) Or	DIE CO
unt			
730			
3 Jan 2022 14:05:57.119 .00475000 51.551902 392.144748	6739 133043	6729 274074	^
3 Jan 2022 14:05:57.119	0/30.122942	0/30.2/49/4	U
.00475000 51.551902	89.295929	334.247552	
392.144748	328.131201	5504.705320	5
4 Jan 2022 05:21:25.969 .00474693 51.551940	6838 005030	6730 157065	•
4 Jan 2022 05:21:25.969	6/38.005232	6/38.15/065	U
.00474693 51.551940	91.279699	330.983923	
392.005618	328.034512	5504.560835	5
750			
			_
4 Jan 2022 20:36:53.399	6737.887283	6738.038824	0
.00474241 51.551933	93.278241	327.720217	
391.856372	327 947276	5504 415945	5
331.030372	327.947270	2204.412242	5
760			
5 Jan 2022 11:52:19.404	6737.768951	6737.920106	0
.00473639 51.551875	95.292360	324.456411	
5 Jan 2022 11:52:19.404 .00473639 51.551875 391.696557	327 8COCEE	FF04 270471	5
391.09033/	32/.809055	5504.2/04/1	5
770			
6 Jan 2022 03:07:43.977	6737.650306	6737.800978	0
.00472888 51.551770	07 222570	221 102490	-
.004/2000 51.551//0	97.322370	321.192460	_
391.526200	327.801757	5504.124497	5
780			
6 Jan 2022 18:23:07.116	6737, 531565	6737.681663	0
00481000 51 551 600	0757.5555	215 202422	J
.00471989 51.551629	99.369258	317.928400	
391.345757	327.743569	5503.978294	5
790			
7 Tom 2022 00.20.20 016	6727 412621	6727 E620E9	^
7 Jan 2022 09:38:28.816 .00470938 51.551468 391.154772	0/3/.412031	0/3/.502058	0
.00470938 51.551468	101.433145	314.664155	
391.154772	327.695344	5503.831738	5
800			
	4-4- 444-44		_
8 Jan 2022 00:53:49.076	6737.293568	6737.442230	0
.00469733 51.551307	103.514759	311.399738	
390.953238	327.657222	5503.684909	5
	327.037222	3303:004303	,
810			
8 Jan 2022 16:09:07.892	6737.174542	6737.322344	0
.00468379 51.551161			
			5
390.741549	327.629140	5503.538012	5
820			
9 Jan 2022 07:24:25.264	6737.055489	6737.202337	0
.00466869 51.551044		204 970207	-
.00400009 51.551044			_
390.519269	327.611405	5503.390966	5
830			
9 Jan 2022 22:39:41.191	6736 936535	6737 082339	0
			0
.00465208 51.550964			
390.286784	327.603892	5503.243932	5
840			
10 Jan 2022 13:54:55.671	6726 017622	6726 062206	0
			U
.00463390 51.550922	112.029345	298.340464	

Page 51			_
Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Po	Arg of Perigee (deg)	RAAN (deg)	Height
unt			
			_
390.043679 850			
11 Jan 2022 05:10:08.706	6736.698815	6736.842244	0
.00461414 51.550914	114.207769	295.075318	
389.789951	327.620537	5502.949750	5
860			
11 Jan 2022 20:25:20.294	6736.580148	6736.722255	0
.00459285 51.550930	116.407381	291.810075	5
389.789951 860 11 Jan 2022 20:25:20.294 .00459285 51.550930 389.526004 870	327.644505	5502.802/32	5
12 Jan 2022 11:40:30.437	6736.461588	6736.602280	0
.00456999 51.550959	118.628606	288.544748	-
389.251455	327.679105	5502.655733	5
880			
13 Jan 2022 02:55:39.132	6736.343129	6736.482319	0
.00454555 51.550984	120.872046	285.279343	
388.966328	327.724310	5502.508752	5
890			
13 Jan 2022 18:10:46.380 .00451960 51.550993	6736.224798	6736.362400	0
.00451960 51.550993	123.138650	282.013862	
388.671077 900	327.779724	5502.361825	5
14 Jan 2022 09:25:52.181			0
.00449210 51.550973	125 428831	0/30.242433	U
388.365331	327 845579	5502 214866	5
910			
15 Jan 2022 00:40:56.532	6735.988269	6736.122445	0
.00446306 51.550915	127.743309	275.482653	
388.049142	327.921748		5
920			
15 Jan 2022 15:55:59.433			0
.00443255 51.550815		272.216902	
	328.007714	5501.920722	5
930	CT05 TT1T00	4505 000400	•
16 Jan 2022 07:11:00.880			0
.00440054 51.550674 387.386641		5501.773407	5
940	328.103030	3301.773407	3
16 Jan 2022 22:26:00.870	6735 633273	6735.761735	0
.00436711 51.550499	134.842188		· ·
387.040538		5501.625892	5
950			-
17 Jan 2022 13:40:59.400	6735.514603	6735.641019	0
.00433222 51.550301	137.262987	262.418874	
	328.323708	5501.477995	5
960			
18 Jan 2022 04:55:56.463	6735.395597	6735.519900	0

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Time (UTCG) Ser	ni-parameter (km)    Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orb	oit Co
unt			
.00429591 51.550097	139.712466	259.152556	
386.318121	328.447679	5501.329606	5
970			
18 Jan 2022 20:10:52.054	6735.276279	6735.398411	0
.00425828 51.549905	142.192124	255.886068	
385.942630	328.580192	5501.180766	5
980			
19 Jan 2022 11:25:46.166 .00421929 51.549742	6735 156437	6735 276341	0
00421020	144 702546	252 610405	U
.00421929 51.549/42	144.702546	252.619405	_
385.557428	328.721254	5501.031214	5
990			
20 Jan 2022 02:40:38.789	6735.035962	6735.153585	0
.00417898 51.549624	147.244828	249.352574	
385.162679	328.870490	5500.880823	6
000			
20 Jan 2022 17:55:29.915 .00413748 51.549562 384.759256	6734.914926	6735.030221	0
00413749 51 549562	140 920612	246 085583	·
204 750256	149.020012	240.003303 EE00 720690	6
304./39230	329.02/165	3500.729669	0
010			
21 Jan 2022 09:10:19.534	6734.793053	6734.905977	0
.00409475 51.549562	152.430554	242.818449	
384.346729	329.191224	5500.577478	6
020			
22 Jan 2022 00:25:07.631	6734.670145	6734.780660	0
.00405087 51.549617			
383.925352	329 361968	5500 423954	6
030	323.301300	3300.123331	·
22 Tom 2022 15,20,54 104	6724 F46F14	6724 CE4E90	0
22 Jan 2022 15:39:54.194 .00400594 51.549714	0/34.546514	6/34.654589	U
383.496217	329.538961	5500.269508	6
040			
23 Jan 2022 06:54:39.211			0
.00395998 51.549832	160.478085	233.016372	
		5500.113638	6
050			
23 Jan 2022 22:09:22.667	6734 296031	6734 399152	0
			·
.00391313 51.549943	103.23/20/	229.740040	_
382.614725	329.909579	5499.956584	6
060			
24 Jan 2022 13:24:04.546			0
.00386540 51.550019		226.481231	
382.163265	330.101996	5499.797915	6
070			
25 Jan 2022 04:38:44.829	6734.040608	6734.138715	0
.00381687 51.550037			•
381.705078	330.298352		6
080	550.250552	3177.037340	0
000			

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
25 Jan 2022 19:53:23.500 .00376773 51.549982 381.241610	6733.911082	6734.006677	0
.00376773 51.549982	171.758284	219.945749	J
381.241610	330.497743	5499.475791	6
26 Jan 2022 11:08:00.541	6733.780058	6733.873143	0
.00371800 51.549854 380.772656	174.683085	216.677837	6
100	330.699631	3499.312213	0
27 Jan 2022 02:22:35.930	6733.647491	6733.738077	0
.00366778 51.549667	177.651341	213.409780	
.00366778 51.549667 380.298922	330.903233	5499.146758	6
110			
27 Jan 2022 17:37:09.650 .00361727 51.549447 379.822056	6733.513708	6733.601815	0
.00361727 51.549447	180.664208	210.141558	6
120	331.10/5/3	3490.9/9040	0
28 Jan 2022 08:51:41.681	6733.378343	6733.463993	0
.00356652 51.549230	183.721825	206.873157	·
379.342036	331.311950	5498.811013	6
1 2 2			
29 Jan 2022 00:06:12.003 .00351569 51.549052	6733.241300	6733.324524	0
.00351569 51.549052	186.824850	203.604573	_
378.859780 140	331.515268	5498.640170	6
29 Tan 2022 15:20:40.597	6733.103137	6733.183975	0
29 Jan 2022 15:20:40.597 .00346495 51.548943	189.973737	200.335813	U
378.377135	331.716816	5498.468006	6
150			
30 Jan 2022 06:35:07.446 .00341441 51.548920 377.894293	6732.963432	6733.041927	0
.00341441 51.548920	193.168345	197.066892	_
	331.915561	5498.294007	6
160 30 Jan 2022 21:49:32.532	6732 822561	6732.898767	0
.00336429 51.548985	196.409012	193.797831	U
377.413160		5498.118649	6
170			
31 Jan 2022 13:03:55.840			0
.00331467 51.549123		190.528649	
376.934071	332.300344	5497.941577	6
180 1 Feb 2022 04:18:17.350	6732 536520	6732.608323	0
.00326573 51.549309		187.259359	J
376.458222	332.484425	5497.762886	6
190			
1 Feb 2022 19:32:37.049	6732.391785		0
.00321770 51.549511		183.989970	_
375.987525	332.661455	5497.583034	6

