8 Apr 2019 17:53

:28
Approved AGI Educational Alliance Partner
Satellite-CubeSat: Orbit Lifetime

Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Pe unt	Arg of Perigee (deg) erigee (km) Sidereal:	Period (sec) Orbit Co
1 Jan 2021 17:42:50.142 .00043499 51.558120	6777.470591	6777.471873 0
.00043499 51.558120	166.876141	34.419482
402.283038	396.386708	5552.806842
U		
2 Jan 2021 09:06:20.987	6777.455082	6777.456139 0
.00039492 51.558163	172,572466	31,193849
401.995706	396.642573	5552.787506
10		
10 3 Jan 2021 00:29:51.723 .00035412 51.558243 401.702919 20	6777.439041	6777.439891 0
.00035412 51.558243	179.265757	27.968224
401.702919	396.902862	5552.767537
20		
3 Jan 2021 15:53:22.259	6777.423841	6777.424505 0
.00031299 51.558350	187.285624	24.742623
401.408773	397.166236	5552.748628
30		
4 Jan 2021 07:16:52.592	6777.407474	6777.407976 0
.00027216 51.558468	197.039433	21.517058
.00027216 51.558468 401.115491	397.426461	5552.728316
40 4 Jan 2021 22:40:22.713 .00023276 51.558579 400.831714	6777.390868	6777.391235 0
.00023276 51.558579	209.050975	18.291533
400.831714	397.676755	5552.707741
50		
5 Jan 2021 14:03:52.623	6777.374972	6777.375234 0
.00019668 51.558666	223.941112	15.066041
400.571193	397.905275	5552.688077
60		
6 Jan 2021 05:27:22.318 .00016679 51.558714	6777.357738	6777.357926 0
.00016679 51.558714	242.000090	11.840573
400.351344	398.090508	5552.666807
70		
6 Jan 2021 20:50:51.792		
.00014702 51.558712	262.475345	8.615109
400.200209	398.207427	5552.645782
80		
7 Jan 2021 12:14:21.050	6777.324352	6777.324487 0
.00014111 51.558653	282.462420	5.389621
400.143823	398.231152	5552.625713

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg)	Period (sec) Orbit Co
90		
8 Jan 2021 03:37:50.091	6777.306747	6777.306898 0
.00014929 51.558548	297.948917	2.164071
400.181652 100	398.158145	5552.604097
8 Jan 2021 19:01:18.913	6777.289785	6777.289976 0
.00016784 51.558426	307.846044	358.938437
400.290454	398.015498	5552.583300
110		
9 Jan 2021 10:24:47.523 .00019237 51.558319 400.440092	6777.273074	6777.273325 0
.00019237 51.558319	313.848185	355.712724
400.440092 120	397.832557	5552.562837
10 Jan 2021 01:48:15.916	6777.255260	6777.255588 0
.00022011 51.558247	317.737562	352.486956
400.610325	397.626852	5552.541040
130		
10 Jan 2021 17:11:44.091		
.00024981 51.558218	320.476647	349.261157
400.794739 140		
11 Jan 2021 08:35:12.053	6777.221252	6777.221787 0
.00028081 51.558230	322.576342	346.035357
.00028081 51.558230 400.987873	397.181701	5552.499500
11 Jan 2021 23:58:39.796 .00031270 51.558272	6777.203299	6777.203962 0
.00031270 51.558272	324.313349	342.809578
401.186190 160	396.947734	5552.477595
12 Jan 2021 15:22:07.323	6777.186496	6777.187304 0
.00034537 51.558327	325.808103	339.583833
401.390963	396.709646	5552.457124
170		
13 Jan 2021 06:45:34.636	6777.169221	
.00037865 51.558375 401.599352	327.154737 396.467033	336.358129 5552.436094
180	396.467033	5552.456094
13 Jan 2021 22:09:01.731	6777.151436	6777.152589 0
.00041245 51.558400		
401.810797	396.220380	5552.414460
190		
14 Jan 2021 13:32:28.612		
.00044676 51.558390 402.026944		329.906807 5552.394296
402.026944 200	353•5/141/	JJJ4.JJ#4J0
15 Jan 2021 04:55:55.281	6777.117484	6777.119055 0
.00048149 51.558339	330.714935	326.681157

rage 3		
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		
 402.245198 210		
402.245198	395.718913	5552.373251
210		
210 15 Jan 2021 20:19:21.732 .00051665 51.558249 402.466186 220	6777.100011	6777.101820 0
00061666	221 015740	222 455407
.00051005 51.550249	331.013/40	323.433467
402.466186	395.463455	5552.352070
220		
16 Jan 2021 11:42:47.972	6777.083597	6777.085663 0
.00055221 51.558127	332.884673	320.229776
402.691026	395 206301	5552 332214
230	373.200301	3332.332211
230		
17 Jan 2021 03:06:14.002	6777.066308	6777.068652 0
.00058812 51.557986	333.939100	317.004012
402.917373	394.945931	5552.311309
17 Jan 2021 18:29:39.817 .00062440 51.557840 403.146434	6777 049205	6777 051847 0
00060440	224 002026	212 770102
.00062440 51.55/840	334.983926	313.//8182
403.146434	394.683260	5552.290657
250		
18 Jan 2021 09:53:05.424	6777.032954	6777.035915 0
.00066102 51.557704	336,014041	310.552286
403.378695	304 410135	5552 271078
260	394.419133	3332.271076
200		
19 Jan 2021 01:16:30.823	6777.015808	6777.019110 0
.00069797 51.557591	337.041328	307.326326
403.612237	394.151982	5552.250426
270		
19 Jan 2021 16:39:56.011 .00073524 51.557512	6776 999141	6777.002804 0
00072524 51 557512	229 066471	204 100211
.00073324 51.337312	330.0004/1	504.100311
403.848531	393.883078	5552.230388
280		
20 Jan 2021 08:03:20.996	6776.983083	6776.987130 0
.00077281 51.557470	339.085015	300.874256
404.087462	393.612798	5552.211125
290	3331011730	3331111111
	6886 066104	6006 000640
20 Jan 2021 23:26:45.777		
.00081068 51.557467	340.106141	
404.327589	393.339706	5552.190869
300		
21 Jan 2021 14:50:10.353	6776.950025	6776.954908 0
.00084884 51.557498		
404.570450	393.065366	5552.171527
310		
22 Jan 2021 06:13:34.731	6776.934206	6776.939541 0
.00088726 51.557553	342.147726	291.196004
		5552.152643
320		
22 Jan 2021 21:36:58.909	6776.917674	6776.923484 0
22 Juli 2021 21.30.30.909	0//0.01/0/4	0770.723.101

Page	4
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entricity Incl: of Apogee (km) unt	Height of Pe	erigee (km)	Sidereal I		rbit Co
.00092595 405.061589	51.557620	392.511378	343.172655	287.969941 5552.132910	
330 23 Jan 2021 13:00 .00096490	:22.888 51.557682	6776.90	)2054 344.199333	6776.908364 284.743903	0
405.310385 340		392.232342		5552.114328	
24 Jan 2021 04:23 .00100407 405.560807	51.557724		345.226769	281.517892	0
350 24 Jan 2021 19:47 .00104348 405.812262	:10.267 51.557734	6776.87 391.669182	70343 346.260635	6776.877722 278.291905 5552.076673	0
360 25 Jan 2021 11:10 .00108310 406.066223	:33.667 51.557701	6776.85	55234 347.296414	6776.863184 275.065929	0
a=a					
370 26 Jan 2021 02:33 .00112292 406.321310	56.879 51.557619	6776.83 391.101555	39887 348.334736	6776.848432 271.839952 5552.040679	0
26 Jan 2021 17:57 .00116294 406.577296	:19.900 51.557493	6776.82	24083 349.380022	6776.833248 268.613952	
406.835580	51.557329		350.427188	265.387911	0
400 28 Jan 2021 00:44 .00124349 407.094488	51.557146		351.478179	6776.804605 262.161811 5551.986820	0
410 28 Jan 2021 16:07 .00128400 407.354212	51.556963		352.536283		. 0
420 29 Jan 2021 07:30 .00132466 407.615933	51.556805		353.596539	6776.776024 255.709385 5551.951696	0
430 29 Jan 2021 22:54 .00136545	:12.216	6776.74	18863		0

Time (ITTCC)	mi-parameter (km) Sem	i-maior Aria (lm)	Faa
entricity Inclination (deg)			
of Apogee (km) Height of P			
unt	erigee (Km) Siderear	Period (sec) Or	DIC CO
30 Jan 2021 14:17:34.125 .00140636 51.556646 408.140489	CDDC D225C1	6886 846065	^
30 Jan 2021 14:17:34.125	6//6./33561	6//6./46965	U
.00140636 51.556646	355./34338	249.256660	
408.140489	389.079440	5551.915986	
450	CDDC D10110	<b>4554 50000</b>	
31 Jan 2021 05:40:55.853	6776.719110	6776.733306	U
.00144737 51.556670	356.809648	246.030218	
408.404724	388.787888	5551.899201	
460			
31 Jan 2021 21:04:17.401	6776.703635	6776.718649	0
.00148847 51.556760 408.668611	357.891333	242.803755	
408.668611	388.494688	5551.881189	
470			
1 Feb 2021 12:27:38.763 .00152966 51.556899	6776.688457	6776.704313	0
.00152966 51.556899	358.979745	239.577296	
408.933399	388.201227	5551.863572	
480			
2 Feb 2021 03:50:59.946	6776.673807	6776.690531	0
.00157091 51.557059	0.072132	236.350863	
409.199090	387.907971	5551.846635	
490			
2 Feb 2021 19:14:20.946	6776.657995	6776.675609	0
.00161220 51.557206	1.171696	233.124471	
409.463951	387.613267	5551.828298	
500			
3 Feb 2021 10:37:41.760 .00165353 51.557308	6776.642811	6776.661340	0
.00165353 51.557308	2.277422	229.898121	_
409.729768	387.318912	5551.810763	
510	307.0020022	333_13_3135	
4 Feb 2021 02:01:02.393	6776.627740	6776.647206	0
.00169486 51.557339	3.387843	226.671804	·
409.995662	387.024750	5551.793394	
520	307.021730	3331.733331	
4 Feb 2021 17:24:22.839	6776 611516	6776.631943	0
.00173617 51.557288		223.445501	U
410.260360	386.729526	5551.774637	
530	380.729320	5551.774657	
5 Feb 2021 08:47:43.096	6776 506164	6776 617574	0
.00177749 51.557161		220.219187	U
410.525936 540	386.435213	5551.756980	
	6886 500408	6886 60000	^
6 Feb 2021 00:11:03.168			0
.00181873 51.556979		216.992838	
410.790724	386.141080	5551.738950	
550	4mm 4 = 444 · -	<b></b> _ =	-
6 Feb 2021 15:34:23.047		6776.587287	0
.00185991 51.556773		213.766438	
411.054155	385.846420	5551.719761	

mi (rimag)	mi-parameter (km) Sem		
entricity Inclination (deg) of Apogee (km) Height of F	Arg of Perigee (deg)	RAAN (deg)	Height
unt			
560			
7 Feb 2021 06:57:42.732	6776.548169	6776.572659	0
.00190104 51.556578	9.033217	210.539977	
411.318195	385.553124	5551.701785	
570 7 Feb 2021 22:21:02.228	6776 F21946	6776 FF7402	•
/ Feb 2021 22:21:02.228	6//6.531846	6//6.55/403	U
.00194203 51.556428	10.179934	207.313458	
411.580713	385.260094	5551.683038	
580	CRRC F14000	6886 541483	^
8 Feb 2021 13:44:21.526 .00198292 51.556344 411.841832	6//6.514828	6//6.5414/3	U
.00198292 51.556344	11.333590	204.086892	
411.841832	384.96/114	5551.663461	
590 9 Feb 2021 05:07:40.627			
.00202370 51.556338	6//6.498/29	6//6.526481	U
412 102106	12.493122	200.000295	
412.103106 600	364.6/365/	5551.645036	
9 Feb 2021 20:30:59.534	6776 401732	6776 E10609	0
.00206428 51.556407			U
412 362204	394 395012	197.033009 5551 625532	
412.362204 610			
10 Feb 2021 11:54:18.238 .00210471 51.556535	6776 464398	6776 494416	0
00210471 51 556535	14 832690	194 407089	Ū
.00210471 51.556535 412.619940	384.094892	5551.605635	
620	3010031032	3331,003033	
11 Feb 2021 03:17:36.745	6776.447861	6776.479038	0
11 Feb 2021 03:17:36.745 .00214495 51.556702	16.012605	191.180509	·
412.877231	383.806846	5551.586737	
630			
11 Feb 2021 18:40:55.051	6776.430309	6776.462659	0
.00218494 51.556880	17.199626	187.953956	
413.131812	383.519507		
640			
12 Feb 2021 10:04:13.153	6776.412742	6776.446281	0
.00222472 51.557045	18.394014	184.727429	
.00222472 51.557045 413.384978	383.233583	5551.546483	
650			
13 Feb 2021 01:27:31.054	6776.395824	6776.430566	0
.00226424 51.557174	19.595326	181.500920	
413.637033	382.950098	5551.527171	
660			
13 Feb 2021 16:50:48.752	6776.377886	6776.413841	0
.00230345 51.557253		178.274419	
413.885951	382.667731	5551.506619	
670			
14 Feb 2021 08:14:06.243		6776.397360	0
.00234238 51.557274	22.019765	175.047912	

Page 7				
Time (UTCG) Ser				
entricity Inclination (deg)				
of Apogee (km) Height of Pount	erigee (km) Si	idereal i	Period (sec) (	orbit co
414.133288	382.387432		5551.486365	
680				
14 Feb 2021 23:37:23.532 .00238098 51.557239	6776.34303	5	6776.381451	_ 0
.00238098 51.557239	23	3.242913	171.821385	
414.378913	382.109988		5551.466816	
690				
15 Feb 2021 15:00:40.616 .00241921 51.557154	6776.324876	5	6776.364536	5 0
.00241921 51.557154	24	4.472988	168.594826	
414.620999	381.834072		5551.446029	
700		_		
16 Feb 2021 06:23:57.492 .00245711 51.557035	6776.30712	7	6776.348038	3 0
.00245711 51.557035	25	5.710653	165.368226	
414.861259 710	381.56081/		5551.425/56	
16 Feb 2021 21:47:14.165	6776 20070	7	6776 221066	
00249460 51 556899	0//0.209/9	, 5 955560	162 141570	, ,
.00249460 51.556899 415.099178	381 290754	0.933300	5551 406006	
17 Feb 2021 13:10:30.633	6776,271548	8	6776.314979	0
.00253166 51.556763	28	3.207429	158.914888	
17 Feb 2021 13:10:30.633 .00253166 51.556763 415.333284	381.022675		5551.385132	
730				
18 Feb 2021 04:33:46.894	6776.25385	5	6776.298553	3 0
.00256833 51.556647	29	9.467146	155.688155	
415.565293	380.757814		5551.364947	
740				
18 Feb 2021 19:57:02.953	6776.236426	5	6776.282393	3 0
.00260452 51.556566	30	0.734243	152.461392	
415.794352	380.496434		5551.345088	
750	6556 0404F4	_	6886 A684A	
19 Feb 2021 11:20:18.807	6776.218172	2	6776.265408	3 0
.00264024 51.556532		2.008621	149.234610	
416.019352 760	380.237464		5551.324217	
20 Feb 2021 02:43:34.457	6776 20061	5	6776 249121	_ 0
.00267550 51.556549			146.007822	. 0
	379.982264		5551.304202	
770	0,51502201		33311301202	
20 Feb 2021 18:06:49.907	6776.183136	5	6776.232910	0
.00271022 51.556617			142.781043	
416.461025	379.730795		5551.284281	
780				
21 Feb 2021 09:30:05.154				<u> </u>
.00274442 51.556728			139.554283	
416.675765	379.482142		5551.263445	
790		_		
22 Feb 2021 00:53:20.200	6776.14752	5	6776.199823	3 0

Page 8		
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		
.00277810 51.556869	35 106500	136 308540
.00277810 51.556869	37.186522	136.327548
416.887807	379.237838	5551.243623
800		
22 Feb 2021 16:16:35.048 .00281118 51.557024	6776.129995	6776.183545 0
.00281118 51.557024	38.501423	133.100842
417.095586	378.997503	5551.223619
810		
23 Feb 2021 07:39:49.695 .00284367 51.557171	6776 111806	6776 166601 0
00284367 51 557171	30 824947	120 874150
.00204307 51.557171	39.024347	129.074139
417.298786	3/8./60416	5551.202/98
820		
23 Feb 2021 23:03:04.143	6776.094609	6776.150640 0
.00287557 51.557291	41.157683	126.647486
417.498941	378.528340	5551.183185
830		
24 Feb 2021 14:26:18.395 .00290679 51.557367 417.693990	6776.076959	6776.134214 0
.00290679 51.557367	42.498757	123.420809
417 693990	378 300438	5551 163000
840	370.300430	3331.103000
25 Feb 2021 05:49:32.445	C77C 050750	6776 117224 0
25 Feb 2021 05:49:32.445	6//6.058/59	6//6.11/224 0
.00293737 51.557389	43.849105	120.194105
417.884159	378.076288	5551.142122
850		
25 Feb 2021 21:12:46.297	6776.041579	6776.101240 0
.00296726 51.557354	45.208917	116.967352
418.070694	377.857787	5551.122481
860		
860 26 Feb 2021 12:35:59.952 .00299640 51.557270	6776.023682	6776.084520 0
.00299640 51.557270	46.577415	113.740533
418.251355	377.643684	5551 101934
418.251355 870	377.043004	5551.101934
27 Feb 2021 03:59:13.404	CBBC 0053BC	CBBC 0CB3BE 0
.00302483 51.557153		
418.426845	377.433905	5551.080866
880		
27 Feb 2021 19:22:26.656	6775.988030	6776.051167 0
.00305249 51.557027		
		5551.060949
890		
28 Feb 2021 10:45:39.708	6775 969699	6776.033952 0
.00307933 51.556921		
418.762626	377.031278	5551.039795
900		
1 Mar 2021 02:08:52.554		
.00310542 51.556860		
418.921858	376.837125	5551.018339
910		

Page 9			
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	<b>3</b> · · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , , ,	
1 Mar 2021 17:32:05.196 .00313065 51.556864	6775.933385	6775.999796	0
.00313065 51.556864	53.564340	97.605330	
419.076059	376.649534	5550.997823	
2 Mar 2021 08:55:17.633 .00315502 51.556941	6775 914406	6775 091955	0
2 Mai 2021 00:55:17:055	64 001105	0//3.901033	U
.00315502 51.556941	54.991105	94.376166	
419.223242	376.466468	5550.975777	
930			
3 Mar 2021 00:18:29.857	6775.895424	6775.963884	0
.00317859 51.557086	56.428760	91.151076	
419.364880	376.288888	5550.953694	
0.4.0			
3 Mar 2021 15:41:41.873 .00320123 51.557281 419.500779	6775 976969	6775 046400	0
3 Mai 2021 13:41:41.673	0775.070909	07/3.940409	U
.00320123 51.557281	57.876931	87.924015	
419.500779	376.118038	5550.932220	
950			
4 Mar 2021 07:04:53.675	6775.857137	6775.927523	0
.00322299 51.557500	59.336154	84.697014	
419.629285	375.951761	5550.909013	
960	3,3,3,2,01	33301303013	
	6775 027626	C77E 00007	0
4 Mar 2021 22:28:05.257	0//5.83/626	6//5.90892/	U
.00324387 51.557713	60.807252	81.470064	
419.752128	375.791727	5550.886162	
970			
5 Mar 2021 13:51:16.622 .00326376 51.557895	6775.818225	6775.890403	0
.00326376 51.557895	62.289787	78.243146	
419.868298	375.638509	5550.863400	
.00326376 51.557895 419.868298	3,3,030303	3330,003100	
C Mars 2021 05:14:27 761	6775 707403	C77E 070401	0
6 Mar 2021 05:14:27.761 .00328272 51.558028	6//5./9/403	6//5.8/0421	U
.00328272 51.558028	63.784602	75.016234	
419.976678	375.490164	5550.838845	
990			
6 Mar 2021 20:37:38.669	6775.777149	6775.850969	0
.00330069 51.558106			
420.078984		5550.814942	1
000	373.340334	3330.014342	_
	CBB5 B56630	6885 001000	•
7 Mar 2021 12:00:49.348		6775.831209	0
.00331761 51.558135			
420.173753	375.214664	5550.790661	1
010			
8 Mar 2021 03:23:59.789	6775.734798	6775.810093	0
.00333352 51.558130			
420.260391			1
	373.003733	5550.764714	
020	4000 04400	488	_
8 Mar 2021 18:47:09.986			0
.00334836 51.558110		62.108132	
420.340500	374.964911	5550.739661	1

Time (UTCC) Ser	mi-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe		
unt		
030		
9 Mar 2021 10:10:19.942	6775.692053	6775.768644 0
9 Mar 2021 10:10:19.942 .00336208 51.558098 420.412345	71.449250	58.880939
420.412345	374.850943	5550.713781 1
040		
10 Mar 2021 01:33:29.646	6775.669320	6775.746489 0
.00337475 51.558109	73.021809	55.653693
420.475918	374.743059	5550.686557 1
050		
10 Mar 2021 16:56:39.096 .00338627 51.558155 420.532588	6775.647480	6775.725176 0
.00338627 51.558155	74.607694	52.426411
420.532588	374.643764	5550.660367 1
060		
11 Mar 2021 08:19:48.293	6775.624713	6775.702885 0
.00339664 51.558240	76.207420	49.199117
420.580484	374.551287	5550.632977 1
070		
11 Mar 2021 23:42:57.227		
.00340591 51.558361	77.821509	45.971830
420.620341	374.465652	5550.604851 1
000		
12 Mar 2021 15:06:05.899 .00341398 51.558509	6775.578873	6775.657845 0
.00341398 51.558509	79.449657	42.744563
.00341398 51.558509 420.652787	374.388903	5550.577632 1
13 Mar 2021 06:29:14.308 .00342088 51.558672	6775.555235	6775.634526 0
.00342088 51.558672	81.092890	39.517327
420.676127	374.318925	5550.548977 1
100		
13 Mar 2021 21:52:22.446	6775.531500	6775.611058 0
.00342663 51.558834	82.751311	36.290124
420.691554	374.256561	5550.520140 1
110		
14 Mar 2021 13:15:30.315	6775.508444	6775.588211 0
.00343114 51.558983 420.699183	84.425063	
	374.203238	5550.492066 1
120		
15 Mar 2021 04:38:37.916		
.00343446 51.559106		
	374.157188	5550.463082 1
130		
15 Mar 2021 20:01:45.245	6775.461218	
.00343659 51.559197		26.608638
	374.119477	5550.434347 1
140		
16 Mar 2021 11:24:52.307	6775.438243	6775.518302 0
.00343744 51.559251	89.545356	23.381475

Time (UTCG) Ser	mi-parameter (km) Sem	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe		
unt	211900 (12) 21401041	101104 (200) 01210 00
420.671709	374 090895	5550 406163 1
150	374.030033	5550.400105
17 Max 2021 02.47.59 097	6775 111216	6775 404207 0
17 Mar 2021 02:47:59.097 .00343705 51.559270	01 207100	20 154207
.00343703 51.559270	374 000563	5550.376655 1
420.645012 160	3/4.069563	5550.376655
	CERT 200015	CDDE 400000
17 Mar 2021 18:11:05.612	6775.390815	6775.470779 0
.00343541 51.559258	93.046532	16.927059
420.610307	374.057252	5550.347769 1
170		
170 18 Mar 2021 09:34:11.857 .00343245 51.559224 420.566927	6775.367724	6775.447550 0
.00343245 51.559224	94.825121	13.699781
420.566927	374.054173	5550.319225 1
19 Mar 2021 00:57:17.828	6775.343754	6775.423384 0
.00342822 51.559178	96.623423	10.472448
420.514018	374.058750	5550.289530 1
190		
19 Mar 2021 16:20:23.524	6775.320567	6775.399939 0
.00342268 51.559132	98.441138	7.245059
420.452958		
200		_
200 20 Mar 2021 07:43:28.950 .00341578 51.559094 420.382829 210	6775 . 297571	6775.376623 0
.00341578 51.559094	100.280159	4.017618
420 382829	374 096417	5550.232072 1
210	3/4.03041/	3330.232072
20 Mar 2021 23:06:34.103		
.00340759 51.559073	102 140425	0773.332023
420.303249	27/ 127006	5550.202582 1
220	3/4.12/990	5550.202562
21 Mar 2021 14:29:38.983	6775 251166	6775.329398 0
.00339804 51.559072	07/3.251100	
.00339804 51.559072	104.022201	357.562622
	374.169577	5550.174044 1
230 22 Mar 2021 05:52:43.594	CERE 000421	CDDE 206161 0
.00338710 51.559091		
420.117825	374.220496	5550.145491 1
240		
22 Mar 2021 21:15:47.934		
.00337485 51.559122		
420.010927	374.279776	5550.116235 1
250		
23 Mar 2021 12:38:52.005	6775.182906	
.00336121 51.559157		
419.895551	374.349352	5550.088096 1
260		
24 Mar 2021 04:01:55.810	6775.160500	6775.236363 0

Page 12		
Time (UTCG) Set	mi-parameter (km) Sem	ni-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
.00334620 51.559180	111.785782	344.652533
419.770641	374.428085	5550.059727 1
270		
24 Mar 2021 19:24:59.345	6775.137670	6775.212793 0
.00332986 51.559177	113.788838	341.425037
419 636282	374 515303	5550.030765 1
419.636282	374.313303	5550.050705
280		
25 Mar 2021 10:48:02.613 .00331213 51.559134	6775.115904	6775.190230 0
.00331213 51.559134	115.818623	338.197544
419.493545	374.612914	5550.003040 1
290		
26 Mar 2021 02:11:05.617	6775.093774	6775.167245 0
.00329305 51.559042	117.876873	334.970037
410 241224	274 710266	5549.974798 1
419.341224	3/4./19200	3349.9/4/90
300		
26 Mar 2021 17:34:08.352 .00327266 51.558896 419.179650	6775.071310	6775.143874 0
.00327266 51.558896	119.963008	331.742492
419.179650	374.834098	5549.946081 1
310		
27 Mar 2021 08:57:10.821	6775 049956	6775.121558 0
.00325092 51.558703	122 070364	220 514005
.00325092 51.558703	122.0/9364	328.514885
419.009910	374.959206	5549.918660 1
320		
28 Mar 2021 00:20:13.025	6775.027943	6775.098533 0
.00322786 51.558478	124.227482	325.287194
418.830591	375.092475	5549.890369 1
330		_
330 28 Mar 2021 15:43:14.959 .00320352 51.558241	6775 005720	6775.075259 0
20 Mai 2021 13:43:14.939	106 40700	0775.075259
.00320352 51.558241	126.40/023	322.059401
410.042332	375.234186	5549.861771 1
340		
29 Mar 2021 07:06:16.627		
.00317785 51.558017	128.621043	318.831503
		5549.834425 1
350	373.303070	3313.031123
	CTT4 0C0F40	CTTT 00000T 0
29 Mar 2021 22:29:18.027		
.00315093 51.557829		315.603509
418.240454	375.545156	5549.805920 1
360		
30 Mar 2021 13:52:19.154	6774.940423	6775.006490 0
.00312275 51.557695		
		5549.777272 1
	3/3./12043	JJ=3•111212 I
370	4884 A4444	4884 00100F
31 Mar 2021 05:15:20.011		
.00309329 51.557620		
417.804033	375.890038	5549.749681 1
380		

Page 13			
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			
unt	criged (hin) bracrear	101104 (500)	
31 Mar 2021 20:38:20.596 .00306263 51.557596	6884 006005	6554 060350	0
31 Mar 2021 20:38:20.596	6//4.896825	6//4.9603/2	U
.00306263 51.557596	137.845084	305.919196	1
417.572538	376.074206	5549.720605	1
390			
1 Apr 2021 12:01:20.902 .00303075 51.557607	6771 071621	6774 026965	0
1 Apr 2021 12:01:20.902	0//4.0/4034	0//4.930005	U
.00303075 51.557607	140.249853	302.691086	
417.333004	376.266725	5549.691721	1
400			
2 Apr 2021 03:24:20.931	6774 853037	6774 913917	0
00000000	140 60000	200 463012	· ·
.00299767 51.557628			
417.085878	376.467956	5549.663525	1
410			
2 Apr 2021 18:47:20.680	6774.830101	6774.889600	0
2 Apr 2021 18:47:20.680 .00296347 51.557633 416.829790	145 102201	206 224094	•
.0029634/ 51.55/633	145.192391	290.234904	_
416.829790	376.675410	5549.633646	1
420			
3 Apr 2021 10:10:20.139 .00292816 51.557599	6774.807657	6774.865745	0
00202816 51 557500	147 731140	293 006991	
41.6 5.6.6.11	147.751140	253.000551	_
416.566611	376.890879	5549.604335	1
430			
4 Apr 2021 01:33:19.314 .00289176 51.557515	6774.785397	6774.842050	0
.00289176 51.557515	150.319622	289.779016	
416 206200	277 112001	EE40 E7E221	1
416.296299	3//.113601	3349.373221	_
440			
4 Apr 2021 16:56:18.195 .00285440 51.557377	6774.761790	6774.816988	0
.00285440 51.557377	152.957104	286.551033	
416.017998	377.341979	5549.544427	1
450	377.341373	3313.311127	_
450			_
5 Apr 2021 08:19:16.776	6774.738949	6774.792675	0
5 Apr 2021 08:19:16.776 .00281607 51.557197	155.645825	283.323015	
415.733940	377.577410	5549.514553	1
460			
	6884 848006	6884 B6040E	•
5 Apr 2021 23:42:15.060			0
.00277685 51.556989	158.389870	280.094938	
415.443676	377.818595	5549.484401	1
470			
6 Apr 2021 15:05:13.038	CDD4 CO1CCO	6554 540405	•
=			0
.00273686 51.556778		276.866785	
415.146936	378.063875	5549.452786	1
480			
7 Apr 2021 06:28:10.705	6774 669375	6774 717622	0
_			U
.00269613 51.556585		273.638549	
414.846117	378.315126	5549.422334	1
490			
7 Apr 2021 21:51:08.064	6774.644482	6774.692229	0
.00265477 51.556430		270.410233	J
			_
414.540453	378.570005	5549.391134	1

Page 14			
	mi-parameter (km) Sem		
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Orb	it Co
unt			
500			
500			
8 Apr 2021 13:14:05.104	6774.619779	6774.666030	0
.00261288 51.556327	169.940201	267.181846	
414.230410	378.827650	5549.358943	1
510 9 Apr 2021 04:37:01.826 .00257054 51.556282 413.918408 520			
9 Apr 2021 04:37:01.826	6774.596131	6774.640896	0
.00257054 51.556282	172,982404	263.953405	
413 918408	379 089385	5549 328061	1
520	373.003303	3349.320001	_
0.7 2021 10.50.50 220	6774 571622	6774 614015	0
9 Apr 2021 19:59:58.230	6//4.5/1623	6//4.614915	0
.00252791 51.556293	176.090706	260.724929	
413.603539	379.352292	5549.296138	1
530			
10 Apr 2021 11:22:54.308	6774.546734	6774.588571	0
.00248507 51.556353	179.264568	257.496437	
.00248507 51.556353 413.286869	379.616272	5549.263769	1
E 4 O			
11 Apr 2021 02:45:50 063	6774 522937	6774 563342	0
0024421E E1 EE6447	102 500002	254 267046	·
410 00000	102.500002	254.207940	-
11 Apr 2021 02:45:50.063 .00244215 51.556447 412.970865	3/9.881819	5549.232//0	1
550			
11 Apr 2021 18:08:45.495	6774.498159	6774.537158	0
.00239933 51.556559	185.820889	251.039469	
412.654496	380.145820	5549.200599	1
560			
12 Apr 2021 09:31:40.597	6774.473384	6774.511009	0
.00235668 51.556670	189,202659	247.811014	
412.339330	380 408688	5549 168470	1
570	300.40000	3343.100470	_
13 Apr 2021 00:54:35.375	6774 440603	6774 485071	0
			U
.00231442 51.556762			_
412.027960	380.669981	5549.137705	1
580			
13 Apr 2021 16:17:29.828	6774.424955	6774.459946	0
.00227268 51.556821	196.179481	241.354170	
411.719137	380.926754	5549.105729	1
590			
14 Apr 2021 07:40:23.951	6774 . 400601	6774.434337	0
.00223158 51.556837		238.125770	Ŭ
			-
	381.1/9639	5549.074264	1
600			
14 Apr 2021 23:03:17.753			0
.00219139 51.556806			
411.118084	381.427320	5549.043995	1
610			
15 Apr 2021 14:26:11.230	6774.352762	6774.384141	0
.00215221 51.556729		231.668954	
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Page 15		
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		
	singee (Am) Siderear	reliod (sec) Oldic Co
unt		
410.827021		
410.827021	381.667261	5549.012589
620		
620 16 Apr 2021 05:49:04.383 .00211419 51.556613 410.544623	6774.329068	6774.359348 0
00211419 51 556613	210 945682	228 440511
410 544602	201 000000	5540 000105 1
410.544623	381.900073	5548.982127 1
630		
16 Apr 2021 21:11:57.218	6774.306052	6774.335293 0
.00207762 51.556473	214 793991	225 212027
410.272777	382.123810	5548.952572 1
640		
17 Apr 2021 12:34:49.735	6774.282215	6774.310478 0
.00204257 51.556325	218 694510	221 082405
.0020425/ 51.550525	210.094310	221.903493
410.010505	382.336451	5548.922081 1
650		
18 Apr 2021 03:57:41.934 .00200925 51.556188 409.760881	6774.259326	6774.286674 0
0020025 51 556100	222 642294	210 75/000
.00200925 51.556166	222.043204	210.754900
409.760881	382.538467	5548.892834 1
660		
18 Apr 2021 19:20:33.824	6774.236836	6774.263337 0
.00197789 51.556081	226 634533	215 526267
409.525076	382.727598	5548.864161 1
670		
19 Apr 2021 10:43:25.403	6774.213730	6774.239451 0
00104056	230.657773	212 207570
.00194856 51.556020	230.637773	212.29/5/9
409.302483	382.902420	5548.834814 1
20 Apr 2021 02:06:16.676 .00192146 51.556013	6774.191717	6774.216728 0
00102146	224 706959	200 069954
.00192146 51.556015	234.700030	209.000034
	383.063311	5548.806894 1
690		
20 Apr 2021 17:29:07.650	6774.169872	6774.194245 0
.00189680 51.556064		
408.906512	383.207978	5548.779270 1
700		
21 Apr 2021 08:51:58.324	6774.147485	6774.171290 0
00107456	242.840529	
.00187456 51.556165		
408.732867	383.335712	5548.751066 1
710		
22 Apr 2021 00:14:48.703	6774.126300	6774.149608 0
.00185495 51.556300		
408.578350	383.446867	5548.724428 1
720		
22 Apr 2021 15:37:38.795	6774.105018	6774.127905 0
.00183808 51.556443		
408.442324	383.539485	5548.697761 1
730		
23 Apr 2021 07:00:28.596	6774.083210	6774.105745 0