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Time (UTCG)	Sen	ni-parameter	(km) Semi	i-major Axis (km)	Ecc
entricity Inclinat:					
of Apogee (km) He:	ight of Pe	rigee (km)	Sidereal E	Period (sec) O	rbit Co
unt					
200					
2 Feb 2022 10:46:54.9	921	6732.245	5813	6732.313494	0
.00317068	51.549698		209.814870	180.720479	
375 522490	31.313030	332 830499	203.011070	5497 401759	6
375.522490		332.030133		3137.101733	Ū
210 3 Feb 2022 02:01:10.9 .00312484 375.064360 220	052	6722 000	2702	6732 164440	0
3 Feb 2022 02:01:10.3	53 <u>4</u> 51 540040	0/32.090	212 270122	177 450077	U
.00312484	31.349842	220 000500	213.2/0132	1//.4508//	_
375.064360		332.990520		5497.219191	6
3 Feb 2022 17:15:25.3	129	6731.950	0776	6732.014655	0
.00308040					
374.614936		333.140375		5497.035729	6
230					
4 Feb 2022 08:29:37.4	442	6731.803	1902	6731.864011	0
.00303747	51.549950		220.289929	170.911285	
374.174839		333.279184		5496.851218	6
240					
4 Feb 2022 23:43:47.8 .00299625	879	6731.652	2245	6731.712679	0
.00299625	51.549911		223.847768	167.641263	
373.745577		333.405780		5496.665864	6
250					•
5 Feb 2022 14:57:56.4	433	6731.501	1951	6731.560806	0
.00295687	51 549824	0731.30.	227 432455	164.371073	ŭ
					6
373.328126 260		333.319400		3490.479832	O
	005	6821 25	1000	6721 400400	0
6 Feb 2022 06:12:03.0	095 F1 F40800	0/31.33.	1027	0/31.400400	U
	51.549/08	222 610260		161.100707	_
372.923440		333.619360		5496.293188	6
270					
6 Feb 2022 21:26:07.8					0
.00288419	51.549584		234.664090	157.830164	
372.532909		333.704406		5496.106115	6
280					
7 Feb 2022 12:40:10.	724	6731.04	7862	6731.102580	0
.00285118	51.549472		238.300862	154.559449	
372.157132		333.774029		5495.918633	6
290					
8 Feb 2022 03:54:11.6	681	6730.89	5724	6730.949270	0
.00282051				151.288569	_
371.796991		333.827549		5495.730869	6
300		555,627515		31330,30003	ŭ
8 Feb 2022 19:08:10.	730	6720 741	3342	6730 705922	0
.00279234				148.017536	J
371.453487				5495.542938	6
		333.004I30		J473.344730	0
310	960	CD20 F04	7766	6930 64000	^
9 Feb 2022 10:22:07.8					0
.00276671	51.549354		249.226846	144.746364	

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Time (UTCG) Sen	ni-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) Height
of Apogee (km) Height of Pe		
	singee (Am) brachean	reriod (Bec) Orbic co
unt		
201 100016	222 002555	5405 354001
371.127016	333.883557	5495.354901 6
320		
320 10 Feb 2022 01:36:03.098 .00274369 51.549407 370.818098	6730.438061	6730.488727 0
.00274369 51.549407	252.853280	141.475063
370 818098	333 885356	5495.166837 6
330	333.003330	3493.100037
10 Feb 2022 16:49:56.417	6730.285223	6730.335140 0
.00272336 51.549500	256.462665	138.203645
370.527272	333.869007	5494.978742 6
340		0 = 0 = 0 = 0 = 0
	<b>6</b> 700 100001	
11 Feb 2022 08:03:47.825	6730.132321	6730.181592 0
.00270572 51.549623	260.047480	134.932116
370.254597	333.834587	5494.790696 6
250		
11 Feb 2022 23:17:37.324 .00269082 51.549758 370.000304	6720 070205	6730.028024 0
11 Feb 2022 23:1/:3/.324	0/29.9/9295	6/30.028024 0
.00269082 51.549758	263.603272	131.660477
370.000304	333.781744	5494.602629 6
360		
12 Feb 2022 14:31:24.914	6729 826208	6729.874495 0
12 FED 2022 14.31.24.914	0729.020200	100 200705
.00267861 51.549891	267.122854	128.388/25
369.764180	333.710810	5494.414611 6
370		
13 Feb 2022 05:45:10.596 .00266906 51.550003	6729.673040	6729.720982 0
00266006 51 550003	270 600921	125 116952
.00266906 51.550003	270.000921	123.110032
369.546019	333.621944	5494.226615 6
13 Feb 2022 20:58:54.369	6729.519669	6729.567362 0
13 Feb 2022 20:58:54.369 .00266217 51.550079	274.034429	121.844844
369.345645	333.515079	5494.038491 6
	333.313079	3494.036491
390		
14 Feb 2022 12:12:36.233		
.00265785 51.550110	277.417334	118.572685
	333.390873	
400	333.370073	3493.030203
15 Feb 2022 03:26:16.187	6729.212308	6729.259779 0
.00265602 51.550088	280.745900	
368.995812		5493.661828 6
410		
	6000 050000	1
15 Feb 2022 18:39:54.228	6729.058079	6729.105570 0
.00265663 51.550014	284.018927	112.027841
368.845307	333.091834	5493.472989 6
420		
16 Feb 2022 09:53:30.351	6729 002272	6728.950967 0
.00265955 51.549897		
368.709932	332.918001	5493.283668 6
430		
17 Feb 2022 01:07:04.553	6728.748048	6728.795825 0
		0.20.30020

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
00266467	200 282083	105 492104
.00266467 51.549749 368.588830	332.728820	5493.093690 6
440		
17 Feb 2022 16:20:36.825	6728.591950	6728.639987 0
.00267193 51.549588	293.472937	102.209049
368.481412	332.524562	5492.902862 6
450 18 Feb 2022 07:34:07.159	6728 434947	6728.483315 0
.00268116 51.549436	296.498681	98.935692
368.386436	332.306195	5492.711016 6
460		
18 Feb 2022 22:47:35.545 .00269229 51.549313	6728.276908	6728.325678 0
.00269229 51.549313	299.462005	95.662136
368.303311 470	332.074044	5492.517989 6
19 Feb 2022 14:01:01.970	6728.117643	6728.166879 0
.00270516 51.549235	302.360997	92.388401
368.230670	331.829088	5492.323542 6
480		
20 Feb 2022 05:14:26.421	6727.956972	6728.006735 0
.00271964 51.549212	305.196194	89.114508 5492.127451 6
368.167494 490		
20 Feb 2022 20:27:48.880 .00273566 51.549245	6727.794827	6727.845177 0
.00273566 51.549245	307.970448	85.840484
368.113282	331.303072	5491.929630 6
500		
21 Feb 2022 11:41:09.331 .00275305 51.549325	6727.630937	6727.681928 0
368.066566	310.002931	5491.729741 6
510	331.023203	3131.723711
22 Feb 2022 02:54:27.751	6727.465120	6727.516803 0
.00277169 51.549433	313.335098	79.292107
368.026376	330.733230	5491.527558 6
520 22 Feb 2022 18:07:44.119	C727 20720F	6727.349819 0
.00279153 51.549546		
367.992391	330.433247	5491.323102 6
530		
23 Feb 2022 09:20:58.411		
.00281240 51.549639		
367.963151	330.124124	5491.115957 6
540 24 Feb 2022 00:34:10.598	6726.955061	6727.009097 0
.00283420 51.549691	320.952690	69.468724
367.937817	329.806378	5490.905927 6
550		

Page 5/			
Time (UTCG) Ser entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) 1	Height
of Apogee (km) Height of Pount	_		
24 Feb 2022 15:47:20.655 .00285691 51.549689	6726.780402	6726.835306	0
.00285691 51.549689	323.385355	66.193967	·
367.916273	329.480338	5490.693142	6
.00285691 51.549689 367.916273 560			
25 Feb 2022 07:00:28.550 .00288037 51.549634	6726.603078	6726.658886	0
.00288037 51.549634	325.767366	62.919013	
367.897128	329.146644	5490.477143	6
570			
25 Feb 2022 22:13:34.254	6726.423251	6726.479998	0
.00290455 51.549536	328.102637	59.643837	
367.880377	328.805619	5490.258125	6
580			_
26 Feb 2022 13:26:37.734 .00292931 51.549414 367.864692	6726.240545	6726.298263	0
.00292931 51.549414	330.391664	56.368424	6
590	328.45/834	5490.035624	0
27 Ech 2022 04.20.28 056	6726 054977	6726 112502	0
27 Feb 2022 04:39:38.956 .00295459 51.549291	332 636681	53 092770	U
367.849472	328.103715	5489.809533	6
600	320.103713	3103.003333	·
27 Feb 2022 19:52:37.885	6725.866476	6725.926219	0
.00298035 51.549189	334.841463	49.816886	
367.834824	327.743614	5489.580134	6
C10			
28 Feb 2022 11:05:34.488 .00300648 51.549125	6725.675007	6725.735800	0
.00300648 51.549125	337.006505	46.540790	
367.819569	327.378032	5489.347011	6
1 Mar 2022 02:18:28.726 .00303291 51.549104	6725.480451	6725.542316	0
.00303291 51.549104	339.133854	43.264505	
367.803256	327.007377	5489.110139	6
630 1 Mar 2022 17:31:20.566	6725 293090	6725 246029	0
.00305962 51.549125			U
367.786046		5488.869849	6
640	320.032023	3100.003013	·
2 Mar 2022 08:44:09.972	6725.082644	6725.146712	0
.00308652 51.549179		36.711449	
367.767009	326.252415	5488.625833	6
650			
2 Mar 2022 23:56:56.906			0
.00311354 51.549250	345.313819	33.434703	
367.745518	325.868698	5488.377806	6
660			-
3 Mar 2022 15:09:41.335			0
.00314070 51.549321		30.157813	_
367.722465	325.481666	5488.126798	6

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal 1	RAAN (deg) Period (sec) Or	Height bit Co
670			
4 Mar 2022 06:22:23.225 .00316791 51.549378	6724.463694	6724.531179	0
367.696907	349.280623	26.880770	6
680	323.031131	5407.072515	· ·
4 Mar 2022 21:35:02.545	6724.252046	6724.320695	0
.00319516 51.549407	351.223418	23.603560	
367.668993	324.698396	5487.614651	6
690 5 Mar 2022 12:47:39 263	6724 037768	6724 107590	0
5 Mar 2022 12:47:39.263 .00322241 51.549404	353.140072	20.326163	U
367.638393	324.302787	5487.353786	6
700			
6 Mar 2022 04:00:13.348	6723.821021	6723.892026	0
.00324962 51.549366	355.031923	17.048560	6
367.605144 710	323.904908	3407.009913	0
6 Mar 2022 19:12:44.772	6723.601975	6723.674170	0
.00327679 51.549298	356.901631	13.770732	
367.569270	323.505069	5486.823242	6
720		6800 454160	
7 Mar 2022 10:25:13.508 .00330391 51.549208	6723.380776	6723.454168	0
.00330391 51.549208 367.530850	323.103485	5486.553947	6
730			
8 Mar 2022 01:37:39.532 .00333096 51.549106	6723.157622	6723.232219	0
.00333096 51.549106	0.575227	7.214350	
367.490042 740	322.700395	5486.282273	6
8 Mar 2022 16:50:02.820	6722 932568	6723.008374	0
.00335791 51.549004	2.382793	3.935784	J
367.446652		5486.008282	6
750			
9 Mar 2022 08:02:23.353	6722.705921		0
.00338479 51.548912 367.401141	4.171379 321.890745	0.656968 5485.732356	6
760	321.890745	3403.732330	0
9 Mar 2022 23:14:41.110	6722.477612	6722.555853	0
.00341154 51.548838			
367.353134	321.484572	5485.454403	6
770 10 Mar 2022 14:26:56.075	6722 248106	6722.327572	0
.00343821 51.548787	7.698449	354.098614	U
367.303318		5485.174997	6
780			
11 Mar 2022 05:39:08.236	6722.017569	6722.098267	0
.00346479 51.548759	9.437510	350.819097	

367.251899 320.670634 5484.894342 6 790 11 Mar 2022 20:51:17.578 6721.785813 6721.867743 0 .00349121 51.548752 11.162877 347.539369 5844.612201 6 800 12 Mar 2022 12:03:24.091 6721.553346 6721.636513 0 .00351754 51.548757 12.874004 344.259440 344.259440 346.032478  6 810 13 Mar 2022 03:15:27.769 6721.320328 6721.404737 0 .00354378 51.548767 14.571729 340.979316 367.038686 319.48588 5484.045536 6 820 13 Mar 2022 18:27:28.602 6721.086421 6721.172073 0 .00356982 51.548769 16.258245 337.699000 367.028429 319.041718 5483.760790 6 830 14 Mar 2022 09:39:26.584 6720.852194 6720.939992 0 14 Mar 2022 09:39:51.548769 318.635277 17.932883 334.418486 36.968907 318.635277 338.64.968917 318.229410 5483.475661 6 800 15 Mar 2022 00:51:21.712 6720.617744 6720.705891 0 .00364714 51.548622 318.229410 5483.475661 6 800 16 Mar 2022 16:03:13.982 6720.382619 6720.705891 0 .00364714 51.548622 318.229410 5483.190267 6 800 16 Mar 2022 07:15:03.388 6720.382619 6720.237932 0 .003667256 51.548502 317.420462 5482.904050 6 800 16 Mar 2022 20:26:49.925 6719.911225 6720.03107 0 .003667256 51.548502 317.420462 5482.30024 6 800 17 Mar 2022 21:33:33.588 6719.911225 6720.03107 0 .00374738 51.548768 316.615838 51.547980 316.615838 6719.2519 331.73568 6719.532809 0 18 Mar 2022 00:152.278 6719.434488 6719.532809 0 18 Mar 2022 00:152.278 6719.434488 6719.532809 0 .00374738 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.547980 27.7779208 314.735623 366.576443 51.54	entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) H Period (sec) Orb	leight
367.251899 320.670634 5484.894342 6 790 11 Mar 2022 20:51:17.578 6721.785813 6721.867743 0 .00349121 51.548752 11.162877 347.539369 5844.612201 6 800 12 Mar 2022 12:03:24.091 6721.553346 6721.636513 0 .367.143125 51.548757 367.143125 319.855901 5484.329200 6 810 13 Mar 2022 03:15:27.769 6721.320328 6721.404737 0 .0354378 51.548767 319.448588 5484.452920 6 820 13 Mar 2022 18:27:28.602 6721.086421 6721.72073 0 .0356982 51.548769 319.44858 344.65936 6 367.028429 319.041718 6720.852194 6720.939092 0 .0356982 51.548769 319.041718 6720.852194 6720.939092 0 .0356982 51.548769 318.635277 548.44886 334.418486 6720.035975 51.548761 6720.852194 6720.939092 0 .0366.968907 318.635277 548.44886 334.418486 6720.035975 51.548761 6720.852194 6720.939092 0 .0366.968907 318.635277 548.44886 334.418486 6720.0362157 51.548761 6720.852194 6720.939092 0 .0366.968907 318.25240 5483.475661 68 800 15 Mar 2022 09:51:21.712 6720.617744 6720.705891 0 .00362157 51.548704 318.229410 5483.475661 68 800 16 Mar 2022 07:15:03.388 6720.482619 6720.472012 0 .0364714 51.548622 366.845493 377.824531 5483.492667 6720.37932 0 .0367256 51.548502 317.824531 5485630 327.856630 327				
11 Mar 2022 20:51:17.578				
11 Mar 2022 20:51:17.578	265 051000	200 (50.624	E404 004340	_
11 Mar 2022 20:51:17.578     6721.785813     6721.867743     0       .00349121     51.548752     11.162877     347.539365     5484.612201     6       800     320.263305     5484.612201     6       12 Mar 2022 12:03:24.091     6721.553346     6721.636513     0       .00351754     51.548757     12.874004     344.259440     344.259440       367.143125     319.855901     5484.329200     6       13 Mar 2022 03:15:27.769     6721.320328     6721.404737     0       .00354378     51.548767     14.571729     340.999316     6       313 Mar 2022 18:27:28.602     6721.086421     6721.172073     0       .00356982     51.548769     16.258245     337.699000     6       830     14 Mar 2022 09:39:26.584     6720.852194     6720.939992     0       .00359575     51.548751     17.932883     334.418486       80     15 Mar 2022 00:51:21.712     6720.617744     6720.705891     0       366.908371     318.229410     5482.30220     6       850     15 Mar 2022 16:03:13.982     6720.382619     6720.472012     0       10 Mar 2022 07:15:03.388     6720.147292     6720.237932     0       16 Mar 2022 27:26:49.925     6719.911225     6720.003107     0 </td <td>·/un</td> <td></td> <td></td> <td></td>	·/un			
367.198180     320.263305     5484.612201     6       800     12 Mar 2022 12:03:24.091     6721.553346     6721.636513     0       .00351754     51.548757     12.874004     344.259440     6       810     319.855901     5484.329200     6       810     367.086886     319.448588     6721.404737     0       .00354378     51.548767     14.571729     340.979316     6       13 Mar 2022 18:27:28.602     6721.086421     6721.172073     0       .00356982     51.548769     16.258245     337.699000     6       367.028429     319.041718     5483.475661     6       830     14 Mar 2022 09:39:26.584     6720.852194     6720.939092     0       .00359575     51.548751     17.932883     334.418486     6       840     15 Mar 2022 00:51:21.712     6720.617744     6720.705891     0       .00362157     51.548704     19.596363     331.137768     0       .00364714     51.548622     21.250738     327.856830     0       16 Mar 2022 16:03:13.982     6720.147292     6720.237932     0       .00367256     51.548502     22.89529     324.575651     6       80     16 Mar 2022 22:26:49.925     66719.911225     6720.03107     32	11 Mar 2022 20:51:17.578	6721.785813	6721.867743	0
367.198180     320.263305     5484.612201     6       800     12 Mar 2022 12:03:24.091     6721.553346     6721.636513     0       .00351754     51.548757     12.874004     344.259440     6       810     319.855901     5484.329200     6       810     367.086886     319.448588     6721.404737     0       .00354378     51.548767     14.571729     340.979316     6       13 Mar 2022 18:27:28.602     6721.086421     6721.172073     0       .00356982     51.548769     16.258245     337.699000     6       367.028429     319.041718     5483.475661     6       830     14 Mar 2022 09:39:26.584     6720.852194     6720.939092     0       .00359575     51.548751     17.932883     334.418486     6       840     15 Mar 2022 00:51:21.712     6720.617744     6720.705891     0       .00362157     51.548704     19.596363     331.137768     0       .00364714     51.548622     21.250738     327.856830     0       16 Mar 2022 16:03:13.982     6720.147292     6720.237932     0       .00367256     51.548502     22.89529     324.575651     6       80     16 Mar 2022 22:26:49.925     66719.911225     6720.03107     32	.00349121 51.548752	11.162877	347.539369	
800 12 Mar 2022 12:03:24.091 6721.553346 6721.636513 0 .00351754 51.548757 12.874004 344.259440 367.143125 319.855901 5484.329200 6 810 13 Mar 2022 03:15:27.769 6721.320328 6721.404737 0 .00354378 51.548767 367.086886 319.44858 5484.045536 6 820 13 Mar 2022 18:27:28.602 6721.086421 6721.172073 0 .00356982 51.548769 16.258245 337.699000 367.028429 319.041718 5483.760790 6 830 14 Mar 2022 09:39:26.584 6720.852194 6720.939092 0 .00359575 51.548751 7932883 334.418486 318.635277 5483.475661 6 850 15 Mar 2022 00:51:21.712 6720.617744 6720.705891 0 .00362157 51.548704 19.596363 331.137768 318.229410 5483.190267 6 850 15 Mar 2022 16:03:13.982 6720.382619 6720.472012 0 .00364714 51.548622 21.250738 327.856830 317.824531 5482.904050 6 860 16 Mar 2022 27:15:03.388 6720.147292 6720.237932 0 .00369769 51.548347 24.53179 321.294225 370.0369769 51.548347 24.53179 321.294225 3366.744586 51.548502 317.017627 5482.330224 6 800 17 Mar 2022 13:38:33.588 6719.674954 6719.768077 0 .00374738 51.548708 366.576443 51.547980 6719.438448 6719.532809 0 .00374738 51.547980 27.779208 314.730523 5481.754716 6	367.198180	320.263305	5484.612201	6
.00351754 51.548757 319.855901 5484.329200 6 810 13 Mar 2022 03:15:27.769 6721.320328 6721.404737 0.00354378 51.548767 14.571729 340.979316 6 820 13 Mar 2022 18:27:28.602 6721.086421 6721.172073 0.00356982 51.548769 16.258245 337.699000 6 830 14 Mar 2022 09:39:26.584 6720.852194 6720.939092 0.00359575 51.548751 366.968907 318.635277 5483.478661 6 850 15 Mar 2022 00:51:21.712 6720.617744 6720.705891 0.00362157 51.548764 19.596363 331.137768 366.908371 318.229410 5483.190267 6 850 15 Mar 2022 16:03:13.982 6720.382619 6720.472012 0.00364714 51.548622 317.824531 5482.904050 6 860 16 Mar 2022 07:15:03.388 6720.147292 6720.237932 0.00369769 51.54850 317.420462 5482.617591 6 870 16 Mar 2022 22:26:49.925 6719.911225 6720.003107 0.00369769 51.548349 24.53179 321.294225 366.744586 366.646315 316.615838 6719.438448 6719.532809 0.00374738 51.548768 27.779208 314.730523 50.00374738 51.547980 366.576443 51.547980 6719.438448 6719.532809 0.00374738 51.547980 6719.438448 6719.532809 0.00374738 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576790 314.730523 5481.754716 6719.438448 6719.532809 0.00374738 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576443 51.547980 366.576790 314.730523 51.547980 366.576443 51.547980 366.576790 314.730523 5481.754716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34716 5482.34	800			
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18 Mar 2022 20:01:52.278 6719.201132 6719.296722 0				
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Time (UTCG) Ser	ni-parameter (km)    Sem	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
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366.503325	315.816120	5481.465821 6
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20 Mar 2022 17:36:28.634	6718.486156	6718.585394 0
.00384325 51.547479	34.192291	301.599618
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	6719 246201	6718.346724 0
21 Mar 2022 08:47:54.942 .00386640 51.547476 366.185544	0/10.240291	0/10.340/24
.00386640 51.547476	35.781104	298.316232
366.185544	314.233905	5480.303378 6
950		
21 Mar 2022 23:59:18.328	6718.005354	6718.106971 0
.00388920 51.547516	37.365345	295.032630
366.098001	313.841942	5480.010023 6
960		
22 Mar 2022 15:10:38.779	6717.763259	6717.866042 0
	38.945759	
.00391132 31.347301	212 451005	5479.715233 6
366.006097	313.45198/	54/9./15233
970		
23 Mar 2022 06:21:56.281 .00393345 51.547645	6717.520003	6717.623938 0
.00393345 51.547645	40.522295	288.464869
365.910403	313.063474	5479.419013 6
980		
23 Mar 2022 21:33:10.817	6717.275119	6717.380184 0
.00395483 51.547684		
		5479.120778 6
	312.67/102	5479.120776
990		
24 Mar 2022 12:44:22.369		
.00397574 51.547675		
365.703524	312.292334	5478.820712 7
000		
25 Mar 2022 03:55:30.918	6716.780730	6716.887994 0
.00399615 51.547608		
365.592713		5478.518597 7
010	J • J U J <u>&amp;</u> / 3	51,5.51557
25 Mar 2022 19:06:36.442	6716 530607	6716 630000
.00401589 51.547483		
365.475266	311.528752	5478.213979 7
020		