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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) Orbit Co
unt		
.00182388 51.556565	254.974947	192.925136
408.323926	383.613563	5548.670534 1
740		
23 Apr 2021 22:23:18.113	6774.062618	6774.084873 0
.00181255 51.556636	258.958972	189.696421
408.226255	383.669491	5548.644890 1
750		
24 Apr 2021 13:46:07.350 .00180403 51.556632	6774.041587	6774.063633 0
.00180403 51.556632	262.894821	186.467702
408.147245	383.706022	5548.618794 1
760		
25 Apr 2021 05:08:56.304	6774.020235	6774.042140 0
.00179826 51.556539	266.774161	183.238958
408.086623	383.723658	5548.592387 1
770		
25 Apr 2021 20:31:44.981	6774.000064	6774.021899 0
.00179537 51.556359	270.587497	180.010166
25 Apr 2021 20:31:44.981 .00179537 51.556359 408.046802	383.722996	5548.567518 1
/80		
26 Apr 2021 11:54:33.384 .00179518 51.556108	6773.979083	6774.000913 0
.00179518 51.556108	274.326924	176.781307
408.024444	383.703382	5548.541734 1
790		
27 Apr 2021 03:17:21.509		
.00179765 51.555816	277.987749	173.552367
408.020243	383.665722	5548.516018 1
800		
27 Apr 2021 18:40:09.364 .00180282 51.555524	6773.938061	6773.960077 0
.00180282 51.555524	281.563010	170.323343
408.035289	383.610866	5548.491561 1
810		
28 Apr 2021 10:02:56.948		
.00181044 51.555268	285.048815	
	383.538462	5548.466009 1
820		
29 Apr 2021 01:25:44.260		
.00182050 51.555082	288.444774	163.865089
	383.449807	5548.440766 1
830		
29 Apr 2021 16:48:31.306 .00183293 51.554983	6773.876169	6773.898927 0
.00183293 51.554983		
	383.345868	5548.416430 1
840		
30 Apr 2021 08:11:18.084		
.00184751 51.554973		
	383.226374	5548.390914 1
850		

Page 17			_
entricity Inclination (de of Apogee (km) Height of		RAAN (deg)	Height
unt			
30 Apr 2021 23:34:04.593	6773.834128	6773.857669	0
30 Apr 2021 23:34:04.593 .00186419 51.5550	298.068646	5 154.177514	•
408.348404	383.092933	5548.365738	1
860			
1 May 2021 14:56:50.837 .00188287 51.5551 408.455056	6773.813754	6773.837769	0
.00188287 51.5551	301.089097	150.948349	
408.455056	382.946482	5548.341289	1
8 / ()			
2 May 2021 06:19:36.814 .00190337 51.5552	6773.792230	6773.816770	0
.00190337 51.5552	279 304.021431	147.719209	
408.572817	382.786723	5548.315489	1
880			_
2 May 2021 21:42:22.521	6773.771104	6773.796221	0
.00192561 51.5553	306.866127	144.490084	
408.702919	382.615523	5548.290242	1
390			_
3 May 2021 13:05:07.962	6773.750218	6773,775962	0
.00194951 51.5554	176 309.623420	141.260960	•
.00194951 51.5554 408.844510	382.433414	5548.265352	1
900	301, 133 111	33101203332	_
	6773.728099	6773.754517	0
4 May 2021 04:27:53.133 .00197487 51.5555	312.302343	3 138.031818	
408.994805	382.240230	5548.239004	1
910	3323223	33101107071	_
4 May 2021 19:50:38.030	6773.706629	6773.733770	0
.00200168 51.5554	175 314.901912	2 134.802639	
409.155616	382.037924	5548.213514	1
920	302,037,321	3310122321	_
5 May 2021 11:13:22.657	6773.684942	6773.712851	0
.00202980 51.5553	317.42599	131.573408	·
409.325152	381.826550	5548.187812	1
930			_
6 May 2021 02:36:07.006	6773.662169	6773.690888	0
.00205910 51.5552	280 319.882779	128.344114	·
	381.606168	5548.160829	1
940			_
6 May 2021 17:58:51.077	6773.640253	6773.669830	0
.00208958 51.5551	146 322.270391	125.114753	·
	381.378692		1
950		<b></b>	_
7 May 2021 09:21:34.872	6773.617603	6773.648077	0
.00212107 51 5550	324.595458	121.885331	J
.00212107 51.5550 409.878428	381.143727	5548.108231	1
960	001.110,27	5510.100251	
8 May 2021 00:44:18.382	6773 594253	6773 625667	0
.00215351 51.5549			U
	380.901611		1
410.013123	300.901011	3340.000037	

					RAAN (deg) Period (sec) (	
unt 						
970						
8 May 2021	L6:07:01.60	9	6773.5	71787	6773.604182	2
.00218688	51	.554827		329.073742	115.426339	
410.280	241		380.654123		5548.054300	
000						
9 May 2021 (	07:29:44.55	3	6773.5	48211	6773.581624 112.196800 5548.026586	1
.00222100	51	.554797		331.233174	112.196800	
410.488	758		380.400490		5548.026586	
990						
9 May 2021	22:52:27.20	6	6773.5	24280	6773.558751	L
.00225590	51	.554816		333.345549	108.967254	
					5547.998484	
000						
10 May 2021	L4:15:09.57	2	6773.5	01181	6773.536748	3
.00229150	51	.554882		335.409186	105.737715	
410.921	288		379.878209		5547.971451	
010						
11 May 2021 (	05:37:51.64	8	6773.4	76857	6773.513556 102.508196	5
.00232765	51	.554987		337.433076	102.508196	
411.1429	955		379.610157		5547.942958	
020						
11 May 2021	21:00:33.43	0	6773.4	52609	6773.490476	5
.00236443	51	.555120		339.417850	99.278704	
					5547.914602	
030						
12 May 2021	L2:23:14.92	1	6773.4	28877	6773.467947 96.049239	7
.00240169	51	.555266		341.362962	96.049239	
411.598	708		379.063186		5547.886922	
040						
13 May 2021 (	3:45:56.11	8	6773.4	04046	6773.444352	2
.00243937	51	.555408		343.277044	92.819799	
411.830	318		378.784385		5547.857933	
050						
13 May 2021	L9:08:37.01	9	6773.3	79603	6773.421179	9
.00247753	51	.555532		345.158420	89.590372	
412.065	507		378.502851		5547.829464	
060						
14 May 2021	10:31:17.62	6	6773.3	55380	6773.398257	7
.00251598	51	.555625		347.008274	86.360945	
412.303			378.219513		5547.801302	
070						
15 May 2021 (	01:53:57.93	8			6773.374509	9
.00255476	51	.555681		348.833929	83.131502	
412.5418	388		377.933130		5547.772126	
080						
15 May 2021	L7:16:37.95	2	6773.3	05824	6773.351396	5
	51				79.902022	

Page 19		
		i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
412.783581	377.645211	5547.743730 2
090		
16 May 2021 08:39:17.674 .00263314 51.555671	6773.281359	6773.328322 0
.00263314 51.555671	352.406106	76.672490
413.026447	377.356196	5547.715381 2
100 17 May 2021 00:01:57.100 .00267265 51.555617 413.270361		
17 May 2021 00.01.57 100	6773 256283	6773.304666 0
00267266 61 666617	254 161020	72 442992
.00207205 51.555017	334.101030	73.442032
413.2/0361	3//.0649/1	5547.686317 2
17 May 2021 15:24:36.231	6773.231981	6773.281811 0
.00271235 51.555548	355.893288	70.213218
413.516355	376.773267	5547.658239 2
120		
18 May 2021 06:47:15.073	6773.207555	6773.258856 0
00275212 51 555479	357 607460	66 983470
18 May 2021 06:47:15.073 .00275212 51.555479 413.762686	376 401026	5547.630037 2
413./02000	3/6.481026	5547.630037
18 May 2021 22:09:53.621	6773.182556	6773.235357 0
.00279203 51.555428	359.306594	63.753654
18 May 2021 22:09:53.621 .00279203 51.555428 414.009439	376.187275	5547.601166 2
140		
19 May 2021 13:32:31.881	6773.158635	6773.212958 0
.00283202 51.555411	0.987600	60.523784
414.257822		
150	373.031033	3317.373010
20 Mars 2001 04 FF 00 0F6	6002 124460	6882 100208 0
20 May 2021 04:55:09.856 .00287198 51.555437	6//3.134460	6773.190327 0
.00287198 51.555437	2.655849	57.293882
414.505806	375.600849	5547.545844 2
T00		
20 May 2021 20:17:47.545		
.00291199 51.555509	4.312233	54.063971
414.753695		5547.517564 2
170		
21 May 2021 11:40:24.952	6772 006472	6773.145495 0
.00295196 51.555622		
415.002519	375.014471	5547.490765 2
180		
22 May 2021 03:03:02.084	6773.062644	6773.123269 0
.00299180 51.555760	7.588930	47.604205
415.250129	374.722409	5547.463459 2
190		
22 May 2021 18:25:38.937	6773.038578	6773.100826 0
.00303159 51.555905		44.374376
415.497063		5547.435887 2
	J/T.#3UJJU	3347.433007
200	6882 04555	CDD2 050502
23 May 2021 09:48:15.517	6773.015737	6773.079623 0

Page 20		
		i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
00000100 51 556004	10.000410	41 144550
.00307120 51.556034	10.828418	41.144579
415.744132	374.141113	5547.409837 2
210		
24 May 2021 01:10:51.829	6772.992245	6773.057781 0
.00311061 51.556128	12.437641	37.914802
415.989099	373.852462	5547.383003 2
220		
24 May 2021 16:33:27.869 .00314983 51.556173	6772 968743	6773.035941 0
00214002 E1 EE6172	14 020200	24 695020
416 020065	14.039200	51.005020
	373.565017	5547.356171 2
230		
25 May 2021 07:56:03.645	6772.946396	6773.015267 0
.00318878 51.556167	15.634081	31.455205
416.475921	373.280612	5547.330772 2
240		
25 May 2021 23:18:39.158 .00322742 51.556118 416.715896	6772.923032	6772.993581 0
.00322742 51.556118	17.225023	28.225332
416 715896	372 997266	5547.304130 2
250	372.337200	3317.301130
26 May 2021 14:41:14.404	6772 000073	6772.972310 0
26 May 2021 14:41:14.404	6//2.9000/3	6//2.9/2310 0
.00326581 51.556043	18.809992	24.995384
416.954541	372.716079	5547.277998 2
260		
27 May 2021 06:03:49.394	6772.878077	6772.952005 0
.00330383 51.555963	20.390626	21.765357
417.191680		
270		
270 27 May 2021 21:26:24.125 .00334149 51.555898	6772.854913	6772.930537 0
.00334149 51.555898	21 968695	18.535256
417.425225	372.161848	5547.226677 2
417.425225 280	3/2.101040	5547.226677 2
	6880 030408	6880 000850
28 May 2021 12:48:58.596		
.00337882 51.555864		15.305099
417.657225	371.888274	5547.201140 2
290		
29 May 2021 04:11:32.815	6772.810610	6772.889630 0
.00341572 51.555869	25.114616	12.074910
417.886955		5547.176422 2
300		
29 May 2021 19:34:06.781	6772 787585	6772.868303 0
		8.844712
.00345222 51.555911		
418.112726	371.349879	5547.150220 2
310		
30 May 2021 10:56:40.491		
.00348830 51.555980	28.254272	5.614525
418.336625	371.085142	5547.125135 2
320		

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
 31 May 2021 02:19:13 954	6772 743657	6772 827760	0
31 May 2021 02:19:13.954 .00352388 51.556063 418.557375	29.823226	2.384361	· ·
418.557375	370.824145	5547.100412	2
330			
31 May 2021 17:41:47.166	6772.720695	6772.806482	0
.00355898 51.556141			•
418.773750 340	3/0.565214	554/.0/42/1	2
1 Jun 2021 09:04:20.126	6772.698815	6772.786277	0
.00359356 51.556202	32,961873	355,924112	Ū
418.987704	370.310849	5547.049449	2
2 Jun 2021 00:26:52.841 .00362755 51.556233 419.197554	6772.676864	6772.765988	0
.00362755 51.556233	34.533017	352.694008	_
419.197554	370.060422	5547.024523	2
360 2 Jun 2021 15:49:25.304			
.00366098 51.556229	36.105753	349 463899	U
419.402573	369.812839	5546.998378	2
370			
3 Jun 2021 07:11:57.519	6772.632180	6772.724587	0
.00369377 51.556191	37.680388	346.233766	
419.604485	369.570689	5546.973661	2
380			•
3 Jun 2021 22:34:29.488 .00372588 51.556124	6772.609879	6772.703899	0
419.801185	39.25/913	543.003593 5546 948245	2
390	303.332012	3310.710213	_
4 Jun 2021 13:57:01.206	6772.587038	6772.682652	0
.00375733 51.556039 419.992879	40.838320	339.773368	
419.992879	369.098424	5546.922143	2
400			_
5 Jun 2021 05:19:32.676		6772.662561 336.543082	0
.00378805 51.555948 420.180735		5546.897461	2
410	300.070307	3340.03/401	2
5 Jun 2021 20:42:03.902	6772.542924	6772.641649	0
.00381800 51.555864	44.009537	333.312736	
420.362606	368.646693	5546.871771	2
420			
6 Jun 2021 12:04:34.877			0
.00384721 51.555798 420.539259	45.601183 368.427888	330.082332	2
420.539259	300.42/000	5546.845878	2
7 Jun 2021 03:27:05.609	6772.498803	6772.600528	0
.00387559 51.555760		326.851881	
420.711329	368.215727	5546.821253	2

Time (UTCG) Ser entricity Inclination (deg)		i-major Axis (km) Ecc RAAN (deg) Height
of Apogee (km) Height of Pount		
440 7 Jun 2021 18:49:36.097	6772 476254	6772 570520 0
.00390314 51.555754	48.798310	222 621206
420.876833	368.008228	5546.795456 2
450		
8 Jun 2021 10:12:06.340	6772.454199	6772.558793 0
.00392986 51.555779	50.404628	320.390892
421.036994	367.806591	5546.769980 2
460	6550 430054	6880 530048 0
9 Jun 2021 01:34:36.344 00305567 51 555834	6//2.4328/4 52 016545	6772.538847 0
9 Jun 2021 01:34:36.344 .00395567 51.555834 421.191809	367.611885	5546.745476 2
470	307.011003	3340.743470
9 Jun 2021 16:57:06.108	6772.410649	6772.517961 0
.00398060 51.555907	53.634651	313.929890
421.339673	367.422249	5546.719818 2
480		
10 Jun 2021 08:19:35.632		
.00400463 51.555988	55.259210	310.699416
421.482001 490		
10 Jun 2021 23:42:04.922	6772.367881	6772.477745 0
.00402767 51.556062	56.890606	307.468972
.00402767 51.556062 421.618047	367.063443	5546.670413 2
300		
11 Jun 2021 15:04:33.977 .00404977 51.556115	6772.346084	6772.457157 0
.00404977 51.556115	58.529471	304.238556
421.747068 510	366.893246	5546.645120 2
12 Jun 2021 06:27:02.798	6772 325115	6772 437348 0
.00407089 51.556134	60.176087	301.008163
421.870177	366.730520	5546.620785 2
520		
12 Jun 2021 21:49:31.391		
.00409095 51.556109		
421.986297	366.574993	5546.596580 2
530	6000 00000	6000 200406 0
13 Jun 2021 13:11:59.754 .00411002 51.556035		
422.095150	366.425801	
540	300.123001	3310.371002
14 Jun 2021 04:34:27.891	6772.262734	6772.378138 0
.00412801 51.555915	65.167231	291.316981
422.197561	366.284716	5546.548046 2
550		
14 Jun 2021 19:56:55.805	6772.242391	6772.358740 0 288.086521
.00414488 51.555759	66.849580	200.U0052I

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) He Period (sec) Orbi	ight
422.292348	366.151132	5546.524215	2
560			
15 Jun 2021 11:19:23.497 .00416067 51.555580	6//2.221820 68 541925	0//2.33905/ 284 855996	U
422.379545	366.024569	5546.500035	2
570			
16 Jun 2021 02:41:50.968	6772.202158	6772.320221	0
.00417531 51.555399 422.459741	70.244643	281.625393	
580 16 Jun 2021 18:04:18.225 .00418876 51.555239 422.531753	6772 182402	6772 301226	0
.00418876 51.555239	71.958321	278.394709	·
422.531753	365.796700	5546.453560	2
330			
17 Jun 2021 09:26:45.266	6772.162567	6772.282090	0
.00420105 51.555117			
422.595790	365.694390	5546.430051	2
600 18 Jun 2021 00:49:12.096	6772 142602	6772 262945	0
.00421211 51.555049	75.419444	271 933124	U
422.652387	365.601304	5546.407638	2
610			
18 Jun 2021 16:11:38.720	6772.124650	6772.245363	0
.00422193 51.555037	77.167854	268.702263	
610 18 Jun 2021 16:11:38.720 .00422193 51.555037 422.700332	365.516395	5546.384933	2
620 19 Jun 2021 07:34:05.137			
.00423053 51.555073	78 928437	0//2.220000 265 471391	U
422.739979	365.439741	5546.362202	2
630			
19 Jun 2021 22:56:31.352	6772.087586	6772.209210	0
.00423785 51.555136		262.240537	
422.771808	365.372612	5546.340520	2
640 20 Jun 2021 14:18:57.371	6772 060360	6772 101221	0
.00424389 51.555199			U
422.794775	365.313887	5546.318556	2
650			
21 Jun 2021 05:41:23.192			0
.00424867 51.555230		255.778951	
422.809289	365.263834	5546.296727	2
660 21 Jun 2021 21:03:48.822	6772 024249	6772 15662	0
.00425214 51.555201		6772.156693 252.548226	U
422.815872		5546.276004	2
670			_
22 Jun 2021 12:26:14.264	6772.016886	6772.139457	0

of Anogoo (k	Inclination (deg) m) Height of P	origo (lm)	Gidorool 1	Doried (ded)	عدل=ا
unt	m) Height of P				
.00425432	51.555094		87.929986	249.317530	
422.8133	04	365.191610		5546.254830	:
680					
23 Jun 2021 0	3:48:39.518 51.554907	6771.999	873	6772.122494	1 (
.00425520	51.554907		89.773396	246.086835	
422.8022	48	365.168741		5546.233992	:
h 4 ()					
23 Jun 2021 1	9:11:04.591 51.554653	6771.983	785	6772.106381	L (
.00425476	51.554653		91.632542	242.856114	
422.7830	50	365.155711		5546.214197	2
700			_		_
24 Jun 2021 1	0:33:29.485	6771.967	267	6772.089760	) (
.00425299	51.554355		93.508370	239.625338	
	81	365.151138		5546.193778	2
710		4554 054	00=	6880 ABA6A	
25 Jun 2021 0	1:55:54.199 51.554049 90	6771.951	287	6772.073601	L (
.00424989	51.554049	265 156010	95.400780	236.394489	
422.7171	90	365.156012		5546.173928	2
/20					
25 Jun 2021 1	7:18:18.741	6771.936	053	6772.058111	L C
.00424543	51.553768	265 150002	97.310956	233.163559	2
422.6/14 730	18	365.1/0803		5546.154898	4
	8:40:43.110	6771 020	202	6772 04201	<b>1</b> (
				229.932550	
	51.553540				2
740	46	303.194103		3340.133123	2
	0.03.07 308	6771 905	249	6772 026560	) (
.00423243	0:03:07.308 51.553385	0771.303	101.186453	226.701477	,
422.5517	06	365 227413	101.100155	5546 116139	2
750	•	365.227413		3340.110133	-
	5:25:31.341	6771.890	677	6772.01149	5 0
	51.553307			223.470358	,
422.4784		365.270556		5546.097633	2
760				33 23 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	_
	6:47:55.208	6771.875	543	6771.995792	2 (
	51.553302			220.239215	-
422.3951		365.322408		5546.078343	2
770					
28 Jun 2021 2	2:10:18.909	6771.861	190	6771.980792	2 (
	51.553353			217.008068	
422.3032				5546.059916	2
780					
29 Jun 2021 1	3:32:42.450	6771.847	072	6771.965948	3 (
	51.553438				
422.2018	80	365.456016		5546.041680	2
790					

Page 25			
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			
30 Jun 2021 04:55:05.827 .00417562 51.553533	6771.832419	6771.950494	0
.00417562 51.553533	111.225752	210.545819	
422.090571	365.536416	5546.022695	2
30 Jun 2021 20:17:29.041 .00416009 51.553614	6771 818628	6771 935825	0
00416000 51 553614	112 200401	207 214726	Ū
.00416009 51.555614	113.290401	207.314720	•
421.970705	365.626945	5546.004676	2
810			
1 Jul 2021 11:39:52.097	6771.804757	6771.921002	0
.00414316 51.553662	115.395242	204.083652	
421.841138	365.726867	5545.986466	2
820			
2 .Tul 2021 02.02.14 099	6771 790447	6771 905669	0
2 Jul 2021 03:02:14.988 .00412488 51.553666 421.701969	0//1./9044/	0771.903009	U
.00412488 51.553666	117.515526	200.852588	
421.701969	365.835369	5545.967630	2
830			
2 Jul 2021 18:24:37.718	6771.777003	6771.891129	0
.00410524 51.553620	119.660825	197.621520	
421.554383	365.953875	5545 949769	2
840	303.333073	3313.313,03	_
~	6991 963194	6771 076136	0
3 Jul 2021 09:47:00.286	6//1./631/4	6//1.8/6136	U
.00408424 51.553527	121.832361	194.390438	
421.397106	366.081165	5545.931350	2
850 4 Jul 2021 01:09:22.688 .00406196 51.553397 421.230835			
4 Jul 2021 01:09:22.688	6771.749107	6771.860839	0
.00406196 51.553397	124.029746	191.159330	
421.230835	366.216843	5545.912559	2
860	5001210015	3313131233	_
4 T-1 2021 16-21-44 02E	6771 735909	6771 046044	•
4 Jul 2021 16:31:44.925 .00403834 51.553244	6//1./35808	6//1.846244	U
.00403834 51.553244	126.255036	187.928186	
421.056232	366.362256	5545.894630	2
870			
5 Jul 2021 07:54:06.997	6771.721868	6771.830945	0
.00401342 51.553084		184.697003	
420.872142		5545.875837	2
	300.313749	3343.073037	4
880			
5 Jul 2021 23:16:28.898			0
.00398728 51.552937	130.791102	181.465778	
420.679699	366.677462	5545.856962	2
890			
6 Jul 2021 14:38:50.631	6771,694599	6771.800784	0
.00395985 51.552821			•
			2
420.479101	366.848466	5545.050/84	2
900			
7 Jul 2021 06:01:12.193			0
.00393121 51.552749	135.448397	175.003230	
420.269500	367.026823	5545.819594	2

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg)	Period (sec) Orbit Co
910		
7 Jul 2021 21:23:33.579	6771.666681	6771.769755 0
.00390142 51.552732	137.824180	171.771924 5545.800667 2
420.052251 920	367.213258	5545.80066/ 2
8 Jul 2021 12:45:54.793	6771.653246	6771.754687 0
.00387041 51.552773	140.233854	168.540612
419.827140	367.408233	5545.782157 2
930		
9 Jul 2021 04:08:15.830 .00383830 51.552871 419.593824	6771.639069	6771.738835 0
.00383830 51.552871	142.676892	165.309309 5545.762684 2
940	367.609845	5545.762684 2
9 Jul 2021 19:30:36.688	6771.625318	6771.723365 0
.00380511 51.553014	145.154933	162.078022
419.353537	367.819193	5545.743680 2
950		
10 Jul 2021 10:52:57.369		
.00377084 51.553187	147.669852	158.846760
419.106096 960		
11 Jul 2021 02:15:17.869	6771.597587	6771.692084 0
.00373561 51.553369	150.220865	155.615523
.00373561 51.553369 418.851474	368.258695	5545.705254 2
11 Jul 2021 17:37:38.185 .00369940 51.553538	6771.583886	6771.676560 0
.00369940 51.553538	152.810186	152.384306
418.590731 980	368.488389	5545.686184 2
12 Jul 2021 08:59:58.319	6771.570297	6771.661122 0
.00366231 51.553672	155.439272	149.153098
418.324048	368.724196	
990		
13 Jul 2021 00:22:18.267		
.00362442 51.553753	158.107147	
418.051337 000	368.964823	5545.647513 3
13 Jul 2021 15:44:38.026	6771.542520	6771.629586 0
.00358574 51.553771		
	369.211316	
010		
14 Jul 2021 07:06:57.599	6771.528985	6771.614152 0
.00354641 51.553725		
417.492066 020	369.462237	5545.609520 3
14 Jul 2021 22:29:16.981	6771.514836	6771.598095 0
.00350648 51.553626	166.360936	136.227989

ge 27			_
tricity Inclination (deg)	emi-parameter (km) Ser Arg of Perigee (deg	ni-major Axis (km) ) RAAN (deg)	Ecc Height
f Apogee (km) Height of I t		Period (sec) O	rbit Co
_			
417.205572	369 716619	5545 589795	3
0	303.710013	3343.303733	3
Jul 2021 13:51:36.170	6771.501176	6771.582525	0
0346602 51.553494	169.198163	3 132.996557	
416.915966	369.975085	5545.570669	3
0			
Jul 2021 05:13:55.165	6771.487442	6771.566885	0
0342519 51.553357	172.07960	129.765050	
0342519 51.553357 416.623818	370.235953	5545.551457	3
Jul 2021 20:36:13.963	6771.473175	6771.550720	0
0338402 51.553246	175.004049	9 126.533479	
416.328775	370.498665	5545.531599	3
0			
Jul 2021 11:58:32.565	6771.459992	6771.535652	0
0334264 51.553188	177.97514	3 123.301865	
416.033467	370.763836	5545.513089	3
0			_
Jul 2021 03:20:50.975 0330120 51.553202	6771.446508	6771.520303	0
0330120 51.553202 415.737421	2 180.99124	2 120.070236	
415./3/421	3/1.029185	5545.494234	3
Jul 2021 18:43:09.188		6771 504662	0
0325971 51.553293	184.05157	2 116.838622	J
415.440793	371.294531	5545.475021	3
0	0.100		
Jul 2021 10:05:27.209	6771.420122	6771.490261	0
0321837 51.553451	187.15957	113.607047	
415.146450	371.560071		3
0			
Jul 2021 01:27:45.041	6771.406911	6771.475270	0
0317729 51.553654			
	371.823323	5545.438915	3
0	CBE4 202542	CBB4 450000	•
Jul 2021 16:50:02.678			0
0313652 51.553871 414.562177	372.084475		3
414.5621//	J/2.0011/J	JJTJ.T4UJJO	3
Jul 2021 08:12:20.127	6771.381635	6771.446553	0
0309630 51.554071	196.75037		J
414.275959	372.343148	5545.403639	3
0			
Jul 2021 23:34:37.388			0
0305667 51.554227	200.033689	100.681234	
	372.596844		3
0			
Jul 2021 14:56:54.457	6771.355977	6771.417644	0

Page 28	Comi parameter (lm)	Semi-major Axis (km) Ecc
entricity Inclination ( of Apogee (km) Height	leg) Arg of Perigee (	(deg) RAAN (deg) Height real Period (sec) Orbit Co
unt		
00301777 51 55	1323 203 31	58612 97 <i>44</i> 9823
413 715254	372 846034	5545 368127 3
150	372.040034	58612 97.449823 5545.368127 3
200		6771.404322 0
.00297983 51.55	1356 206.72	24665 94.218376
413.444932	373.089711	5545.351761 3
160		
23 Jul 2021 21:41:28.036	6771.331291	6771.389934 0 25815 90.986872 5545.334088 3
.00294287 51.55	1334 210.12	25815 90.986872
413.180265	373.325604	5545.334088 3
170		
24 Jul 2021 13:03:44.540	6771.319040	6771.376265 0
.00290708 51.55	1276 213.56	52695 87.755297
.00290708 51.55 412.924187	373.554344	5545.317297 3
180		
25 Jul 2021 04:26:00.859	6771.307300	6771.363178 0
.00287265 51.55	217.03	81984 84.523649
.00287265 51.55 412.677964	373.774392	5545.301220 3
190		
25 Jul 2021 19:48:16.989	6771.294357	6771.348957 0 27879 81.291937
.00283962 51.55	138 220.52	27879 81.291937
412.440009	373.983906	5545.283752 3
200		
26 Jul 2021 11:10:32.928	6771.282343	6771.335741 0
.00280819 51.55	1100 224.04	19956 78.060177
412.213921	374.183562	5545.267517 3
210		
27 Jul 2021 02:32:48.683	6771.270377	6771.322652 0
.00277851 51.55	100 227.59	92235 74.828389
411.999843	374.371461	5545.251438 3
220		
27 Jul 2021 17:55:04.246	6771.257192	6771.308422 0
.00275059 51.55	1144 231.14	19718 71.596596
411.796530	374.546313	5545.233958 3
230		
		6771.295418 0
.00272468 51.55		
411.608003	374.708832	5545.217984 3
240		
29 Jul 2021 00:39:34.802	6771.232640	6771.282033 0
.00270084 51.55	1346 238.29	65.133063
411.433158	374.856909	5545.201543 3
250	-	
		6771.267594 0
.00267906 51.55		
	374.989939	5545.183805 3
260		

Time (UTCG)	Semi-parameter (	(km) Sem	i-major Axis (km)	Ecc
entricity Inclination (				
of Apogee (km) Height	of Perigee (km)	Sidereal :	Period (sec) On	bit Co
unt				
30 Jul 2021 07:24:04.585	6771.206	5577	6771.254474	0
.00265960 51.55	4628	245.447452	58.669669	
411.126336	375.108612		5545.167688	3
270				
30 Jul 2021 22:46:19.188	6771.193	3253	6771.240534	0
.00264245 51.55	4764	249.010471	55.438026	
410.996216	375.210852		5545.150565	3
31 Jul 2021 14:08:33.588	6771.179	9010	6771.225760	0
.00262759 51.55	4880	252.559385	52.206407	
31 Jul 2021 14:08:33.588 .00262759 51.55 410.880734	375.296787		5545.132417	3
250				
1 Aug 2021 05:30:47.789	6771.165	5928	6771.212239	0
.00261524 51.55	4967	256.088260	48.974798	
410.783560	375.366919		5545.115808	3
300				
1 Aug 2021 20:53:01.790	6771.151	L551	6771.197511	0
.00260530 51.55	55020	259.590031	45.743186	
410.701507	375.419514		5545.097716	3
310				
2 Aug 2021 12:15:15.582 .00259777 51.55	6771.136	633	6771.182328	0
.00259777 51.55	5041	263.062295	42.511552	
410.635275	375.455380		5545.079065	3
320	6881 106	2722	6881 160043	•
3 Aug 2021 03:37:29.168	6//1.122	2/22	6//1.168243	0
.00259283 51.55	275 474759	266.498525	39.2/9884	,
410.587728 330	3/5.4/4/58		5545.061/64	3
3 7 2021 19.50.42 546	6771 103	7041	6771 150670	0
3 Aug 2021 16:39:42.546	6//1.10/	7241 1241	0//1.1320/3	U
3 Aug 2021 18:59:42.546 .00259028 51.55 410.554853	375 476492	209.094220	50.0401/3	3
340	3/3.4/0492		3343.042037	3
4 Aug 2021 10:21:55.707	6771 091	1647	6771 127074	0
.00259016 51.55	4965	273 246734	32.816410	U
410.538371	375.461777	2/3.240/34	5545.023476	3
350	3/3.401///		3343.023470	3
5 Aug 2021 01:44:08.656	6771 076	5826	6771 122337	0
.00259256 51.55			29.584597	·
410.539897	375.430778		5545.005374	3
360	0.00100		33 23 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
5 Aug 2021 17:06:21.390	6771.060	319	6771.105994	0
	4904		26.352737	
410.555130	375.382859		5544.985299	3
370				
6 Aug 2021 08:28:33.901	6771.044	1191	6771.090113	0
	4902		23.120841	
410.586785	375.319442		5544.965791	3

entricity Inclination (deg) of Apogee (km) Height of Pe	Arg of Perigee (deg)	Period (sec) Orbit Co
380		
6 Aug 2021 23:50:46.196	6771.028472	6771.074725 0
.00261361 51.554927	286.149677	19.888921
410.634677	375.240773	5544.946888 3
390		
7 Aug 2021 15:12:58.270	6771.011122	6771.057781 0
.00262505 51.554980	289.237651	16.656994
410.695134	375.146427	5544.926074 3
400		
8 Aug 2021 06:35:10.118	6770.994624	6771.041768 0
.00263869 51.555056	292.267410	13.425074
8 Aug 2021 06:35:10.118 .00263869 51.555056 410.771434	375.038103	5544.906405 3
410		
8 Aug 2021 21:57:21.746 .00265436 51.555147	6770.977962	6771.025669 0
.00265436 51.555147	295.237708	10.193174
410.861389 420	3/4.915948	5544.886628 3
9 Aug 2021 13:19:33.148	6770 960022	6771.008361 0
.00267192 51.555237	298 149624	6 961301
410.962934	374.779788	5544.865369 3
430	3,11,73,66	3311.003303
430 10 Aug 2021 04:41:44.323 .00269144 51.555313	6770.943178	6770.992227 0
.00269144 51.555313	301.002396	3.729453
411.078958	374.631495	5544.845549 3
440		
10 Aug 2021 20:03:55.275 .00271270 51.555359	6770.925710	6770.975535 0
.00271270 51.555359	303.795996	0.497624
411.206128	374.470943	5544.825046 3
450		
11 Aug 2021 11:26:05.998 .00273563 51.555363	6770.907418	6770.958090 0
	306.533053	
411.343932	374.298247	5544.803617 3
460 12 Aug 2021 02:48:16.493	6770 000105	6770.941773 0
		354.033949
.00276025 51.555322 411.494234	374.115311	5544.783573 3
470	371.113311	3341.703373
12 Aug 2021 18:10:26.763	6770.872093	6770.924659 0
.00278633 51.555238		350.802058
411.653658	373.921661	
480		
13 Aug 2021 09:32:36.801	6770.853588	6770.907199 0
.00281386 51.555123	314.409566	347.570102
411.822600	373.717799	5544.741105 3
490		
14 Aug 2021 00:54:46.612	6770.835983	6770.890702 0
.00284279 51.554995	316.928999	344.338067