Page 61			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) On	rbit Co
unt			
26 Mar 2022 10:17:38.915	6716.278688	6716.388041	0
.00403503 51.547314	48.375195	272.042064	
365.351853	311.150229	5477.906941	7
030			
27 Mar 2022 01:28:38.313 .00405353 51.547126 365.222015	6716 024585	6716 134039	0
2/ Mai 2022 01:20:30.313	0/10.024505	0/10.134930	U
.00405353 51.54/126	49.943132	268.756732	7
365.222015	310.773862	5477.597297	7
040			
27 Mar 2022 16:39:34.610	6715.768131	6715.879447	0
.00407123 51.546947	51.512008	265.471088	
365.084365	310 400529	5477 294736	7
	310.400329	3477.204730	,
050			_
28 Mar 2022 07:50:27.776	6715.509351	6715.621593	0
.00408822 51.546802	53.081639	262.185126	
364.939505	310.029681	5476.969291	7
28 Mar 2022 23:01:17.783 .00410432 51.546714 364.786188	6715 248067	6715 361190	0
00410432	6/ 6F3103	250 000053	Ū
.00410432 51.540/14	54.055102	250.090055	_
364.786188	309.662193	5476.650735	7
070			
29 Mar 2022 14:12:04.599	6714.984305	6715.098269	0
.00411963 51.546691	56.226365	255.612286	
364.625013	309.297526	5476.329104	7
080			
	6714 719010	6714 022701	0
30 Mar 2022 05:22:48.196	0/14./10019	0/14.032/01	U
.00413412 51.546734			
364.455696	308.935867	5476.004339	7
30 Mar 2022 20:33:28.540 .00414763 51.546832	6714.449116	6714.564626	0
.00414763 51.546832	59.381016	249.038355	
364.277173	308 578078	5475 676318	7
	300:370070	3473.070310	,
100			_
31 Mar 2022 11:44:05.602			0
.00416026 51.546966	60.963611	245.751032	
364.090055	308.223699	5475.345131	7
110			
1 Apr 2022 02:54:39.350	6713 903703	6714.020562	0
0041710E E1 E4711E	62 55051	242 463490	U
.00417195 51.547115			_
363.894149	307.872975	5475.010811	7
120			
1 Apr 2022 18:05:09.753			0
.00418260 51.547254	64.142547	239.175732	
363.688500		5474.673287	7
130			•
2 Apr 2022 09:15:36.780	6712 240227	6713 466336	^
			0
	65.740311		
363.473766	307.184687	5474.332768	7

Page 62			_
Time (UTCG) Se	emi-parameter (km) Se	mi-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg	) RAAN (deg)	Height
of Apogee (km) Height of H	Perigee (km) Sidereal	Period (sec) Or	rbit Co
unt			
140			
3 Apr 2022 00:26:00.403	6713.067043	6713.185514	0
.00420089 51.547428	67.34466	4 232.599563	
363.249838	306.847189	5473.989421	7
150 3 Apr 2022 15:36:20.592 .00420838 51.547438 363.015817 160			
3 Apr 2022 15:36:20.592	6712.783463	6712.902352	0
.00420838 51.547438	68.95609	5 229.311128	
363.015817	306.514887	5473.643086	7
160			
4 Apr 2022 06:46:37.321	6712.497833	6712.617080	0
.00421481 51.547394	10.57570	1 226.022437	
362.772460			7
170			
4 Apr 2022 21:56:50.563	6712.210069	6712.329607	0
.00422004 51.547299	72.20378	0 222.733474	
362.518877	305.866337	5472.942584	7
180			
5 Apr 2022 13:07:00.293 .00422414 51.547165 362.255914	6711.920565	6712.040330	0
00422414 51 54716	73 84167	6 219 444221	·
362 255914	305 550745	5472 588792	7
190	303.330743	3472.300732	,
6 Apr 2022 04:17:06.492	6711 629505	6711 749432	0
.00422709 51.547008	75.49031	4 216 1E466E	U
261 002504	75.49031 205 241280	£472 22202E	7
361.983584 200	303.241280	3472.233023	,
	6711 226712	6711 456721	•
6 Apr 2022 19:27:09.139	0/11.330/13	6/11.456/31	0
.00422877 51.546844	77.14969		-
361.700964	304.938498	54/1.8/5061	7
210 7 Apr 2022 10:37:08.214	6811 040800	6711 160740	•
			U
.00422926 51.546691			_
361.409013	304.642468	5471.515527	7
220			
8 Apr 2022 01:47:03.705			0
	80.50691		_
	304.353510	5471.154645	7
230			
8 Apr 2022 16:56:55.595	6710.451270		0
.00422649 51.546476		0 202.993300	
360.796279	304.072007	5470.792061	7
240			
9 Apr 2022 08:06:43.873	6710.154161		0
.00422319 51.546433		1 199.702183	
360.475580	303.798102	5470.428503	7
250			
9 Apr 2022 23:16:28.526			0
.00421855 51.546437	85.64763	9 196.410771	

Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal :	Period (sec) Orbit Co
unt		
360.144691	303.531931	5470.063450 7
260		
10 Apr 2022 14:26:09.543 .00421263 51.546481	6709.557243	6709.676315 0
.00421263 51.546481	87.393329	193.119074
359.804700	303.273929	5469.697835 7
270	3031273323	,
11 Apr 2022 05:35:46.922	6709 258243	6700 376002 0
00420E42	0/09.230243	100 027100
.00420542 51.546553 359.455649	09.15/215	109.02/100
359.455049	303.024155	5469.331720 7
280		
11 Apr 2022 20:45:20.653 .00419684 51.546637 359.096542	6708.958464	6709.076634 0
.00419684 51.546637	90.938457	186.534856
359.096542	302.782726	5468.964566 7
250		
12 Apr 2022 11:54:50.730	6708.658515	6708.776123 0
.00418695 51.546711	92.739850	183.242341
358.728461	302.549786	5468.597124 7
300		
13 Apr 2022 03:04:17.151	6708.358452	6708.475428 0
.00417576 51.546754	94.562461	179.949553
358.351423	302.325432	5468.229465 7
310		
13 Apr 2022 18:13:39.911 .00416319 51.546747 357.964449	6708 057789	6708.174056 0
15 Apr 2022 10:15:59:911	0/00:05//05	176 656401
357 064440	303 100663	5467.860986 7
357.964449	302.109663	5467.860986
320	6808 858068	6808 080555
14 Apr 2022 09:22:59.005 .00414930 51.546675	6707.757067	6707.872555 0
.00414930 51.546675	98.271227	173.363111
357.568557	301.902552	5467.492358 7
330		
15 Apr 2022 00:32:14.430		
.00413411 51.546532		170.069427
357.163728	301.704094	5467.123564 7
340		
15 Apr 2022 15:41:26.183	6707.154897	6707.268613 0
.00411753 51.546322	102.075032	166.775412
356.749012		5466.753978 7
350		
16 Apr 2022 06:50:34.257	6706.853449	6706.966174 0
.00409965 51.546059		
356.325412	301.332935	
	301.332933	5400.504220
360	6706 EF1430	6706.663094 0
16 Apr 2022 21:59:38.648	0/00.331430	6706.663094 0
		160.186337
355.892022	301.160167	5466.013703 7
370		
17 Apr 2022 13:08:39.350	6706.249168	6706.359706 0

entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
.00405987 51.545476 355.449645	107.973180 300.995767	156.891267 5465.642810	7
18 Apr 2022 04:17:36.359	6705.946541	6706.055889	
.00403804 51.545220 354.998197	109.996012	153.595852	
390			
18 Apr 2022 19:26:29.666 .00401487 51.545025	112 046812	150 300108	U
354.536934 400	300.691554	5464.898988	7
19 Apr 2022 10:35:19.262 .00399042 51.544909	6705.339160	6705.445934	0
.00399042 51.544909 354.066495	114.128986 300.551373	147.004058 5464.525770	7
410			0
20 Apr 2022 01:44:05.138 .00396472 51.544877	116.243485	143.707725	
353.586796 420	300.418800	5464.151551	7
20 Apr 2022 16:52:47.283	6704.728594	6704.832557	0
.00393772 51.544917 353.097300	118.388784	140.411128	7
21 Apr 2022 08:01:25.683 .00390949 51.545006	6704.421731	6704.524204	0
.00390949 51.545006 352.598504	120.568296	137.114277	7
440			•
21 Apr 2022 23:10:00.322 .00388002 51.545111	6704.113594	6704.214523	0
352.090029	300.065017	5463.020553	7
450			
22 Apr 2022 14:18:31.184	6703.804130	6703.903466	0
.00384938 51.545199 351.572307		130.519799 5462.640354	7
460	299.900025	3402.040334	,
23 Apr 2022 05:26:58.249			0
.00381758 51.545245			_
351.045362 470	299.862316	5462.258244	7
23 Apr 2022 20:35:21.499	6703.180592	6703.276606	0
.00378464 51.545231		123.924162	
350.509074 480		5461.874181	7
24 Apr 2022 11:43:40.910			0
.00375061 51.545156 349.963768	131.997700 299.683323	120.625847 5461.487893	7
490	499.003343	J401.40/073	,