Time (UTCG) Ser			
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal :	Period (sec) Orbit	Co
unt			
412.001920	373.505484	5544.720841	3
500			
14 Aug 2021 16:16:56.196 .00287294 51.554876	6770.817416	6770.873302	0
.00287294 51.554876	319.398509	341.105951	_
412.188637	373.283966	5544.699467	3
510			_
15 Aug 2021 07:39:05.548	6770.798745	6770.855857	0
.00290431 51.554786	321.821201	337.873763	_
412.383532	373.054183	5544.678039	3
520			_
15 Aug 2021 23:01:14.674 .00293680 51.554737 412.586969	6770.780961	6770.839358	0
.00293680 51.554737	324.196859	334.641523	
412.586969	372.817748	5544.657772	3
550			
16 Aug 2021 14:23:23.574	6770.762014	6770.821750	0
.00297028 51.554734	326.529318	331.409260	
412.795968	372.573531	5544.636142	3
540			
17 Aug 2021 05:45:32.242	6770.743202	6770.804331	0
.00300472 51.554768	328.820629	328.177001	
413.011694	372.322967	5544.614746	3
550			
550 17 Aug 2021 21:07:40.686 .00304003 51.554824 413.234114	6770.725147	6770.787721	0
.00304003 51.554824	331.071010	324.944769	
413.234114	372.067327	5544.594343	3
560			
18 Aug 2021 12:29:48.903	6770.705867	6770.769934	0
.00307609 51.554878	333.284406	321.712578	
413.460449	371.805419	5544.572495	3
570			
19 Aug 2021 03:51:56.890	6770.686945	6770.752554	0
.00311289 51.554908		318.480428	
413.692170		5544.551146	3
580			
19 Aug 2021 19:14:04.653	6770.668541	6770.735738	0
.00315032 51.554898			
413.928753	371.268723	5544.530490	3
590			
20 Aug 2021 10:36:12.188	6770.648921	6770.717747	0
.00318831 51.554836			
	370.993596		3
600			
21 Aug 2021 01:58:19.493	6770.629861	6770.700361	0
.00322684 51.554724		308.784060	-
414.411299		5544.487035	3
610		-	-
21 Aug 2021 17:20:26.572	6770.610955	6770.683167	0
			•

Page 32			
entricity Inclination (deg)		RAAN (deg)	Height
of Apogee (km) Height of Punt			
.00326579 51.554570 414.657782	343.845773 370.434551	305.551884 5544.465914	3
620 22 Aug 2021 08:42:33.420			
.00330513 51.554391	345.869546	302.319645	·
414.905822	370.149914	5544.443437	3
23 Aug 2021 00.04.40 036	6770 571545	6770 647295	0
00334484 51 554206	347 867184	299 087327	U
630 23 Aug 2021 00:04:40.036 .00334484 51.554206 415.157051 640	369.863539	5544.421852	3
23 Aug 2021 15:26:46.423	6770.551949	6770.629520	0
.00338480 51.554036	349.840347	295.854929	
415.409777 650			
24 Aug 2021 06:48:52.574	6770.531324	6770.610748	0
.00342503 51.553897 415.663260	351.791551 369.284237	292.622454 5544.376960	3
660			
24 Aug 2021 22:10:58.490 .00346544 51.553801	6770.511560 353.721050	6770.592870 289.389913	0
415.918970 670	368.992770	5544.355000	3
25 Aug 2021 13:33:04.172 .00350596 51.553752	6770.491056	6770.574279	0
			3
416.174638 680			
26 Aug 2021 04:55:09.611 .00354660 51.553750	6770.469637	6770.554800	0
.00354660 51.553750 416.430267			3
690			
26 Aug 2021 20:17:14.808 .00358727 51.553788	6770.449013 359.397336	6770.536140 279.692081	0
416.686897 700	368.111382	5544.285316	3
27 Aug 2021 11:39:19.762 .00362791 51.553851			0
416.942290		5544.261115	3
710	5550 404045	6550 405060	
28 Aug 2021 03:01:24.462	6770.404845	6770.495963	0
417.196787	3.1010/6	273.226855 5544.235966	3
720 28 Aug 2021 18:23:28.909			0
.00370903 51.553998		269.994274	
417.451065 730	367.227295	5544.211667	3

entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
29 Aug 2021 09:45:33.099 .00374937 51.554049 417.702983	6770.359852	6770.455030	0
.00374937 51.554049	6.750418	266.761717	-
417.702983	366.933077	5544.185688	3
740 30 Aug 2021 01:07:37.021			
.00378955 51.554068	8.558096	263.529177	Ū
417.953155			3
750	6880 210840	CEEO 410000	•
30 Aug 2021 16:29:40.675	6770.312742 10.354447	6770.412028	0
.00382945 51.554046 418.201960	366.348097	5544.132868	3
760			
31 Aug 2021 07:51:44.053 .00386909 51.553981 418.447336	6770.287767	6770.389119	0
.00386909 51.553981	12.142123	257.064104	3
770	366.036901	5544.104/26	3
31 Aug 2021 23:13:47.147	6770.262639	6770.366061	0
.00390842 51.553877	13.920944	253.831540	
418.690519 780			
1 Sep 2021 14:35:49.955 .00394735 51.553741	6770.237542	6770.343035	0
.00394735 51.553741	15.691241	250.598936	
418.930967 790	365.481103	5544.048123	3
2 Sep 2021 05:57:52.466	6770.210606	6770.318170	0
2 Sep 2021 05:57:52.466 .00398592 51.553588	17.455455	247.366278	•
419.167094	365.195245	5544.017580	3
800	CEEO 1020E0	6880 000501	•
2 Sep 2021 21:19:54.673 .00402405 51.553437	6770.183870	6770.293501 244 133553	0
419.400531	364.912471	5543.987280	3
810			
3 Sep 2021 12:41:56.574	6770.156783	6770.268474	0
.00406168 51.553306 419.630161	20.964070 364.632786	240.900755 5543.956538	3
419.630161 820	304.032/80	5543.956536	3
4 Sep 2021 04:03:58.157	6770.127907	6770.241652	0
.00409886 51.553214	22.711419	237.667886	
419.854908	364.354395	5543.923593	3
830 4 Sep 2021 19:25:59.415	6770 099567	6770.215353	0
.00413550 51.553178		234.434951	·
420.076574 840	364.080133	5543.891291	3
5 Sep 2021 10:48:00.347	6770.070414	6770.188227	0
.00417155 51.553206		231.201962	-
420.293401	363.809054	5543.857972	3

Time (ITTCC)	mi-parameter (km) Sem	i-maior Aria (lm)	Faa
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Or	bit Co
unt			
050			
850			_
850 6 Sep 2021 02:10:00.940 .00420707 51.553299 420.505146	6770.039771	6770.159599	0
.00420707 51.553299	27.928819	227.968938	
420.505146	363.540052	5543.822808	3
000			
6 Sep 2021 17:32:01.190	6770.009885	6770.131709	0
.00424197 51.553449	20 661977	224 735896	·
.00424197 51.555449	29.0010//	224.733696	_
420.713382	363.276035	5543.788551	3
870			
7 Sep 2021 08:54:01.096	6769.978807	6770.102605	0
.00427620 51.553635	31.393942	221.502856	
7 Sep 2021 08:54:01.096 .00427620 51.553635 420.915948	363.015262	5543.752803	3
880	3031013101	33131,32003	•
000	6860 046818	6880 080460	•
8 Sep 2021 00:16:00.645 .00430984 51.553832	6769.946717	6770.072469	0
.00430984 51.553832	33.124985	218.269830	
421.113417	362.757522	5543.715787	3
890			
8 Sep 2021 15:37:59.835	6769.915424	6770.043104	0
.00434275 51.554010	34 854542	215 036825	
421.306716	363 505493	EE/2 670710	3
900 9 Sep 2021 06:59:58.663 .00437494 51.554139			_
9 Sep 2021 06:59:58.663	6769.882750	6770.012329	0
.00437494 51.554139 421.493707	36.584972	211.803841	
421.493707	362.256950	5543.641918	3
910			
9 Sep 2021 22:21:57.121 .00440644 51.554196	6769 849815	6769 981265	0
00440644	20 21 5272	209 570966	J
.00440044 51.554190	30.313372	208.370800	
421.675786	362.012745	5543.603764	3
920			
10 Sep 2021 13:43:55.208	6769.817331	6769.950616	0
.00443709 51.554172	40.046238	205.337883	
421.852466	361.774766	5543.566118	3
930			_
11 Sep 2021 05:05:52.921	6760 792405	6760 019570	0
			U
.00446694 51.554072			
422.022378	361.540780	5543.526768	3
940			
11 Sep 2021 20:27:50.251	6769.749820	6769.886665	0
.00449598 51.553915			
422.186974		5543.487569	3
	301.312337	3313.107303	,
950			
12 Sep 2021 11:49:47.201			0
.00452407 51.553734		195.638688	
422.345323	361.090700	5543.448690	3
960			
13 Sep 2021 03:11:43.767	6769.681904	6769.822136	0
.00455130 51.553565	46 988876	192.405500	•
	40.300070	172.TUJJUU	

Page 35		
		i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
400 406645	260 002606	FF42 400211
422.496647	360.8/3626	5543.408311
970		
13 Sep 2021 18:33:39.944	6769.647823	6769.789681 0
13 Sep 2021 18:33:39.944 .00457762 51.553443	48.730333	189.172250
422.642198	360.663163	5543.368447 3
14 Sep 2021 09:55:35.737	6769.613932	6769.757362 0
.00460292 51.553393	50.475467	185.938953
14 Sep 2021 09:55:35.737 .00460292 51.553393 422.780983	360.459741	5543.328751 3
990	300.133711	3313.320731
15 Sep 2021 01:17:31.141	6760 570058	6769.724012 0
15 Sep 2021 01:17:31.141	6/69.5/9056	0/09./24012
.00462731 51.553424	52.224/86	182.705630
422.912604	360.261419	5543.287788 4
000		
15 Sep 2021 16:39:26.156	6769.544876	6769.691297 0
15 Sep 2021 16:39:26.156 .00465070 51.553531	53.977538	179.472300
423.038081	360.070514	5543.247607 4
010		
16 Sep 2021 08:01:20.785 .00467304 51.553691	6769.510797	6769.658628 0
.00467304 51.553691	55.735472	176.238978
423.156503	350 886753	5543.207481 4
020	339:000733	3343.207401
	6860 486000	6760 605076
16 Sep 2021 23:23:15.026	6/69.4/6090	6769.625276 0
.00469442 51.553877	57.498590	173.005674
423.267764	359.708788	5543.166517 4
0.3.0		
17 Sep 2021 14:45:08.880	6769.442044	6769.592523 0
.00471472 51.554055	59.266686	169.772386
423.372223	359.538823	5543.126287 4
040		
18 Sep 2021 06:07:02.350	6769.407994	6769.559699 0
.00473392 51.554197	61.041389	166.539105
423.469243		5543.085972 4
050	337.370133	3343.003372
18 Sep 2021 21:28:55.433	6760 272277	6769.526247 0
.00475207 51.554280		
	359.219995	5543.044885 4
060		
19 Sep 2021 12:50:48.130 .00476905 51.554294	6769.339615	6769.493579 0
.00476905 51.554294	64.609811	160.072503
423.640604	359.072554	5543.004761 4
070		
20 Sep 2021 04:12:40.445	6769.305653	6769.460639 0
.00478487 51.554238		
423.714631	358.932647	
080		
20 Sep 2021 19:34:32.373	6769.271177	6769.427114 0
		J. J. J. L. L. L. U

Page 36		
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		
.00479953 51.554122	68.207827	153.605729
423.780191		
000		
21 Sep 2021 10:56:23.916 .00481295 51.553962	6760 227725	6769.394534 0
21 Sep 2021 10:50:25.916	0/09.23//25	0/09.394534 0
.00481295 51.553962	70.018276	150.372242
423.030310	358.676752	5542.883112 4
100		
22 Sep 2021 02:18:15.077 .00482515 51.553779	6769.203770	6769.361374 0
.00482515 51.553779	71.837790	147.138683
423.887526	358.561222	5542.842383 4
110		
22 Sep 2021 17:40:05.851	6769 169405	6769.327724 0
.00483608 51.553595	73 665729	143 905052
402 000045	75.005720	143.903032
423.927745		
120 23 Sep 2021 09:01:56.241 .00484573 51.553430 423.960298		
23 Sep 2021 09:01:56.241	6769.136153	6769.295104 0
.00484573 51.553430	75.502739	140.671356
423.960298	358.355909	5542.760989 4
130		
24 Sep 2021 00:23:46.247	6769.102032	6769.261530 0
.00485408 51.553301	77.349849	137.437608
423.983038	358 266021	5542.719753 4
140	330.200021	3342.713733
	6860 068605	6860 008684 0
24 Sep 2021 15:45:35.864	6769.067695	6769.227654 0
.00486111 51.553218	79.206455	134.203821
423.996587	358.184722	5542.678147 4
25 Sep 2021 07:07:25.095 .00486681 51.553186	6769.034406	6769.194740 0
.00486681 51.553186	81.073465	130.970010
424.002136	358.113344	5542.637721 4
160		
25 Sep 2021 22:29:13.941	6769.000090	6769.160710 0
.00487115 51.553203		127.736188
	358.050099	5542.595925 4
170		
26 Sep 2021 13:51:02.393		
.00487414 51.553261	84.840408	124.502365
423.983158	357.995790	5542.553877 4
180		
27 Sep 2021 05:12:50.455 .00487576 51.553349	6768.932011	6769.092933 0
.00487576 51.553349	86.741025	121.268546
0_0000	***************************************	5542.512682 4
190	JJ, • JJ1110	JJ 12 • J 12 0 0 2 T
27 Sep 2021 20:34:38.123	6760 00707F	6769.058010 0
.00487597 51.553451		
423.926717	357.915302	5542.469789 4
200		

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) Or	bit Co
unt			
28 Sep 2021 11:56:25.391 .00487481 51.553551 423.883943	6768.862388	6769.023246	0
.00487481 51.553551	90.578934	114.800923	
423.883943	357.888548	5542.427093	4
210			
29 Sep 2021 03:18:12.260	6768.828070	6768.988756	0
.00487223 51.553634			
423.831812	357.871700	5542.384733	4
220			
29 Sep 2021 18:39:58.723	6768.792339	6768.952759	0
.00486820 51.553686	94.469276	108.333261	
423.768349	357.863168	5542.340521	4
220			
30 Sep 2021 10:01:44.775 .00486279 51.553701 423.696127	6768.757236	6768.917299	0
.00486279 51.553701	96.435122	105.099379	
423.696127	357.864470	5542.296970	4
240			
1 Oct 2021 01:23:30.417	6768.722018	6768.881627	0
.00485591 51.553675	98.415935	101.865440	
423.613680	357.875574	5542.253159	4
250			
1 Oct 2021 16:45:15.639 .00484755 51.553613	6768.685455	6768.844514	0
.00484755 51.553613	100.412200	98.631428	
423.519847	357.895182	5542.207578	4
2 Oct 2021 08:07:00.437	6768.649818	6768.808238	0
2 Oct 2021 08:07:00.437 .00483781 51.553525	102.424131	95.397331	
423.417437	357.925039	5542.163025	4
270			
2 Oct 2021 23:28:44.813 .00482654 51.553428	6768.613762	6768.771444	0
.00482654 51.553428	104.452947	92.163143	
423.304221	357.964666	5542.117835	4
280			
3 Oct 2021 14:50:28.755	6768.576492	6768.733342	0
.00481381 51.553340	106.499015	88.928867	
423.179710		5542.071040	4
290			
4 Oct 2021 06:12:12.262	6768.540280	6768.696209	0
.00479965 51.553283	108.562668	85.694514	
423.046610	358.071807	5542.025434	4
300			
4 Oct 2021 21:33:55.332	6768.503252	6768.658161	0
.00478396 51.553273		82.460102	
422.902159		5541.978706	4
310			
5 Oct 2021 12:55:37.956	6768.465502	6768.619302	0
.00476682 51.553322	112.746684	79.225657	
422.747078	358.217526	5541.930981	4

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg)	Period (sec) Orbit Co
320		
6 Oct 2021 04:17:20.134 .00474825 51.553432 422.583294	6768.428761	6768.581365 0
.00474825 51.553432	114.867748	75.991205
330	350.305436	5541.004300 4
6 Oct 2021 19:39:01.865	6768.390953	6768.542267 0
.00472816 51.553597	117.009635	72.756771
422.408051	358.402484	5541.836371 4
340		
7 Oct 2021 11:00:43.138	6768.352964	6768.502906 0
7 Oct 2021 11:00:43.138 .00470669 51.553799 422.223133	358 508679	5541.788029 4
350		
8 Oct 2021 02:22:23.957 .00468381 51.554015	6768.315833	6768.464320 0
.00468381 51.554015	121.356621	66.288014
422.029531	358.625110	5541.740641 4
360	6760 277570	C7C9 424519 0
8 Oct 2021 17:44:04.319 .00465949 51.554217		
421.824920	358.750116	5541.691758 4
9 Oct 2021 09:05:44.216 .00463387 51.554382	6768.239580	6768.384916 0
.00463387 51.554382	125.793973	59.819384
.00463387 51.554382 421.611732	358.884101	5541.643122 4
		6768 345938 0
10 Oct 2021 00:27:23.653 .00460692 51.554496	128.048319	56.585063
421.390154	359.027722	5541.595252 4
390		
10 Oct 2021 15:49:02.625 .00457864 51.554552	6768.163973	6768.305863 0
	130.328013	53.350701
421.158473 400	359.179253	5541.546034 4
11 Oct 2021 07:10:41.129	6768.126259	6768.266327 0
.00454916 51.554558	132.633060	50.116267
420.919257	359.339397	5541.497479 4
410		
11 Oct 2021 22:32:19.170		
.00451844 51.554531 420.672242		
420.672242	359.508562	5541.4490/5
12 Oct 2021 13:53:56.745	6768.051265	6768.187501 0
.00448652 51.554492	137.325621	
420.416106	359.684895	5541.400671 4
430		
13 Oct 2021 05:15:33.851	6768.014142	6768.148379 0 40.412428
.00445350 51.554462	139./13885	40.412428

Page 39					
Time (UTCG) entricity Inclina				i-major Axis (km)	
of Apogee (km)					
unt					
420.153321		250 960426		EE/1 2E262E	4
440		339.009430		5541.552625	7
13 Oct 2021 20:37:10	0.496	6767.97	77538	6768.109722	0
.00441933					
419.883258		360.062186		5541.305151	4
450					
14 Oct 2021 11:58:46	6.676	6767.94	10317	6768.070402	0
.UU4384IU	31.334489		144.561190	33.942833	
.00438410 419.605314		360.261490		5541.256862	4
460					
15 Oct 2021 03:20:2	2.393	6767.90	04082	6768.032025	0
.00434787	51.554555		147.060472	30.707987	
419.321576		360.468473		5541.209730	4
470		4-4- 6			
15 Oct 2021 18:41:5	7.652	6767.86	58211	6767.993971	0
.00431063	51.554647	262 62264	149.572661	27.473135	
		360.682641		5541.162996	4
180	0 454	6868 0	2000	CDCD 055551	•
l6 Oct 2021 10:03:32 .00427249	2.434 51 55/753	0/0/.0.	150 117000	0/0/.9000	0
418.734548	31.334/33	260 002554	152.11/229	24.230209 EE/1 11E01/	4
190		300.902334		2241.112014	-
17 Oct 2021 01:25:06	6.799	6767.79	96856	6767, 918153	0
.00423348	51.554856	0707.7	154.694368	21.003453	ŭ
418.433030	0_0001000	361,129277		5541.069886	4
500					
L7 Oct 2021 16:46:40	0.695	6767.76	51944	6767.880969	0
.00419366	51.554943			17.768623	
				5541.024220	4
510					
L8 Oct 2021 08:08:14		6767.72	26878	6767.843612	0
	51.555002			14.533788	
417.814282		361.598943		5540.978343	4
520					
18 Oct 2021 23:29:4					0
.00411192					
417.499086		361.841672		5540.933846	4
530		<b>484</b>		<b>4848</b> 44	_
19 Oct 2021 14:51:19	9.696	6767.65	165 25006	6/67.771214	0
.00407015	51.555015	363 000306	165.352863	8.064040	4
417.180041		362.088386		5540.889432	4
540 20 Oct 2021 06:12:51	1 010	6767 6	25000	6767 734000	^
.00402789	E1 EE/070	0/0/.04	160 106400	4.829094	0
416.857584	31.3343/Z	362.338191	100.100499	4.829094	4
550		JUZ.JJ0191		JJ10.011041	*
20 Oct 2021 21:34:23	3.486	6767 50	92249	6767 699734	0
10 OCC 2021 21:34:2.		0707.53	,,	0/0/.033/34	U

entricity Incli					
of Apogee (km) unt 	_	_			
.00398523	51.554906		170.896638	1.594084	
416.533581		362.591887		5540.801649	4
560					
21 Oct 2021 12:55: .00394227	54.727	6767.5	59318	6767.66449	8 0
.00394227	51.554827	262 045520	173.725505	358.359001	4
<b>416.207466</b> 570		362.84/529		5540./583//	4
370 32 Oat 2021 04.17.	25 522	6767 5	26006	6767 62000	3 0
22 Oct 2021 04:17: .00389909	51 55 <i>474</i> 0	0/0/.5	176 50000	0/0/.02090 255 122944	3 0
415.879557	31.334749	363 104410	170.309902	5540 714763	4
580		202.104410		JJ40•/14/0J	-
22 Oct 2021 19:38:	55.903	6767.49	94177	6767.59479	3 0
.00385582	51.554681	0.0.01	179.492494	351.888614	•
415.552442		363.363144		5540.672775	4
590					
23 Oct 2021 11:00: .00381255 415.224805	25.846	6767.4	61769	6767.56014	0 0
.00381255	51.554634		182.433958	348.653321	
415.224805		363.621474		5540.630219	4
600					
24 Oct 2021 02:21:	55.353	6767.4	29089	6767.52524	3 0
.00376936 414.897512	51.554613		185.410391	345.417975	_
414.897512		363.878973		5540.587364	4
610	04 431	6868 2	07050	CECE 40103	
24 Oct 2021 17:43:					0 0
.00372647					4
414.573654 620		304.130003		3340.340330	-
25 Oct 2021 09:04:	53.082	6767.30	65494	6767.45733	3 0
25 Oct 2021 09:04: .00368386	51.554654	0,0,1	191.478312	338.947184	
414.250695					4
630					
26 Oct 2021 00:26:	21.297	6767.3	33189	6767.42293	9 0
.00364171	51.554706		194.564400	335.711766	
413.930932		364.640945		5540.461729	4
640					
26 Oct 2021 15:47:		6767.3	02177	6767.38989	3 0
	51.554769		197.688432	332.476347	
413.616940		364.888845		5540.421147	4
650	1.5.440	<b></b>		4747 25525	
27 Oct 2021 07:09:		6767.20	09522	6767.35525	7 0
.00355935				329.240932 5540.378613	A
413.305616 660		365.130898		JJ4U.3/8613	4
27 Oct 2021 22:30:	43 357	6767 2	37417	6767 22122	5 0
.00351933					5 0
413.000647				5540.336833	4
670		555.557625		22-10-22-0022	

Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Pe	Arg of Perigee (deg) erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
28 Oct 2021 13:52:09.844 .00348030 51.554892 412.703211 680	6767 206022	6767 207001	•
00348030 51 554892	0/0/.200023 207 255082	322 770108	U
412.703211	365.598772	5540.296009	4
29 Oct 2021 05:13:35.891	6767.172881	6767.253068	0
.00344228 51.554875	210.503532	319.534681	
<b>412.410859 690</b>			
29 Oct 2021 20:35:01.495	6767.140626	6767.219107	0
.00340547 51.554820	213.779280	316,299221	
412.127682	366.036532	5540.211417	4
700 30 Oct 2021 11:56:26.660 .00337001 51.554730 411.853747 710	CECE 100420	6868 105004	•
30 OCT 2021 11:56:26.660	6767.108430	6767.185284	0
411 853747	366 242821	5540 169882	4
710	300.212021	3310.103002	•
31 Oct 2021 03:17:51.377			
.00333589 51.554613	220.401430	309.828128	
411.587419	366.438455	5540.126475	4
720			
31 Oct 2021 18:39:15.641 .00330332 51.554485	6767.041853	6767.115696	0
.00330332 51.554485	223.742285	306.592458	
411.332642 730			4
1 Nov 2021 10:00:39.458 .00327244 51.554367	6767.008694	6767.081162	0
.00327244 51.554367	227.098453	303.356691	4
411.089004 740	366./99319	5540.042017	4
2 Nov 2021 01:22:02.815	6766.974169	6767.045346	0
2 Nov 2021 01:22:02.815 .00324319 51.554277	230.465164	300.120827	Ū
410.855188	366.961505	5539.998036	4
750			
2 Nov 2021 16:43:25.713	6766.940728	6767.010708	0
.00321581 51.554236			
410.635131	367.112286	5539.955500	4
760 3 Nov 2021 08:04:48.154	6766 906609	6766 975496	0
.00319040 51.554254		293.648856	U
410.427851		5539.912247	4
770			
3 Nov 2021 23:26:10.129	6766.871466	6766.939332	0
.00316688 51.554333		290.412799	
410.232405	367.372259	5539.867850	4
780	6766 037504	6966 004459	_
4 Nov 2021 14:47:31.640 .00314550 51.554462		6766.904457 287.176733	0
410.052754	367.482159	5539.825023	4
		<del> </del>	-

Page 42			_
Time (UTCG) Se	mi-parameter (km) Se	mi-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg	) RAAN (deg) Hei	.ght
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Orbit	. Co
unt			
790			
5 Nov 2021 06:08:52.688	6766.802511	6766.868648	0
.00312627 51.554620	247.34865	4 283.940690	
409.886708	367.576587	5539.781049	4
800			
5 Nov 2021 21:30:13.264 .00310913 51.554780 409.734287	6766.766936	6766.832349	0
.00310913 51.554780	250.70601	4 280.704687	
409.734287	367.656411	5539.736475	4
810			
6 Nov 2021 12:51:33.374	6766.732625	6766.797417	0
.00309434 51.554910	254.04867	0 277.468733	
409.599194	367.721639	5539.693578	4
820			
7 Nov 2021 04:12:53.019	6766.696927	6766.761193	0
.00308177 51.554986	257.37161	9 274.232821	•
409.477824	367.770563	5539.649097	4
020			
7 Nov 2021 19:34:12.189 .00307143 51.554992 409.371490	6766 661121	6766 724957	0
00207143 51 554002	260 67143	5 270 996929	U
400 271400	267 904422	5 270.990920 FE30 604E00	4
840	367.804423	3339.604399	4
8 Nov 2021 10:55:30.894	6766 626400	6766 680007	0
6 NOV 2021 10:55:50.694	0/00.020490	0/00.00999/	U
.00306353 51.554928	263.94535	5 207.761025	
409.282970	367.823024	2239.201009	4
850			_
9 Nov 2021 02:16:49.130	6766.590347	6766.653618	0
.00305786 51.554804	267.18912	3 264.525082	
409.208072	367.825165	5539.516997	4
860			
9 Nov 2021 17:38:06.894			0
.00305446 51.554646	270.40058	6 261.289069	
409.149100	367.812377	5539.472938	4
870			
10 Nov 2021 08:59:24.194			0
.00305346 51.554481			
	367.784321	5539.430027	4
880			
11 Nov 2021 00:20:41.028	6766.483448	6766.546584	0
.00305462 51.554339		0 254.816770	
	367.740335	5539.385563	4
890			
11 Nov 2021 15:41:57.395	6766.448076	6766.511354	0
.00305804 51.554241			-
409.066603	367.682104		4
900	<del></del>		_
12 Nov 2021 07:03:13.305	6766.413135	6766.476647	0
.00306370 51.554201		5 248.344115	·
		<del></del>	

entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) Ho Period (sec) Orb	eight
409 070128	367 600167	5530 200682	4
409.070128 910			
12 Nov 2021 22:24:28.755 .00307141 51.554221	6766.376975	6766.440807	0
.00307141 51.554221	285.879858	245.107691	·
409.086338	367.521275	5539.255672	4
920			
13 Nov 2021 13:45:43.747	6766.342201	6766.406443	0
.00308127 51.554293 409.118550	288.847280	241.871231	
409.118550	367.420335	5539.213474	4
930			
14 Nov 2021 05:06:58.292	6766.307538	6766.372277	0
.00309318 51.554400	291.767956	238.634754	
930 14 Nov 2021 05:06:58.292 .00309318 51.554400 409.164879	367.305674	5539.171520	4
14 Nov 2021 20:28:12.387			
.00310695 51.554523	294 643191	235 398276	U
409.222815	367.177473	5539.128379	4
950	307.177173	3333.120373	-
15 Nov 2021 11:49:26.038	6766.237871	6766.303852	0
.00312272 51.554637	297.471023	232.161803	
409.296110	367.037594	5539.087498	4
960			
16 Nov 2021 03:10:39.254	6766.203696	6766.270423	0
.00314032 51.554724	300.251437	228.925338	
960 16 Nov 2021 03:10:39.254 .00314032 51.554724 409.381693	366.885152	5539.046449	4
970			
16 Nov 2021 18:31:52.033	6766.168735	6766.236282	0
.00315959 51.554768 409.477809	302.985898	225.688876	4
980		5539.004527	4
17 Nov 2021 09:53:04.381	6766.135749	6766.204200	0
.00318066 51.554758	305.673035	222.452405	·
409.588218		5538.965133	4
990			
18 Nov 2021 01:14:16.309	6766.102108	6766.171538	0
.00320334 51.554692	308.314188	219.215913	
409.708866	366.360210	5538.925025	5
000			
18 Nov 2021 16:35:27.813			0
.00322749 51.554576			_
	366.163987	5538.884608	5
010 19 Nov 2021 07:56:38.902	6766 026111	6366 103320	0
	6766.036111 313.462146		0
409.982392		5538.846661	5
020	202.303017	3330.010001	3
19 Nov 2021 23:17:49.583	6766.002845	6766.075652	0

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Time (UTCG) Ser entricity Inclination (deg)			
of Apogee (km) Height of Pe			
unt			
.00328032 51.554236	315.97023	9 209.506178	
410.133550	365.743754	5538.807284	5
030			
20 Nov 2021 14:38:59.852	6765.969967	6766.044039	0
.00330871 51.554047	318.43700	5 206.269477	
410.293947	365.520131	5538.768466	5
040			
21 Nov 2021 06:00:09.723	6765.938689	6766.014098	0
.00333845 51.553869	320.86182	9 203.032708	-
040 21 Nov 2021 06:00:09.723 .00333845 51.553869 410.465119	365.289076	5538.731701	5
21 Nov 2021 21:21:19.198 .00336932 51.553722	323 24739	2 199 795874	U
410.642512	365.048944	5538.693182	5
060	303.010311	3330.033102	J
22 Nov 2021 12:42:28.274	6765.874071	6765.952345	0
.00340130 51.553620	325.59566	7 196.558980	
.00340130 51.553620 410.828381	364.802309	5538.655874	5
23 Nov 2021 04:03:36.965	6765.843230	6765.923034	0
.00343438 51.553572	327.90621	5 193.322037	
070 23 Nov 2021 04:03:36.965 .00343438 51.553572 411.022763	364.549304	5538.619882	5
080			
23 Nov 2021 19:24:45.270	6765.810947	6765.892339	0
.00346838 51.553582	330.18217	190.085058	_
411.222020 090	364.288657	5538.582191	5
	6765 770016	6765 062001	0
24 Nov 2021 10:45:53.189 .00350328 51.553647	332 42506	6 186 848055	U
411.428719			5
100	301.023245	5550.510110	3
25 Nov 2021 02:07:00.733	6765.749220	6765.833961	0
.00353905 51.553754	334.63498	5 183.611040	
411.641585	363.752337	5538.510510	5
110			
25 Nov 2021 17:28:07.899			0
.00357555 51.553888			
411.858317	363.475329	5538.473503	5
120			
26 Nov 2021 08:49:14.690	6765.686876	6765.775183	0
.00361276 51.554026	338.96605		_
412.081279 130	363.195086	5538.438336	5
27 Nov 2021 00:10:21.112	6765 656021	6765 716100	0
.00365061 51.554144	341 N8880	1 173.899983	U
	362.910085		5
140			J