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Heigh Period (sec) Orbit C	t
			-
			<u>-</u>
			_
25 Apr 2022 02:51:56.460	6702.549992	6702.642525	0
25 Apr 2022 02:51:56.460 .00371555 51.545029 349.409544	299.601506	5461.099219	7
500	233.001300	3101.033213	•
25 Apr 2022 18:00:08.123	6702.231916	6702.322654	0
.00367945 51.544869	136.840771	114.028127	
348.846513 510			7
26 Apr 2022 09:08:15.874	6701.911733	6702.000648	0
.00364239 51.544701	139.324962	110.728710	_
348.274916	299.452380	5460.314767	7
520 27 Apr 2022 00:16:19.687 .00360437 51.544548 347.694965	6701 589567	6701 676632	0
.00360437 51.544548	141.853003	107.428930	٠
347.694965	299.384299	5459.918794	7
330			
27 Apr 2022 15:24:19.536	6701.265248	6701.350440	0
.00356548 51.544431	144.424352	104.128802	
347.106950 540			7
28 Apr 2022 06:32:15.393	6700 938675	6701 021975	0
.00352575 51.544363	147.042037	100.828345	Ŭ
346.511111	299.258839	5459.118781	7
55O			
28 Apr 2022 21:40:07.229 .00348522 51.544348	6700.610120	6700.691512	0
.00348522 51.544348	149.705165	97.527577	7
345.907904 560	299.201120	5458./14958	′
29 Apr 2022 12:47:55.020	6700.279307	6700.358779	0
29 Apr 2022 12:47:55.020 .00344397 51.544383	152.416835	94.226514	
345.297584	299.145975	5458.308372	7
570			
30 Apr 2022 03:55:38.735 .00340204 51.544459	6699.946261	6700.023806 90.925168	0
344.680560	299.093053		7
580	233.033033	3137.033000	•
30 Apr 2022 19:03:18.348	6699.611280	6699.686895	0
.00335950 51.544562	157.988108	87.623543	
344.057488	299.042302	5457.487388	7
590 1 May 2022 10:10:53.834	6600 274154	6600 247929	0
.00331642 51.544674		6699.347838 84.321637	U
343.428698			7
600			
2 May 2022 01:18:25.164	6698.934952		0
.00327288 51.544781		81.019442	_
342.794740	298.944681	5456.656304	7

Page 66			
Time (UTCG) Se	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Or	bit Co
unt			
610			
2 May 2022 16:25:52.315	6698.593953	6698.663794	0
.00322895 51.544868	166.729728	77.716945	
342.156459	298.897129	5456.237326	7
620 3 May 2022 07:33:15.262 .00318472 51.544925 341.514269 630			
3 May 2022 07:33:15.262	6698.251029	6698.318967	0
.00318472 51.544925	169.749771	74.414129	
341.514269	298.849665	5455.816026	7
3 May 2022 22:40:33.981	6697.906426	6697.972479	0
.00314030 51.544947	172.822906	71.110975	
340.869137			7
640			
4 May 2022 13:47:48.451 .00309576 51.544933	6697.560077	6697.624265	0
.00309576 51.544933	175.951573	67.807467	·
340.221530	298.753001	5454.967291	7
CEO			
5 May 2022 04.54.58 649	6697 212088	6697 274439	0
00305121 51 544886	179 136243	64 503586	Ū
220 572212	208 702665	5454 530015	7
5 May 2022 04:54:58.649 .00305121 51.544886 339.572213	296.702005	3434.339913	,
5 May 2022 20:02:04.556	6606 963633	6606 022177	0
.00300678 51.544814	182.375249	61 100323	U
.003006/8 51.544814	182.3/5249	61.199323	7
338.922340	298.650014	3454.110/96	,
670	6606 511504	6606 550400	•
6 May 2022 11:09:06.152 .00296255 51.544730	6696.511/24	6696.570498	0
.00296255 51.544730	185.6/0615	57.894668	_
338.272436	298.594561	5453.679960	7
680			
7 May 2022 02:16:03.419			0
.00291864 51.544644			_
337.623381	298.535636	5453.247532	7
690			
7 May 2022 17:22:56.341			0
.00287524 51.544569			
	298.472091	5452.813631	7
700			
8 May 2022 08:29:44.901			0
.00283241 51.544515		47.978364	
336.332395	298.403521	5452.378350	7
710			
8 May 2022 23:36:29.088			0
.00279033 51.544491			
335.692728	298.329444	5451.942436	7
720			
9 May 2022 14:43:08.888	6694.739046	6694.789644	0
.00274914 51.544498	202.966397	41.365638	

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Time (UTCG) Ser	ni-parameter (km)    Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orl	bit Co
unt			
225 058584	000 045514	E4E1 E04616	_
335.057574	298.247714	5451.504616	7
730			
10 May 2022 05:49:44.284	6694.381134	6694.430261	0
.00270896 51.544535	206.582165	38.058760	
334.428229	298.158293	5451.065658	7
10 May 2022 20:56:15.264	6694.022183	6694.069905	0
.00267003 51.544595	210.243699	34.751557	
10 May 2022 20:56:15.264 .00267003 51.544595 333.806274	298 059537	5450.625525	7
750	270:037337	3430.023323	,
	6603 663378	6603 709663	^
11 May 2022 12:02:41.816	0093.002278	0093.708002	0
.00263241 51.544666	213.950900	31.444036	
333.192240	297.951084	5450.184319	7
760			
12 May 2022 03:09:03.927	6693.301402	6693.346518	0
12 May 2022 03:09:03.927 .00259625 51.544733	217.700471	28.136201	
332.587142	297.831895	5449.742025	7
770			
12 May 2022 18:15:21.585 .00256181 51.544782	6692 939426	6692 983352	0
00256101 E1 544702	221 495160	24 929045	· ·
.00256161 51.544762	221.403100	24.020045	_
331.992533	297.700170	5449.298494	7
780			
13 May 2022 09:21:34.776	6692.576376	6692.619186	0
.00252915 51.544798	225.303670	21.519556	
331.408806	297.555566	5448.853756	7
790			
14 May 2022 00:27:43.487 .00249840 51.544775	6692.212166	6692.253939	0
.00249840 51.544775	229.150959	18.210715	
330.836872			7
800			
14 May 2022 15:33:47.703	6691 846638	6691 887459	0
.00246981 51.544709	222 017499	14.901500	J
330.278176			7
	29/.222/41	5447.960167	,
810			
15 May 2022 06:39:47.408			0
.00244343 51.544606		11.591889	
329.732931	297.032465	5447.511074	7
820			
15 May 2022 21:45:42.584	6691.111328	6691.150496	0
.00241945 51.544478	240.790039	8.281865	
329.202432		5447.060234	7
830			•
16 May 2022 12:51:33.214	6690 741250	6600 770720	0
<del>-</del>			U
.00239793 51.544343			_
328.686722	296.598738	3446.60/496	7
840			
17 May 2022 03:57:19.277	6690.369369	6690.407233	0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) F Period (sec) Orb	Height
.00237895 51.544218 328.186356	248.569826	1.660554	7
850			
17 May 2022 19:03:00.750	6689.995528	6690.032874	0
.00236269 51.544120			7
327.702334 860	290.009413	3443.093330	,
18 May 2022 10:08:37.610	6689.619536	6689.656452	0
.00234915 51.544055	256.291891	355.037617	·
327.234433	295.804472	5445.235953	7
870			
19 May 2022 01:14:09.831 .00233839 51.544024	6689.241202	6689.277780	0
.00233839 51.544024	260.115644	351.725586	
326.782887	295.498673	5444.773612	7
880			
19 May 2022 16:19:37.386			0
.00233051 51.544016			_
326.348327	295.171268	5444.308465	7
890	6600 477040	CC00 F13220	0
20 May 2022 07:25:00.244 .00232548 51.544015	0000.47/049	0088.51322U	0
325 930201	207.042310	5443 840162	7
325.930201 900			
20 May 2022 22:30:18.375 .00232334 51.544002	6688.090952	6688.127054	0
.00232334 51.544002	271.331790	341.787447	
325.528880	294.451228	5443.368714	7
910			
21 May 2022 13:35:31.746	6687.701844	6687.737966	0
.00232405 51.543960	274.967307	338.474056	
325.143582	294.058350	5442.893711	7
920	6600 200551	6605 245500	•
22 May 2022 04:40:40.320 .00232755 51.543876	6687.309551		0
324.773924		335.160301 5442.414940	7
930	293.043033	3442.414940	,
22 May 2022 19:45:44.060	6686.914184	6686.950607	0
.00233384 51.543747			
324.419911	293.207302	5441.932537	7
940			
23 May 2022 10:50:42.927	6686.515348	6686.552049	0
.00234282 51.543578	285.493490	328.531597	
324.080426	292.749672	5441.446016	7
950			
24 May 2022 01:55:36.881	6686.112889		0
.00235439 51.543381		325.216599	-
323.754750 960	292.271152	5440.955189	7
300			

rage 69			
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pe			
	silgee (Am) bideredi	rerrod (sec) or	DIC CO
unt			
24 May 2022 17:00:25.880 .00236848 51.543172	6605 806000	6605 544404	•
24 May 2022 17:00:25.880	6685.706989	6685.744494	Ü
.00236848 51.543172	292.160605	321.901145	
323.442573	291.772415	5440.460277	7
25 May 2022 08:05:09.880 .00238496 51.542969	669E 207209	660E 33E33E	0
25 May 2022 08:05:09.880	0005.29/200	0005.335235	U
.00238496 51.542969	295.382973	318.585227	
323.142494	291.253975	5439.960738	7
980			
25 May 2022 23:09:48.838	6604 003040	6694 022572	0
25 May 2022 25:09:40.656	0004.003940	0004.922572	U
.00240370 51.542787	298.527881	315.268846	
322.854090	290.717054	5439.457061	7
990			
26 Mars 2022 14.14.22 709	6694 466410	6694 505706	0
20 May 2022 14:14:22.700	0004.400410	0004.505700	U
26 May 2022 14:14:22.708 .00242458 51.542638 322.575815	301.598760	311.952009	
322.575815	290.161597	5438.948269	8
000			
	6694 044695	6694 094722	0
27 May 2022 05:18:51.441 .00244745 51.542529	0004.044005	0004.004/22	U
.00244745 51.542529	304.596305	308.634728	
322.306655	289.588789	5438.434468	8
010			
27 May 2022 20:23:14.988	6683 619030	6693 650979	0
27 May 2022 20:23:14:900	0003.019030	0003.039070	U
.00247218 51.542460	307.518100	305.317016	
322.046086	288.999670	5437.915971	8
020			
020 28 May 2022 11:27:33.301 .00249860 51.542424	6683 189052	6683 230775	0
20 May 2022 11.27.33.301	0003.103032	0003.230773	U
.00249860 51.542424 321.792517	310.369077	301.998889	
321.792517	288.395034	5437.392294	8
030			
29 May 2022 02:31:46.328 .00252656 51.542412	6682.754710	6682.797370	0
00050666 51 540410	212 150021	200 (00250	Ū
.00252656 51.542412	313.130921	290.000330	_
321.544881	287.775859	5436.863382	8
040			
29 May 2022 17:35:54.019	6682.316258	6682.359913	0
.00255595 51.542410			Ū
		295.361429	_
321.302678	287.143149	5436.329545	8
050			
30 May 2022 08:39:56.323	6681.873383	6681.918087	0
.00258657 51.542405		292.042104	•
			_
321.064303	286.497871	5435.790392	8
060			
30 May 2022 23:43:53.192	6681.426636	6681.472440	0
.00261827 51.542383		288.722379	
			•
320.829323	285.841556	5435.246595	8
070			
31 May 2022 14:47:44.573	6680.975114	6681.022065	0
.00265095 51.542332		285.402244	-
			•
320.596110	285.174020	5434.697048	8

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
080	6680 510148	6680 567288 0
1 Jun 2022 05:51:30.411 .00268441 51.542245	326.082217	282.081684
320.363668	284.496908	5434.142148 8
090		
1 Jun 2022 20:55:10.654	6680.058887	6680.108257 0
.00271858 51.542120	328.491903	278.760681
320.131657 100	283.810857	5433.582077 8
2 Jun 2022 11:58:45.250	6679.594168	6679.644802 0
2 Jun 2022 11:58:45.250 .00275324 51.541957	330.850287	275.439213
319.898474	283.117130	5433.016627 8
110		
3 Jun 2022 03:02:14.146 .00278825 51.541765	6679.124998	6679.176924 0
.00278825 51.541765	333.160087	272.117262 5432.445800 8
319.663161 120	202.410007	3432.443000
3 Jun 2022 18:05:37.287	6678.651426	6678.704672 0
.00282358 51.541555	335.422175	268.794807
319.425525	281.709819	5431.869658 8
130		
4 Jun 2022 09:08:54.622 .00285899 51.541342	6678.173354	6678.227941 0
.00285899 51.541342 319.183911	337.641192 280 997970	5431.288072 8
5 Jun 2022 00:12:06.094 .00289437 51.541141	6677.690559	6677.746501 0
.00289437 51.541141	339.819902	262.148332
318.937348	280.281654	5430.700762 8
150	6677 202210	6677 260621
5 Jun 2022 15:15:11.649 .00292967 51.540969	341.958902	56//.260621 U
318.685786	279.561455	
160		
6 Jun 2022 06:18:11.232	6676.711317	6676.770001 0
.00296467 51.540838 318.427389	344.062543	
	278.838613	5429.509593 8
170 6 Jun 2022 21:21:04.785	6676 214429	6676.274490 0
.00299938 51.540758		
318.162193	278.112787	
180		
7 Jun 2022 12:23:52.247		
	348.170261	
317.888229 190	277.385604	5428.294623 8
8 Jun 2022 03:26:33.558	6675.205275	6675.268068 0
.00306705 51.540749	350.180379	245.522906

Time (ITTCC)	ni-parameter (lm) com	i-major Axis (km) Ecc
Time (UTCG) Se	mi-parameter (km) sem	I-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
317.604477	276.657660	5427.677651 8
200		
8 Jun 2022 18:29:08.652 .00309996 51.540802	6674.692584	6674.756726 0
.00309996 51.540802	352,162798	242.196304
317.311193	275 928260	5427.054003 8
210	273.720200	5127.051005
	6684 484400	6684 000804
9 Jun 2022 09:31:37.462		
.00313197 51.540867	354.120898	238.869223
317.006128	275.199055	5426.423314 8
10 Jun 2022 00:33:59.916 .00316299 51.540921 316.688225	6673.649570	6673.716338 0
00216200	356 056501	225 541667
316 600005	350.050501	233.341007
316.688225	2/4.4/0450	5425.785187 8
250		
10 Jun 2022 15:36:15.939	6673.118704	6673.186744 0
.00319312 51.540938	357.970123	232.213634
316.358019	273.741469	5425.139354 8
240	2,31,12103	31231233331
	6680 501044	6680 650316
11 Jun 2022 06:38:25.452	66/2.581044	6672.650316 0
.00322205 51.540898	359.864655	228.885111
316.012942	273.013691	5424.485214 8
250		
11 Jun 2022 21:40:28.370 .00324993 51.540788 315.653738	6672.036395	6672.106866 0
.00324993 51.540788	1.740446	225.556076
215 652720	272 295004	5423.822535 8
313.033736	2/2.203994	5425.622555
260		
12 Jun 2022 12:42:24.605	6671.484130	6671.555749 0
.00327643 51.540606	3.600135	222.226502
315.277636	271.559863	5423.150537 8
270		
13 Jun 2022 03:44:14.061	6670.923765	6670.996477 0
.00330147 51.540366		218.896360
314.883580	270.835375	5422.468623 8
280		
13 Jun 2022 18:45:56.639		
.00332523 51.540092	7.275420	215.565619
314.472681	270.111247	5421.776690 8
290	_, _, _, _, _, _, _, _, _, _, _, _, _, _	
14 Jun 2022 09:47:32.235	6660 777576	6669.852312 0
.00334738 51.539817		212.234259
314.041874	269.388750	5421.073643 8
300		
15 Jun 2022 00:49:00.733	6669.190313	6669.265960 0
.00336787 51.539576		208.902266
313.590156		5420.358803 8
	200.007703	J=20.330003 0
310		
15 Jun 2022 15:50:22.019	6668.593485	6668.669981 0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) I Period (sec) Orl	Height
00220600	12 607500	205 560625	
.00338689 51.539396 313.119030	267.946932	5419.632258	8
320 16 Jun 2022 06:51:35.968			0
.00340413 51.539296	14.485802	202.236372	U
312.625162 330	267.227271	5418.892598	8
16 Jun 2022 21:52:42.451	6667.367882	6667.445859	0
.00341981 51.539278	16.265823	198.902486	· ·
312.110286	266.507432	5418.140059	8
17 Jun 2022 12:53:41.334	6666.737994	6666.816594	0
.00343362 51.539330	18.039745	195.567986	
17 Jun 2022 12:53:41.334 .00343362 51.539330 311.570912	265.788276	5417.373041	8
18 Jun 2022 03:54:32.467	6666.095679	6666.174816	0
.00344550 51.539426	19.808567	192.232876	
311.006151 360	265.069482	5416.590809	8
18 Jun 2022 18:55:15.704	6665.441323	6665.520922	0
.00345571 51.539536 310.418047	21.572434	188.897154	8
370			
19 Jun 2022 09:55:50.887 .00346392 51.539627	6664.773422	6664.853392	0
.00346392 51.539627	23.333071	185.560806	
380	263.629857		8
20 Jun 2022 00:56:17.848	6664.091395	6664.171643	0
.00347010 51.539673	25.091185	182.223812	
309.160005 390			8
20 Jun 2022 15:56:36.418		6663.476255	0
.00347450 51.539657		178.886143	
308.491532 400	262.186977	5413.302074	8
21 Jun 2022 06:56:46.422	6662.685033	6662.765574	0
.00347681 51.539574		175.547772	
307.793761	261.463387	5412.436078	8
410	6661 050505	6660 040000	•
21 Jun 2022 21:56:47.679			0
.00347729 51.539429 307.069096		172.208668 5411.552323	8
420	6661 010001	CCC1 000CEC	•
22 Jun 2022 12:56:40.002 .00347562 51.539236	32.109473	168.868802	0
306.313822	260.009522	5410.648741	8
430			

Page /3		
Time (UTCG)	Semi-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (de	g) Arg of Perigee (deg)	RAAN (deg) Height
of Apogee (km) Height of		
unt	rerigee (ham) bracked	reriod (Bee) orbit ee
23 Jun 2022 03:56:23.188 .00347180 51.5390	6660 450050	6660 540050 0
23 Jun 2022 03:56:23.188	6660.4599/0	6660.540252 0
.00347180 51.5390	14 33.863980	165.528155
305.527297	259.279208	5409.724726 8
23 Jun 2022 18:55:57.039 .00346608 51.5387	6650 685786	6659 765794 0
25 0411 2022 10.55.57.055	0055.005700	160 106705
.00346608 51.5387	35.6192/0	162.186/05
304.712044	258.545545	5408.781225 8
450		
24 Jun 2022 09:55:21.352	6658.893978	6658.973613 0
.00345818 51.5385	72 27 276002	150 044441
.00343616 51.5365	73 37.376003	130.044441
303.864514	257.808711	5407.816189 8
460		
25 Jun 2022 00:54:35.907	6658.084123	6658.163285 0
00344810 51 5383	93 39 134465	155 501354
202 004277	25.131103	5406.829106 8
25 Jun 2022 00:54:35.907 .00344810 51.5383 302.984277	257.068293	5406.829106 8
4 / ()		
25 Jun 2022 15:53:40.491 .00343609 51.5382	6657.256981	6657.335582 0
.00343609 51.5382	59 40.895177	152.157437
202 072702	256 222202	5405.820921 8
302.073783	250.525562	5405.820921
480		
26 Jun 2022 06:52:34.883	6656.410983	6656.488927 0
.00342190 51.5381	76 42.658255	148.812687
301.129754	255 574099	5404.789715 8
26 Jun 2022 21:51:18.858 .00340576 51.5381	444464	
26 Jun 2022 21:51:18.858	6655.546821	6655.624021 0
.00340576 51.5381	44 44.424423	145.467097
.00340576 51.5381 300.154509	254.819532	5403.736348 8
500		
500 27 Jun 2022 12:49:52.186 .00338745 51.5381	6654 663017	6654.739379 0
2/ Juli 2022 12:49:52.166	0034.003017	0054./595/9 0
.00338745 51.5381	55 46.193315	142.120659
299.144969	254.059789	5402.659016 8
510		
28 Jun 2022 03:48:14.625	6653 750211	6653.834641 0
.00336696 51.5381		
298.100829	253.294453	5401.557285 8
520		
28 Jun 2022 18:46:25.936	6652.835880	6652.910298 0
.00334451 51.5382		135.425184
297.024044	252.522552	5400.431757 8
530		
29 Jun 2022 09:44:25.871	6651.891726	6651.965042 0
.00331990 51.5383		132.076106
295.911883	251.744202	5399.280845 8
540		
30 Jun 2022 00:42:14.177	6650.926353	6650.998481 0
.00329312 51.5383		128.726100
294.764009	250.958952	5398.104077 8
274.104007	230.730732	3330.101077