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Time (UTCG) Ser entricity Inclination (deg)	ni-parameter (km) Sem Arg of Perigee (deg)	i-major Axis (km) RAAN (deg)	Ecc Height
of Apogee (km) Height of Pe			
unt			
27 Nov 2021 15:31:27.160 .00368902 51.554222	6765.624354	6765.716428	0
.00368902 51.554222	343.186201	170.662951	
412.538310	362.620546	5538.366191	5
.00368902 51.554222 412.538310 150			
28 Nov 2021 06:52:32.839 .00372795 51.554240	6765.594126	6765.688154	0
.00372795 51.554240	345.258160	167.425895	•
412 772220	362 328078	5529 221472	5
412.773329 160	302.320970	3330.331473	5
	C7CE EC204E	C7CE CE0070	0
28 Nov 2021 22:13:38.152	0/05.502045	0/05.0508/0	U
.00376735 51.554191	347.306228	164.188797	_
413.010506	362.033233	5538.295516	5
170			
29 Nov 2021 13:34:43.090	6765.531228	6765.629291	0
.00380714 51.554077	349.332615	160.951640	
29 Nov 2021 13:34:43.090 .00380714 51.554077 413.249987	361.734595	5538.259197	5
180			
30 Nov 2021 04:55:47.662 .00384729 51.553912	6765.500869	6765.601011	0
.00384729 51.553912	351.337207	157.714410	
413.493247	361 434775	5538 224473	5
190	301.434773	3330.224173	3
	6765 469102	6765 571360	0
30 Nov 2021 20:16:51.867 .00388774 51.553721	0/03.409102	154 477100	U
.00366774 51.553721	353.321/30	154.47/100	_
413.737158	361.131562	5538.188065	5
200			_
1 Dec 2021 11:37:55.698 .00392843 51.553535	6765.437427	6765.541836	0
.00392843 51.553535	355.287920	151.239711	
.00392843 51.553535 413.982784	360.826889	5538.151813	5
2 Dec 2021 02:58:59.162 .00396933 51.553386	6765.406612	6765.513206	0
.00396933 51.553386	357.236048	148.002255	
414.230730	360.521682	5538.116659	5
220			
2 Dec 2021 18:20:02.256	6765.374196	6765.483004	0
.00401034 51.553304		144.764753	•
414.477901		5538.079575	5
230	300.214107	3330.073373	,
3 Dec 2021 09:41:04.974	C7CE 2422C2	6765.453413	0
		141.527229	U
.00405146 51.553303			_
414.726378	359.906448	5538.043241	5
240			
4 Dec 2021 01:02:07.324			0
.00409262 51.553385	2.986728	138.289711	
414.975492	359.598872	5538.007350	5
250			
4 Dec 2021 16:23:09.300	6765.277816	6765.393421	0
.00413372 51.553537		135.052218	
415.222645		5537.969579	5
			_

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Time (UTCG) Ser entricity Inclination (deg)	mi-parameter (km) Sem Arg of Perigee (deg)	i-major Axis (km) Ecc RAAN (deg) Height
of Apogee (km) Height of Pe		
	siigee (Am) Sidereal	reliod (sec) Olbic Co
unt		
260		
5 Dec 2021 07:44:10.898 .00417478 51.553731	6065 045000	
5 Dec 2021 07:44:10.898	6765.245727	6765.363639 0
.00417478 51.553731	6.753485	131.814757
.00417478 51.553731 415.470573 270	358.982705	5537.933011 5
270		
5 Dec 2021 23:05:12.125 .00421571 51.553933	6765 213332	6765 333567 0
00401571 51 55000	0,03.213332	120 577320
.004215/1 51.553933	0.019990	128.5//329
415.717263	358.675871	5537.896087 5
280		
6 Dec 2021 14:26:12.973	6765.179860	6765.302427 0
.00425642 51.554112	10.476147	125.339919
415.961391	250 260464	5537.857852 5
415.901391	330.309404	5557.657652
290		
7 Dec 2021 05:47:13.442	6765.147503	6765.272416 0
.00429697 51.554239	12.323295	122.102502
7 Dec 2021 05:47:13.442 .00429697 51.554239 416.205599	358.065233	5537.821003 5
300		
7 Dec 2021 21:08:13.538	6765 114551	676F 241916 0
/ Dec 2021 21:00:13.536	6/65.114551	6765.241616 0
.00433723 51.554301	14.161864	118.865053
416.447197	357.762435	5537.783431 5
310		
8 Dec 2021 12:29:13.252	6765.080949	6765.210566 0
.00437714 51.554297		
416 605022	257 461200	5537.745061 5
416.685832	357.461300	5537.745061
320		
9 Dec 2021 03:50:12.589 .00441678 51.554237	6765.048457	6765.180432 0
.00441678 51.554237	17.815998	112.389964
416.923770	357.163095	5537.708061 5
330		
9 Dec 2021 19:11:11.551	6765 015220	676E 140EE9 0
.00445600 51.554141		
417.158031	356.867085	5537.670152 5
340		
10 Dec 2021 10:32:10.133	6764.981734	6765.118409 0
.00449478 51.554033		
417.389105	356.573714	5537.631907 5
350		
11 Dec 2021 01:53:08.340	6764.949309	6765.088329 0
.00453318 51.553936	23.250499	102.676721
417.618701	356.283957	5537.594974 5
360	3301203337	333, (3313, 1
	CDC4 01 C055	CBCE 055400
11 Dec 2021 17:14:06.176		
.00457103 51.553870	25.052003	
417.843701	355.997156	5537.557033 5
370		
12 Dec 2021 08:35:03.636	6764.882842	6765.026512 0
.00460837 51.553848		96.200922
31.333040	20.049790	J

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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		
418.065257	355.713766	5537.519072 5
380		
12 Dec 2021 23:56:00.726	6764.850514	6764.996489 0
.00464521 51.553875	28 645266	92 962989
410 204247	20.045200	5537.482209 5
418.284347	355.434631	5537.482209
13 Dec 2021 15:16:57.448 .00468138 51.553947 418.498145	6764.817487	6764.965743 0
.00468138 51.553947	30.437396	89.725059
418.498145	355.159342	5537.444459 5
400		
14 Dec 2021 06:37:53.801	6761 791616	6764.935165 0
14 Dec 2021 00:37:33.601	0/04./04040	0/04.933103
.00471697 51.554057	32.228224	86.487145
418.708158	354.888171	5537.406914 5
410		
14 Dec 2021 21:58:49.792	6764.752719	6764.905476 0
14 Dec 2021 21:58:49.792 .00475193 51.554190 418.914814	34.018406	83.249257
418 914814	354 622139	5537.370462 5
420	334.022139	3337.370102
420	6864 B0000	6764 074007
15 Dec 2021 13:19:45.422	6764.720025	6764.874985 0
15 Dec 2021 13:19:45.422 .00478609 51.554333	35.806940	80.011394
419.115302	354.360668	5537.333025 5
430		
16 Dec 2021 04:40:40.689	6764.687722	6764.844858 0
.00481959 51.554468	37.596313	76.773552
410 211640	254 104077	5537.296035 5
419.311640	334.1040//	5557.296055
440		
16 Dec 2021 20:01:35.602 .00485232 51.554584	6764.656274	6764.815551 0
.00485232 51.554584	39.386304	73.535721
419.503568	353.853535	
450		
17 Dec 2021 11:22:30.162	6764 623968	6764.785341 0
		70.297887
	353.608170	5537.222959 5
460		
18 Dec 2021 02:43:24.366	6764.592308	6764.755740 0
.00491521 51.554717	42.968973	
		5537.186614 5
470		3337723332
	6764 F61337	6764.726779 0
18 Dec 2021 18:04:18.224 .00494536 51.554728	0/04.50133/	6764.726779 0
	44.763189	
420.043763	353.135795	5537.151057 5
480		
19 Dec 2021 09:25:11.735	6764.529408	6764.696806 0
.00497452 51.554705		60.584204
420.210915	352.908696	
490	332.300030	3337.111230
	6764 400303	C7C4 CC7700
20 Dec 2021 00:46:04.898	6/64.498393	6764.667700 0

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
.00500282 51.554656 420.373139	48.359174 352.688262	57.346202 5537.078520 5
500		
20 Dec 2021 16:06:57.721 .00503007 51.554592	6/64.46//90 50 161600	6764.638946 0
420.528551	352.475340	5537.043215 5
510	6764 436140	6764.609092 0
21 Dec 2021 07:27:50.200 .00505627 51.554527	6/64.436149 51 967626	50 869991
420.675777	352.268407	5537.006561 5
520 21 Pog 2021 22:48:42 227	6764 405525	6764.580198 0
.00508150 51.554473	53.778719	47.631785
21 Dec 2021 22:48:42.337 .00508150 51.554473 420.817434	352.068963	5536.971086 5
530 22 Dec 2021 14:09:34.138		
.00510558 51.554441	6/64.3/5063	6764.551394 0
420.951335		
540		
23 Dec 2021 05:30:25.597	6764.343549	6764.521470 0
.00512856 51.554440 421.076733	57.413236 351.692208	41.155221 5536.898981 5
550		
23 Dec 2021 20:51:16.716 .00515048 51.554472	6764.313233	6764.492678 0
421.196051	59.239238	37.916894 5536.863630 5
560	351.515304	5556.665650
24 Dec 2021 12:12:07.501	6764.282589	6764.463477 0
24 Dec 2021 12:12:07.501 .00517117 51.554536	61.070068	34.678560
<b>421.306643</b> 570	351.346312	5536.827778 5
25 Dec 2021 03:32:57.942	6764.250991	6764.433249 0
.00519073 51.554624	62.908132	31.440233
421.408584		5536.790665 5
580		
25 Dec 2021 18:53:48.043		
.00520913 51.554722		28.201922
421.503894	351.030560	5536.755032 5
590	CECA 10040E	CBC4 3B435B
26 Dec 2021 10:14:37.806 .00522626 51.554815		
421.589603	350.884911	
600		
27 Dec 2021 01:35:27.220 .00524221 51.554887	6764.157627 68.465741	6764.343516 0 21.725346
421.666614		5536.680494 5
610		

entricity Inclination (deg) of Apogee (km) Height of Pe	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
 27 Dog 2021 16.56.16 200	6764 126990	6764 212022 0
27 Dec 2021 16:56:16.289 .00525691 51.554926 421.736326	70.334675	18.487059
421.736326	350.617519	5536.644159 5
620		
28 Dec 2021 08:17:05.011	6764.095011	6764.282895 0
.00527028 51.554924	72.212345	15.248748
<b>421.</b> 795579	350.496211	5536.606065 5
28 Dec 2021 23:37:53.376	6764.062659	6764.251407 0
.00528241 51.554883	74.100603	12.010390
.00528241 51.554883 421.845943	350.382871	5536.567406 5
640		
29 Dec 2021 14:58:41.387 .00529319 51.554813 421.888293	6764.031451	6764.220971 0
.00529319 51.554813	75.998184	8.771963
421.888293	350.2/9648	5536.53003/
30 Dec 2021 06:19:29.041		
.00530257 51.554729	77.906492	5.533455
421.919392		
30 Dec 2021 21:40:16.328 .00531062 51.554651	6763.965912	6764.156680 0
.00531062 51.554651	79.826305	2.294863
421.941574 670	350.097786	5536.451104 5
31 Dec 2021 13:01:03.253	6763.934017	6764.125259 0
31 Dec 2021 13:01:03.253 .00531725 51.554599	81.756564	359.056196
421.954782	350.021737	5536.412528 5
680		
1 Jan 2022 04:21:49.810	6763.900431	6764.092045 0
.00532241 51.554585	83.699019	355.817474
421.956294 690	349.953796	5536.371748 5
1 Jan 2022 19:42:35.993	6763.867555	6764.059439 0
.00532618 51.554614		352.578721
421.949022	349.895857	5536.331718 5
700		
2 Jan 2022 11:03:21.806		
.00532847 51.554678		349.339965
421.931960 710	349.848153	5536.291960 5
3 Jan 2022 02:24:07.242	6763 801035	6763.993141 0
.00532928 51.554765		346.101225
421.903358	349.808924	5536.250321 5
720 3 Jan 2022 17:44:52.298	6763.768180	6763.960242 0
.00532869 51.554852		342.862512
421.866295	349.780190	5536.209930 5
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Time (UTCG)	Semi-parameter (km)	Semi-major Axis (km)	Ecc
entricity Inclination (de	g)	eg) RAAN (deg)	Height
of Apogee (km) Height of	Perigee (km) Siderea	al Period (sec) Or	rbit Co
unt			
730			
4 Jan 2022 09:05:36.979	6763 735175	6763 927086	0
.00532660 51.5549	21 93.595	320 339 623827	U
421 010014	240 761350	559.023027	5
421.818814	349.701330	5556.169225	3
740 5 Jan 2022 00:26:21.278 .00532305	6760 F0100F	5555 000001	
5 Jan 2022 00:26:21.278	6763.701237	6763.892891	0
.00532305 51.5549	53 95.6146	513 336.385157	
421.760417	349.751365	5536.127241	5
750			
5 Jan 2022 15:47:05.195	6763.668646	6763.859943	0
.00531810 51.5549	40 97.6476	333.146481	
421.693807	349.752078	5536.086789	5
760			
6 Jan 2022 07:07:48.734	6763.635484	6763.826314	0
.00531162 51.5548	80 99 695	890 329 907777	Ū
421.616216	240 762412	5536 045503	5
421.010210	349.702413	3330.043303	5
770	6762 601000	6560 F00140	
6 Jan 2022 22:28:31.887	6763.601888	6763.792149	0
.00530371 51.5547	101.759	749 326.669021	
6 Jan 2022 22:28:31.887 .00530371 51.5547 421.528370	349.781929	5536.003558	5
780			
7 Jan 2022 13:49:14.659	6763.569753	6763.759344	0
.00529439 51.5546	52 103.8393	179 323.430194	
421.432296	349.812393	5535.963283	5
790			
8 Jan 2022 05:09:57.052 .00528351 51.5545	6763.536747	6763,725559	0
.00528351 51.5545	14 105.9358	828 320.191287	•
421 224776	340 852342	5535 921905	5
421.324776 800	349.032342	5555.521005	3
8 Jan 2022 20:30:39.060	6762 502056	6762 601700	0
			U
.00527122 51.5543			_
421.207682	349.901897	5535.880346	5
810			
9 Jan 2022 11:51:20.690	6763.472271	6763.659225	0
.00525746 51.5542	70 110.180	708 313.713221	
421.081899	349.962550	5535.840366	5
820			
10 Jan 2022 03:12:01.943	6763.439666	6763.625532	0
.00524215 51.5541	89 112.3308	898 310.474079	
420.944500	350.032564	5535.799001	5
830	550.05 <u>25</u> 04	5555.,55001	3
10 Jan 2022 18:32:42.813	6762 407625	6763 502207	0
.00522545 51.5541			U
			_
420.798112	350.112502	5535.758211	5
840			
11 Jan 2022 09:53:23.309			0
.00520724 51.5541	116.687	789 303.995650	

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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) Orbit Co
unt		
420.642462	350.203544	5535.718552 5
850		
12 Jan 2022 01:14:03.430 .00518751 51.554154 420.475460	6763.344564	6763.526573 0
.00518751 51.554154	118.896516	300.756399
420.475460	350.303686	5535.677510 5
860		55551077520
12 Jan 2022 16:34:43.172	6763 313419	6763 493949 0
.00516642 51.554192	121 125170	207 5171/2
420.299990	350.413909	5535.637456
870		
13 Jan 2022 07:55:22.544	6763.282936	6763.461889 0
.00514381 51.554236	123.375603	294.277892
420.114847	350.534931	5535.598098 5
13 Jan 2022 23:16:01.542	6763.251511	6763.428794 0
13 Jan 2022 23:16:01.542 .00511977 51.554271 419.919016	125.647899	291.038652
419.919016	350.664573	5535.557468 5
890		
14 Jan 2022 14:36:40.165	6763.221225	6763.396754 0
.00509440 51.554284		
419.715202	350 804307	5535.518134 5
900	330.004307	3333.310134
15 Jan 2022 05:57:18.420	6762 101107	6763.364881 0
00506756	120 250607	0/03.304001 0
.00506756 51.554264		
419.501635	350.954127	5535.479003 5
910		
15 Jan 2022 21:17:56.302 .00503941 51.554205	6763.160433	6763.332192 0
.00503941 51.554205	132.600891	281.320958
	351.112006	5535.438872 5
920		
16 Jan 2022 12:38:33.811		
.00500997 51.554103		
419.047549	351.279709	5535.400123 5
930		
17 Jan 2022 03:59:10.951	6763.101147	6763.268822 0
.00497916 51.553962		
418.807237	351.456408	5535.361075 5
940	3310130100	55551501075
17 Jan 2022 19:19:47.717	6763 070921	6763.236448 0
.00494718 51.553790		
418.558383	351.640513	5535.321330 5
950	CDC2 041000	CDC2 005151
18 Jan 2022 10:40:24.110		
.00491398 51.553602		
	351.833891	5535.282908 5
960		
19 Jan 2022 02:01:00.131	6763.012175	6763.173207 0