Time (UTCC)	Semi-parameter (k	m) Semi	i-major Avic (km)	Fcc
entricity Inclination	(dos) Ams of Domi	m) semi	DAN (doc)	TTo i ab i
of Apogee (km) Height	of Perigee (km)	Sidereal I	Period (sec) On	rbit Co
unt				
550				
30 Jun 2022 15:39:50.594	6640 0300	0.77	6650 010550	^
30 Jun 2022 15:39:50.594	6649.9399	07	6650.010//0	U
.00326437 51.5	38377	55.080017	125.375132	
293.581840	250.165700		5396.901648	8
560				
1 Jul 2022 06:37:14.860	6648.9312	60	6649.000776	0
.00323345 51.5	38350	56.863815	122.023167	
292.362986	249.364567		5395.672185	8
570				
1 Jul 2022 21:34:26.703 .00320054 51.5 291.108440	6647 0002	77	6647 069375	0
1 001 2022 21:34:20.703	20077	// E0 (E0E#4	110 670167	U
.00320054 51.5	382//	58.6505/4	118.6/016/	_
291.108440	248.554311		5394.415542	8
300				
2 Jul 2022 12:31:25.845	6646.8459	05	6646.912508	0
.00316545 51.5	38157	60.436584	115.316096	
289.815988	247.735027		5393.130436	8
590				-
3 Jul 2022 03:28:11.998	6645 7674	94	6645 932527	0
3 Jul 2022 03:20:11.996	27000	<i>5</i> 2 000500	111 060015	U
.00312820 51.5	37998	62.220530	111.960915	_
288.484998	246.906056		5391.816087	8
3 Jul 2022 18:24:44.864 .00308890 51.5	6644.6643	72	6644.727771	0
.00308890 51.5	37810	64.005384	108.604594	
287.115690	246.065852		5390.471697	8
610				
4 Jul 2022 09:21:04.137 .00304742 51.5	6643 5355	06	6643 597204	0
00204742	27600	65 705550	105 247102	U
.00304742 31.3	3/606	65.765559	105.247105	•
285.706044	245.214363		5389.096013	8
620				
5 Jul 2022 00:17:09.497	6642.3799	17	6642.439848	0
.00300375 51.5	37410	67.559129	101.888421	
284.255064	244.350631		5387.687853	8
630				
5 Jul 2022 15:13:00.612	6641.1962	83	6641.254392	0
00205709 51 5	27222	60 330003	98.528531	·
.00295798 51.5 282.762083	243.472700		5386.245631	8
	243.472700		5386.245631	•
640				
6 Jul 2022 06:08:37.133				0
.00290999 51.5	37091	71.090640	95.167421	
281.225074	242.580206		5384.767902	8
650				
6 Jul 2022 21:03:58.693	6638.7394	99	6638.793796	0
.00285985 51.5			91.805080	·
279.642733	241.670859		5383.252489	8
	241.0/0009		JJ0J• ZJZ40J	0
660		0.5	220E ======	_
7 Jul 2022 11:59:04.908	6637.4630	y/	6637.515413	0
.00280744 51.5	36940	74.585305	88.441499	

Page /5		
Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) Height
of Apogee (km) Height of Pe		
unt	2	
278.012848	240 742077	E201 607611 0
270.012040	240.743977	3381.09/044
670		
8 Jul 2022 02:53:55.371 .00275275 51.536924 276.333372	6636.152276	6636.202563 0
.00275275 51.536924	76.306798	85.076661
276.333372	239.797755	5380,101036 8
680		
	5534 004350	
8 Jul 2022 17:48:29.646	6634.804369	6634.852587 0
.00269581 51.536931	78.016008	81.710543
274.601879	238.829295	5378.459441 8
690		
	6633 417376	6633.463386 0
9 Jul 2022 08:42:47.271	0033.41/2/0	0033.403300 0
.00263651 51.536939	79.700510	78.343110
272.815584	237.837188	5376.770321 8
700		
700 9 Jul 2022 23:36:47.739 .00257477 51.536925 270.968666	6631 985768	6632 029734 0
00055455	0031.903700	0032.023734 0
.0025/4// 51.536925	81.362688	74.974313
270.968666	236.816803	5375.027341 8
710		
10 Jul 2022 14:30:30.514	6630.510755	6630.552551 0
.00251067 51.536867		
.00251007	02.9903/2	71.004007
269.062702	235.768400	5373.231633 8
720		
11 Jul 2022 05:23:55.035 .00244408 51.536751	6628.986718	6629.026316 0
.00244408 51.536751	84.591867	68.232362
267 001100	224 697424	5371.376507 8
267.091199	231.00/131	3371.370307
730		
11 Jul 2022 20:17:00.678 .00237496 51.536571	6627.408998	6627.446379 0
.00237496 51.536571	86.156633	64.859057
265.049314	233.569445	5369.456331 8
740		
	6605 553030	6605 000050
12 Jul 2022 11:09:46.765		
.00230322 51.536332		
262.932059	232.410697	5367.465829 8
750		
13 Jul 2022 02:02:12.558	6624 073000	6624.106806 0
.00222879 51.536051		
260.733562	231.206050	5365.398334 8
760		
13 Jul 2022 16:54:17.245	6622 304404	6622.335062 0
		54.728862
.00215162 51.535747		
258.446830	229.949294	5363.245861 8
770		
14 Jul 2022 07:45:59.932	6620.457769	6620.486182 0
.00207164 51.535443		
256.064432	228.633933	5360.999983 8
780		
14 Jul 2022 22:37:19.631	6618.525419	6618.551596 0

Time (UTCG) Semi-parameter (Rm) Semi-major Axis (Rm) Eccentricity Inclination (deg) Arg of Perigee (Rm) Siderel Period (sec) Orbit Count	Page 76		
Unit	entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) Height
	unt		
253.577322			
253.577322	.00198876 51.535157	93.109702	47.966110
15 Jul 2022 13:28:15.246   6616.497675   6616.521635   0	253.577322	227.251871	5358.650332 8
250.975551   225.793720   5356.185211   8	790		
250.975551   225.793720   5356.185211   8   800   16 Jul 2022 04:18:45.548   6614.362946   6614.384715   0   00181417   51.534674   95.273276   41.195300   8   810   16 Jul 2022 19:08:49.159   6612.107673   6612.127287   0   00172235   51.534471   96.161551   37.806672   245.378674   222.601901   5350.850150   8   820   17 Jul 2022 09:58:24.518   6609.715253   6609.732761   0   00162751   51.534276   96.866905   34.415755   242.353194   202.838327   37.804672   8   8   8   30   18 Jul 2022 00:47:29.842   6607.165591   6607.181052   0   00152971   51.534071   97.347947   31.022409   239.151152   218.936953   5344.847177   8   8   8   8   10   2022 15:36:03.079   6604.434421   6604.447906   0   00142888   51.533837   97.579366   27.626466   27.626466   235.747866   235.747866   216.873945   5341.531072   8   8   50   19 Jul 2022 06:24:01.841   6601.490301   6601.501895   0   00132526   51.533557   97.462671   24.227722   232.113619   214.616172   5337.957469   8   8   6598.294191   6598.303994   0   0   00121888   51.533218   96.932830   20.825937   228.209503   212.124485   95.820466   17.420828   223.986736   209.342449   95.820466   17.420828   223.986736   209.342449   95.820466   17.420828   223.986736   209.342449   95.820466   17.420828   223.986736   209.342449   5325.133362   8   8   8   8   8   8   8   8   8	15 Jul 2022 13:28:15.246	6616.497675	6616.521635 0
16 Jul 2022 04:18:45.548 6614.362946 6614.384715 0 .00181417 51.534674 95.273276 41.195300 248.247366 224.248065 5353.590612 8 810 16 Jul 2022 19:08:49.159 6612.107673 6612.127287 0 .00172235 51.534471 96.161551 37.806672 2245.378674 222.601901 5350.850150 8 820 17 Jul 2022 09:58:24.518 6609.715253 6609.732761 0 .00162751 51.534276 96.866905 34.415755 242.353194 2022 00:47:29.842 6607.165591 6607.181052 0 .00152971 51.534071 97.347947 31.022409 239.151152 218.936953 5344.847177 8 840 18 Jul 2022 15:36:03.079 6604.434421 6604.447906 0.00142888 51.533837 97.579366 27.626466 235.747866 216.873945 5341.531072 8 850 19 Jul 2022 06:24:01.841 6601.490301 6601.501895 0 .00132526 51.533557 97.462671 24.227722 232.113619 21.616172 5337.957469 8 860 19 Jul 2022 21:11:23.313 6598.294191 6598.303994 0 .00121888 51.533218 96.932830 20.825937 228.209503 212.124485 5334.079216 8 870 20 Jul 2022 11:58:04.127 6594.793463 6594.801592 0 .001100017 51.532312 95.820466 17.420828 223.986736 20.925937 223.986736 20.925937 232.937591 8 880 21 Jul 2022 02:44:00.174 6590.917936 6590.924529 0 .00100017 51.532312 93.925551 14.012054 219.379591 80.0088914 51.531776 90.998480 10.599203 214.295109 20.5882368 5319.863827 8	.00190295 51.534900	94.255271	44.581749
16 Jul 2022 04:18:45.548 6614.362946 6614.384715 0 .00181417 51.534674 95.273276 41.195300 248.247366 224.248065 5353.590612 8 810 16 Jul 2022 19:08:49.159 6612.107673 6612.127287 0 .00172235 51.534471 96.161551 37.806672 2245.378674 222.601901 5350.850150 8 820 17 Jul 2022 09:58:24.518 6609.715253 6609.732761 0 .00162751 51.534276 96.866905 34.415755 242.353194 2022 00:47:29.842 6607.165591 6607.181052 0 .00152971 51.534071 97.347947 31.022409 239.151152 218.936953 5344.847177 8 840 18 Jul 2022 15:36:03.079 6604.434421 6604.447906 0.00142888 51.533837 97.579366 27.626466 235.747866 216.873945 5341.531072 8 850 19 Jul 2022 06:24:01.841 6601.490301 6601.501895 0 .00132526 51.533557 97.462671 24.227722 232.113619 21.616172 5337.957469 8 860 19 Jul 2022 21:11:23.313 6598.294191 6598.303994 0 .00121888 51.533218 96.932830 20.825937 228.209503 212.124485 5334.079216 8 870 20 Jul 2022 11:58:04.127 6594.793463 6594.801592 0 .001100017 51.532312 95.820466 17.420828 223.986736 20.925937 223.986736 20.925937 232.937591 8 880 21 Jul 2022 02:44:00.174 6590.917936 6590.924529 0 .00100017 51.532312 93.925551 14.012054 219.379591 80.0088914 51.531776 90.998480 10.599203 214.295109 20.5882368 5319.863827 8	250.975551	225.793720	5356.185211 8
16 Jul 2022 19:08:49.159 6612.107673 6612.127287 37.806672 245.378674 222.601901 5350.850150 8820 17 Jul 2022 09:58:24.518 6609.715253 6609.732761 0.0162751 51.534276 220.838327 5347.943764 8830 18 Jul 2022 00:47:29.842 6607.165591 6607.181052 0.0152971 51.534071 97.347947 31.022409 239.151152 218.936953 97.347947 31.022409 239.151152 218.936953 5341.531072 8850 235.747866 219.Jul 2022 06:24:01.841 6601.490301 6601.501895 0.00132526 51.533557 214.616172 5337.957469 8860 19 Jul 2022 21:11:23.313 6598.294191 6598.303994 0.00121888 51.533218 96.932830 20.825937 228.209503 51.532812 228.209503 51.532812 228.209503 51.532812 229.3986736 20.9342449 59.820466 17.420828 580 21 Jul 2022 02:44:00.174 6590.917936 6590.924529 0.00100017 51.532332 93.925551 14.012054 219.379591 202.582368 50.9088914 51.531776 98.800 21 Jul 2022 17:29:06.331 6586.570531 6586.575578 0.0088914 51.531776 90.998480 51.599203 202.582368 5319.863827 8	800	6614 260046	6614 204515
16 Jul 2022 19:08:49.159 6612.107673 6612.127287 37.806672 245.378674 222.601901 5350.850150 8820 17 Jul 2022 09:58:24.518 6609.715253 6609.732761 0.0162751 51.534276 220.838327 5347.943764 8830 18 Jul 2022 00:47:29.842 6607.165591 6607.181052 0.0152971 51.534071 97.347947 31.022409 239.151152 218.936953 97.347947 31.022409 239.151152 218.936953 5341.531072 8850 235.747866 219.Jul 2022 06:24:01.841 6601.490301 6601.501895 0.00132526 51.533557 214.616172 5337.957469 8860 19 Jul 2022 21:11:23.313 6598.294191 6598.303994 0.00121888 51.533218 96.932830 20.825937 228.209503 51.532812 228.209503 51.532812 228.209503 51.532812 229.3986736 20.9342449 59.820466 17.420828 580 21 Jul 2022 02:44:00.174 6590.917936 6590.924529 0.00100017 51.532332 93.925551 14.012054 219.379591 202.582368 50.9088914 51.531776 98.800 21 Jul 2022 17:29:06.331 6586.570531 6586.575578 0.0088914 51.531776 90.998480 51.599203 202.582368 5319.863827 8	16 JUL 2022 04:18:45.548	6614.362946	6614.384715 0
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Note			
245.378674     222.601901     5350.850150     8       820     17 Jul 2022 09:58:24.518     6609.715253     6609.732761     0       .00162751     51.534276     96.866905     34.415755     8       242.353194     220.838327     5347.943764     8       830     18 Jul 2022 00:47:29.842     6607.165591     6607.181052     0       .00152971     51.534071     97.347947     31.022409     5344.847177     8       840     18 Jul 2022 15:36:03.079     6604.434421     6604.447906     0       .00142888     51.533837     97.57936     27.626466     27.626466       19 Jul 2022 06:24:01.841     6601.490301     6601.501895     8       860     214.616172     5337.957469     8       860     90.0121888     51.533218     96.932830     20.825937       228.209503     51.533218     96.932830     20.825937     8       20 Jul 2022 11:158:04.127     6594.793463     6594.801592     0       .00111029     51.532812     95.820466     17.420828     5329.832759     8       21 Jul 2022 02:44:00.174     6590.917936     6590.924529     0     0       .00100017     51.532322     93.925551     14.012054     8       21 Jul 2022 17:29:06.331 <td< td=""><td>.00172235 51.534471</td><td>96.161551</td><td>37.806672</td></td<>	.00172235 51.534471	96.161551	37.806672
820 17 Jul 2022 09:58:24.518 6609.715253 6609.732761 0.00162751 51.534276 96.866905 34.415755 242.353194 200.838327 5347.943764 8 830 18 Jul 2022 00:47:29.842 6607.165591 6607.181052 0.00152971 51.534071 97.347947 31.022409 239.151152 218.936953 5344.847177 8 840 18 Jul 2022 15:36:03.079 6604.434421 6604.447906 0.00142888 51.533837 97.579366 27.626466 850 19 Jul 2022 15:36:03.079 6601.490301 6601.501895 0.00132526 51.533557 97.462671 24.227722 232.113619 214.616172 5337.957469 8 860 19 Jul 2022 21:11:23.313 6598.294191 6598.303994 0.00121888 51.533218 96.932830 20.825937 228.209503 212.124485 5334.079216 8870 20 Jul 2022 11:58:04.127 6594.793463 6594.801592 0.00111029 51.532812 95.820466 17.420828 223.986736 209.342449 55.259.832759 8 880 21 Jul 2022 02:44:00.174 6590.917936 6590.924529 0.00100017 51.532332 93.92551 14.012054 219.379591 200.6195467 5325.133362 8 890 21 Jul 2022 17:29:06.331 6586.570531 6586.575738 0.00088914 51.53176 99.998480 10.5999203 214.295109 502.582368 5319.863827 8	245.378674	222.601901	5350.850150 8
.00162751 51.534276 96.866905 34.415755 242.353194 220.838327 5347.943764 8 830  18 Jul 2022 00:47:29.842 6607.165591 6607.181052 0 .00152971 51.534071 97.347947 31.022409 239.151152 218.936953 5344.847177 8 840  18 Jul 2022 15:36:03.079 6604.434421 6604.447906 0 .00142888 51.533837 97.579366 27.626466 850  19 Jul 2022 06:24:01.841 6601.490301 6601.501895 0 .00132526 51.533557 97.462671 24.227722 5337.957469 8 860  19 Jul 2022 21:11:23.313 6598.294191 6598.303994 0 .00121888 51.533218 96.932830 20.825937 228.209503 212.124485 96.932830 20.825937 228.209503 212.124485 5329.832759 8 870 20 Jul 2022 11:58:04.127 6594.793463 6594.801592 0 .00111029 51.532812 95.820466 17.420828 5329.832759 8 880 21 Jul 2022 02:44:00.174 6590.917936 6590.924529 0 .00100017 51.532332 93.925551 14.012054 229.379591 8 890 21 Jul 2022 17:29:06.331 6586.570531 6586.575738 0 .00088914 51.531776 90.998480 10.599203 60.80088914 51.531776 90.998480 5319.863827 8	820		
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18 Jul 2022 15:36:03.079 6604.434421 6604.447906 0 .00142888 51.533837 97.579366 27.626466 235.747866 216.873945 5341.531072 8 850 19 Jul 2022 06:24:01.841 6601.490301 6601.501895 0 .00132526 51.533557 97.462671 24.227722 232.113619 214.616172 5337.957469 8 860 19 Jul 2022 21:11:23.313 6598.294191 6598.303994 0 .00121888 51.533218 96.932830 20.825937 228.209503 212.124485 5334.079216 8 870 20 Jul 2022 11:58:04.127 6594.793463 6594.801592 0 .00111029 51.532812 95.820466 17.420828 223.986736 209.342449 5329.832759 8 880 21 Jul 2022 02:44:00.174 6590.917936 6590.924529 0 .00100017 51.532332 93.925551 14.012054 219.379591 206.195467 5325.133362 8 890 21 Jul 2022 17:29:06.331 6586.570531 6586.575738 0 .00088914 51.531776 90.998480 10.599203 214.295109 202.582368 5319.863827 8	.001529/1 51.5340/1	9/.34/94/	31.022409 5344 947177 9
18 Jul 2022 15:36:03.079       6604.434421       6604.447906       0         .00142888       51.533837       97.579366       27.626466         235.747866       216.873945       5341.531072       8         850       19 Jul 2022 06:24:01.841       6601.490301       6601.501895       0         .00132526       51.533557       97.462671       24.227722       232.113619       8         860       19 Jul 2022 21:11:23.313       6598.294191       6598.303994       0         .00121888       51.533218       96.932830       20.825937       228.209503       212.124485       5334.079216       8         870       20 Jul 2022 11:58:04.127       6594.793463       6594.801592       0         20 Jul 2022 11:58:04.127       6594.793463       6594.801592       0         .00111029       51.532812       95.820466       17.420828       0         223.986736       209.342449       5329.832759       8         880       21 Jul 2022 02:44:00.174       6590.917936       6590.924529       0         .00100017       51.532332       93.925551       14.012054         21 Jul 2022 17:29:06.331       6586.570531       6586.575738       0         .00088914       51.531776 <t< td=""><td>840</td><td>210.930933</td><td>3344.04/1//</td></t<>	840	210.930933	3344.04/1//
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850         19 Jul 2022 06:24:01.841       6601.490301       6601.501895       0         .00132526       51.533557       97.462671       24.227722       232.113619       214.616172       5337.957469       8         860       19 Jul 2022 21:11:23.313       6598.294191       6598.303994       0         19 Jul 2022 21:11:23.313       6598.294191       6598.303994       0         00121888       51.533218       96.932830       20.825937       8         20 Jul 2022 11:58:04.127       6594.793463       6594.801592       0         00111029       51.532812       95.820466       17.420828       7         223.986736       209.342449       5329.832759       8         880       21 Jul 2022 02:44:00.174       6590.917936       6590.924529       0         00100017       51.532332       93.925551       14.012054       8         890         21 Jul 2022 17:29:06.331       6586.570531       6586.575738       0         21 Jul 2022 17:29:06.331       6586.570531       6586.575738       0         214.295109       202.582368       5319.863827       8	.00142888 51.533837	97.579366	27.626466
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214.295109 202.582368 5319.863827 8			10.599203
900			
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Time (UTCG) Semi- entricity Inclination (deg)	-parameter (km) Semi	-major Axis (km) Ecc
of Apogee (km) Height of Per		
unt	igee (km) Sidereal F	Period (sec) Orbit Co
unc		
22 Jul 2022 08:13:16.023	6581 607320	6581 611327 0
.00077931 51.531135	86 555388	7 181765
208.603419	98.345234	5313.850456 8
910	30.343234	3313.030430
22 Jul 2022 22:56:20.452	6575.804325	6575.807306 0
00067221 51 520202	70 0/110/	3.759078
202.097232	93.243379	5306.822945 8
920		
23 Jul 2022 13:38:07.210	6568.787404	6568.789591 0
23 Jul 2022 13:38:07.210 .00057705 51.529510	69.874668	0.330245
194.443116	86.862066	5298.330033 8
930		
24 Jul 2022 04:18:17.103	6559.806081	6559.807684 0
.00049429 51.528401	54.408651	356.893971
184.913147	78.428220	5287.466654 8
940		
24 Jul 2022 18:56:16.852	6547.275214	6547.276482 0
00043999 51 526863	32 511523	
172.020189	66.258775	5272.322919 8
950		
25 Jul 2022 09:30:54.414 .00040642 51.524280	6526.346059	6526.347137 0
.00040642 51.524280	5.653912	349.988972
150.862545	45.557729	5247.062484 8
960		
25 Jul 2022 10:56:18.367 .00036392 51.489601	6520.393557	6520.394420 0
.00036392 51.489601	252.741650	334.321426
144.630322	39.884519	5239.885310 8
970		
25 Jul 2022 12:23:21.151	6511.863523	6511.864000 0
.00027050 51.488496	263.840807	333.972352
135.488433	31.965566	5229.605916 8
971		
25 Jul 2022 13:50:09.551 .00013282 51.486482 119.251142 1	6496.525136	6496.525251 0
.00013282 51.486482	280.324751	333.622346
119.251142	17.525360	5211.139232 8
972		