Page 52			
Time (UTCG) Ser	mi-parameter (km)	Semi-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidere	al Period (sec) Orb	it Co
unt			
.00487956 51.553415	144.683	742 265.124104	
418.037518	352.034895	5535.243691	5
970			
19 Jan 2022 17:21:35.773	6762.982241	6763.140941	0
.00484411 51.553247	147.179	958 261.884503	
417.765309	352.242572	5535.204080	5
980	332.212372	3333.201000	-
20 7	6860 053008	6862 100600	•
20 Jan 2022 08:42:11.038 .00480755 51.553117	6/62.95328/	6/63.109600	0
.00480755 51.553117	149.704	617 258.644813	
417.486574	352.458625	5535.165604	5
990			
21 Jan 2022 00:02:45.925	6762.923362	6763.077238	0
.00476995 51.553039	152,258	964 255,405044	
417.199754	352 680723	5535 125875	6
000 21 Jan 2022 15:23:20.425 .00473147 51.553021 416.906979	5750 000404	6860 044008	_
21 Jan 2022 15:23:20.425	6762.893434	6763.044837	0
.00473147 51.553021	154.841	580 252.165210	
416.906979	352.908695	5535.086098	6
010			
22 Jan 2022 06:43:54.541	6762.864208	6763.013098	0
.00469205 51.553062	157.455	063 248 925330	
416.608477	353 143710	5535 047133	6
020	333.143719	3333.047133	Ü
* <del>- *</del>	6860 000806	67.60 000000	_
22 Jan 2022 22:04:28.268	6762.833736	6762.980082	0
.00465180 51.553154	160.099	620 245.685428	
416.303102	353.383062	5535.006602	6
030			
030 23 Jan 2022 13:25:01.598 .00461086 51.553277	6762.803562	6762.947342	0
.00461086 51.553277	162.774	135 242.445523	
415.993317	353.627368	5534.966409	6
040	333.027300	3334.900409	U
0 2 0		6860 014088	
24 Jan 2022 04:45:34.533			0
.00456918 51.553405		468 239.205632	
415.678834	353.876916	5534.926551	6
050			
24 Jan 2022 20:06:07.064	6762.742471	6762.881063	0
.00452693 51.553509		774 235.965763	•
			_
	354.129003	5534.885043	6
060			
25 Jan 2022 11:26:39.185			0
.00448419 51.553562	170.991	278 232.725914	
415.036700	354.384890	5534.844202	6
070			
26 Jan 2022 02:47:10.896	6762.681007	6762 814386	0
.00444100 51.553545			J
			_
414.711031	354.643742	2224.002108	6
080			

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Heigh Period (sec) Orbit (	ht
 26 .Tan 2022 18:07:42 188	6762 649029	6762 779808	٥
.00439752 51.553454	176.632221	226.246220	Ū
26 Jan 2022 18:07:42.188 .00439752 51.553454 414.382237	354.903379	5534.760739	6
090			
27 Jan 2022 09:28:13.054 .00435380 51.553297	6762.617710	6762.745902	0
414.052575	355.165230	5534.719115	6
100			
28 Jan 2022 00:48:43.495	6762.585843	6762.711466	0
.00430997 51.553098	182,403029	219,766379	
413.721516 110	355.427416	5534.676841	6
28 Tan 2022 16:09:13.498	6762 553059	6762 676140	0
28 Jan 2022 16:09:13.498 .00426615 51.552891	185.336984	216.526350	Ŭ
413.389717	355.688562	5534.633474	6
120			
29 Jan 2022 07:29:43.062	6762.520925	6762.641495	0
.00422241 51.552713	188.302812	213.286235	_
413.059120 130	355.949869	5534.590943	6
29 Jan 2022 22:50:12.184	6762.487985	6762.606082	0
.00417891 51.552597	191.301880	210.046039	
412.729435	356.208730	5534.547471	6
30 Jan 2022 14:10:40.854 .00413579 51.552563	6762.454403	6762.570076	0
412.401649	194.331011 356.464502	200.805//6 5534.503269	6
150			
31 Jan 2022 05:31:09.070	6762.421380	6762.534676	0
.00409310 51.552618	197.391164	203.565464	
	356.717930	5534.459812	6
160 31 Jan 2022 20:51:36.830	6762 387404	6762.498384	0
.00405107 51.552752	200.482312	200.325128	U
411.756732		5534.415260	6
170			
1 Feb 2022 12:12:04.125			0
.00400978 51.552944			_
411.440956 180	357.208962	5534.370545	6
2 Feb 2022 03:32:30.957	6762.319375	6762.425920	0
.00396931 51.553161		193.844446	-
411.131095 190		5534.326303	6
2 Feb 2022 18:52:57.320	6762.284610	6762.389050	0
.00392991 51.553374		190.604117	
410.827613	357.676486	5534.281042	6

Page 54				
Time (UTCG)	Semi-parameter	(km) Sem	i-major Axis (km)	Ecc
entricity Inclination				
of Apogee (km) Heigh	nt of Perigee (km)	Sidereal D	Period (sec) On	rbit Co
unt				
200				
	6762 24	10070	6762 353303	0
3 Feb 2022 10:13:23.211	6/62.24	19979	6/62.352392	U
.00389160 51.	.553554	213.116458	187.363794	_
410.531774	357.899010		5534.236042	6
4 Feb 2022 01:33:48.628 .00385449 51.	6762.21	L5381	6762.315850	0
.00385449 51.	.553681	216.336080	184.123467	
410.244124	358.113575		5534.191183	6
220				
4 Feb 2022 16:54:13.568	6762.18	30136	6762.278754	0
.00381884 51.	553744	219 575177	180 883121	•
409.965785				6
230	330.317723		3334.143043	0
		4=400	6760 0410F0	•
5 Feb 2022 08:14:38.029	6762.14	15102	6762.241958	0
.00378459 51.	.553746	222.830394	177.642742	
409.697270	358.512646		5534.100475	6
240				
5 Feb 2022 23:35:02.010 .00375190 51. 409.439314	6762.10	09990	6762.205180	0
.00375190 51.	553695	226.102192	174.402315	
409.439314	358,697046		5534.055328	6
250	333337,013			•
6 Feb 2022 14:55:25.509	6762 0	74421	6762 168049	0
.00372101 51.	FE3607	720 205064	171 161033	U
				_
409.193121	358.8689//		5534.009/4/	6
260				
7 Feb 2022 06:15:48.524	6762.03	39024	6762.131188	0
.00369179 51.	. 553503	232.676390	167.921290	
408.958587	359.029788		5533.964497	6
270				
7 Feb 2022 21:36:11.055	6762.00	3470	6762.094274	0
.00366448 51.				
408.736818	359.177730		5533.919183	6
280	333.177730		3333.313103	Ū
8 Feb 2022 12:56:33.100	6761 04	57507	6762 057152	0
				U
.00363920 51.			161.440033	_
	359.311643		5533.873614	6
290				
9 Feb 2022 04:16:54.660	6761.93	31939	6762.020349	0
.00361586 51.	.553288	242.574113	158.199333	
	359.432820		5533.828436	6
300				
9 Feb 2022 19:37:15.736	6761 . 89	96168	6761.983545	0
.00359470 51.			154.958602	•
	359.539265			6
310	339.339403		5555.105250	O
	6761.0	50117	6761 046574	^
10 Feb 2022 10:57:36.326				0
.00357574 51.	553354	249.156895	151.717851	

rage 55			
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			
unt	2		-
407.988504	359 630644	5522 72797 <i>A</i>	6
107.500501	333.030044	3333.737074	U
320 11 Feb 2022 02:17:56.433 .00355890 51.553458 407.837907			
11 Feb 2022 02:17:56.433	6761.824314	6761.909959	0
.00355890 51.553458	252.433355	148.477091	
407.837907	359.708011	5533.692927	6
330			
11 Feb 2022 17:38:16.058			
11 Feb 2022 17:30:10.036	0/01./00550	0/01.0/3499	U
.00354443 51.553599	255.695132	145.236332	
407.703489	359.769510	5533.648171	6
340			
12 Feb 2022 08:58:35.203	6761 752493	6761 836859	0
00353333	250 020010	141 005570	Ü
.00353223 51.553762 407.584250	250.930010	141.9955/9	_
407.584250	359.815467	5533.603193	6
13 Feb 2022 00:18:53.867	6761.716702	6761.800592	0
00352229 51 553929	262 161489	138 754830	
13 Feb 2022 00:18:53.867 .00352229 51.553929 407.480590	250 046504	EE33 EE967E	6
407.480590	359.846594	5533.5566/5	О
300			
13 Feb 2022 15:39:12.056	6761.681045	6761.764578	0
.00351478 51.554084	265.359733	135.514080	
407.393665			6
370	337.001471	3333.311100	٠
			_
14 Feb 2022 06:59:29.768	6761.644999	6761.728281	0
.00350952 51.554207	268.530875	132.273319	
407.321672	359.860891	5533.469911	6
380			
14 Feb 2022 22:19:47.007 .00350655 51.554286	6761 600421	6761 602572	0
14 Feb 2022 22:19:47:007	0701.009431	0701.092572	U
.00350655 51.554286	271.672383	129.032531	
407.265760	359.845385	5533.426077	6
390			
15 Feb 2022 13:40:03.776	6761.573859	6761.656972	0
.00350597 51.554309			-
			_
	359.813824	5533.382377	6
400			
16 Feb 2022 05:00:20.073	6761.537668	6761.620855	0
.00350753 51.554275	277.856210	122,550805	
	359.767261		6
	333.707201	5533.338043	U
410			
16 Feb 2022 20:20:35.901			0
.00351135 51.554187	280.894975	119.309831	
	359.706262		6
420			•
-	CDC1 4CC450	CDC1	_
17 Feb 2022 11:40:51.263			0
.00351741 51.554057			
407.196291	359.629960	5533.251222	6
430			
18 Feb 2022 03:01:06.155	6761.429881	6761.513918	0
10 100 2022 03.01.00.133	0,01,12,001	0,01.010010	J

	entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
18 Feb 2022 18:21:20.579 6761.394263 6761.478785 0.00353562 51.553750 289.778007 109.586341 5407.247818 359.435753 5533.163651 6 6 6761.357984 6761.443091 0.00354782 51.553618 292.657332 106.344995 6600 202 Peb 2022 01:01:48.025 6761.320718 6761.406495 0.00356178 51.553528 295.496016 103.103583 407.352170 359.186821 5533.074915 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6			
18 Feb 2022 18:21:20.579 6761.394263 6761.478785 0.00353562 51.553750 289.778007 109.586341 5407.247818 359.435753 5533.163651 6 6 6761.357984 6761.443091 0.00354782 51.553618 292.657332 106.344995 6600 202 Peb 2022 01:01:48.025 6761.320718 6761.406495 0.00356178 51.553528 295.496016 103.103583 407.352170 359.186821 5533.074915 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	.00352545 51.553905	286.857029	112.827602
18 Feb 2022 18:21:20.579 6761.394263 6761.478785 0.00353562 51.553750 289.778007 109.586341 6450 19.596341 292.657332 106.344995 6761.443091 0.00354782 51.553618 292.657332 106.344995 6760.00356178 51.553618 292.657332 106.344995 6760.00356178 51.553618 292.657332 106.344995 6760.00356178 51.553528 295.496016 103.103583 6761.320718 6761.406495 0.00356178 51.553528 295.496016 103.103583 6761.320718 6761.284698 6761.371244 0.00357773 51.553495 298.291052 99.862128 6761.320718 6761.284698 6761.371244 0.00357773 51.553495 298.291052 99.862128 6761.334576 0.00359540 51.553523 301.044085 96.620657 3298.291052 99.862128 6761.334576 0.00359540 51.553523 301.044085 96.620657 3298.291052 99.86634 6761.247173 6761.334576 0.00361462 51.553523 301.044085 96.620657 328.887898 5532.886634 6761.247173 6761.297454 0.00361462 51.553606 303.755527 993.379193 6762.00361462 51.553606 303.755527 993.379193 6760.00361462 51.553606 303.755527 993.379193 6760.00361462 51.553606 303.755527 993.379193 6760.00361861 51.553725 306.423041 90.137751 528.54056 510 520 520 51.553857 306.423041 90.137751 528.54056 510 520 520 51.553857 306.423041 90.137751 528.54056 510 520 520 51.553857 306.423041 90.137751 528.54056 510 520 520 51.553857 306.423041 90.137751 528.54056 5532.086927 6761.223232 0.00365801 51.553974 407.941669 5.553974 407.941669 5.553974 407.941669 5.553974 407.941669 5.553974 407.941669 5.553974 407.941669 5.553974 408.075061 51.553974 408.075061 51.553061 357.946490 5532.757340 6761.147776 6761.147776 6761.147776 6761.147776 6761.147776 6761.147776 6761.05306 6761.05460 6761.147776 6761.147776 6760.00370711 51.554051 357.946490 5532.757340 6761.107530 6761.003733349 51.554074 316.686038 77.172098 5532.757340 6761.003733349 51.554074 316.686038 77.172098 5532.757340 6761.003733349 51.554074 316.686038 77.172098 5532.707940 6761.003733349 51.554074 316.686038 77.172098 5532.707940 6761.003733349 51.554074 316.686038 77.172098 5532.707940 6761.003733349 51.554074 316.686038 77.172098 5532.707940 6761.003733349 51.554074 316.68603	407.214269 440	359.539568	5533.206777 6
10,0353562   51,553750   289,778007   109,586341   670,0354782   51,553618   6761,357984   6761,443091   0,00354782   51,553618   292,657332   106,344995   660   6761,00356178   51,553528   295,496016   103,103583   6761,320718   6761,406495   670,00356178   51,553528   295,496016   6761,406495   670,00356178   51,553528   298,291052   533,074915   6761,00357773   51,553495   298,291052   533,031645   680   680   690,00359540   51,553528   301,044085   6761,334576   680   690,00359540   51,553528   301,044085   696,620657   696,620657   696,620657   696,620657   690,00359540   51,553608   407,507253   358,887898   6761,297454   690,00361462   51,553608   407,600005   500   22 Feb 2022 14:22:37.254   6761,12125   6761,297454   690,3379193   51,553755   407,705933   51,553755   407,705933   51,553755   407,705933   51,553755   407,705933   51,553755   407,705933   51,553755   407,705933   51,553755   407,705933   51,553858   6761,132760   6761,223232   6761,223232   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,22332   6761,233663   67	18 Feb 2022 18:21:20.579	6761.394263	6761.478785 0
19   Feb 2022 09:41:34.538   6761.357984   6761.443091   0   0.0354782   51.553618   292.657332   106.344995   6460   20   Feb 2022 01:01:48.025   6761.320718   6761.406495   0   0.0356178   51.553528   295.496016   103.103583   6470.352170   359.186821   5533.074915   6   6761.284698   6761.371244   0.0357773   51.553495   298.291052   99.862128   407.424619   359.043870   5533.031645   6   6   6   6   6   6   6   6   6	.00353562 51.553750	289.778007	109.586341
19   Feb 2022 09:41:34.538	407.247818	359.435753	5533.163651 6
407.294504       51.553618       292.657332       106.344995       466         20 Feb 2022 01:01:48.025       6761.320718       6761.1.056495       0         .00356178       51.553528       295.496016       103.103583       0         470       359.186821       5533.074915       6         20 Feb 2022 16:22:01.042       6761.284698       6761.371244       0         .00357773       51.553495       298.291052       99.862128         407.424619       359.043870       5533.031645       6         480       6761.247173       6761.334576       0         21 Feb 2022 07:42:13.590       6761.247173       6761.334576       0         407.507253       358.887898       5532.986634       6         490       21 Feb 2022 23:02:25.659       6761.209114       6761.297454       0         407.600005       358.720903       5532.941067       6         500       358.720903       5532.941067       6         22 Feb 2022 14:22:37.254       6761.172125       6761.261494       0         .00365801       51.553874       358.353584       5532.896927       6         407.818881       51.553974       358.353584       5532.893636       6		6761 . 357984	6761 443091 0
407.294504 359.317677 5533.119836 6 460 20 Feb 2022 01:01:48.025 6761.320718 6761.406495 0.00356178 51.553528 295.496016 103.103583 6700.00356178 51.553528 295.496016 103.103583 6700.0035777	.00354782 51.553618	292.657332	106.344995
460         20 Feb 2022 01:01:48.025       6761.320718       6761.406495       0         .00356178       51.553528       295.496016       103.103583         407.352170       359.186821       5533.074915       6         470       6761.284698       6761.371244       0         2.0 Feb 2022 16:22:01.042       6761.284698       6761.371244       0         .00357773       51.553495       298.291052       99.862128         407.424619       359.043870       5533.031645       6         480       21 Feb 2022 07:42:13.590       6761.247173       6761.334576       0         .00359540       51.553523       301.044085       96.620657       6         490       21 Feb 2022 23:02:25.659       6761.209114       6761.297454       0         .00361462       51.553606       303.755527       93.379193       6         407.600005       358.720903       5532.941067       6         500       407.705933       358.543056       5532.896927       6         510       328 Feb 2022 15:42:48.368       6761.132760       6761.22322       0         .00365801       51.553857       309.05003       86.896336       5         23 Feb 2022 21:23:09.125	407.294504	359.317677	5533.119836 6
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20 Feb 2022 16:22:01.042       6761.284698       6761.371244       0         300357773       51.553495       298.291052       99.862128         407.424619       359.043870       5533.031645       6         480       21 Feb 2022 07:42:13.590       6761.247173       6761.334576       0         2.0359540       51.553523       301.044085       96.620657       6         490       358.887898       5532.986634       6         490       6761.209114       6761.297454       0         407.600005       358.720903       5532.941067       6         500       22 Feb 2022 14:22:37.254       6761.172125       6761.261494       0         20 363553       51.553725       306.423041       90.137751       6         407.705933       358.543056       5532.896927       6         510       23 Feb 2022 05:42:48.368       6761.132760       6761.223232       0         20 365801       51.553857       309.050030       86.896336       5         407.818881       51.553974       358.154869       5532.803363       6         520       23 Feb 2022 21:02:58.990       6761.093617       6761.185269       0         0.03368181       51.553974       358.1	.00356178 51.553528	295.496016	103.103583
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407.600005       358.720903       5532.941067       6         500       22 Feb 2022 14:22:37.254       6761.172125       6761.261494       0         .00363563       51.553725       306.423041       90.137751       6         407.705933       358.543056       5532.896927       6         510       23 Feb 2022 05:42:48.368       6761.132760       6761.223232       0         .00365801       51.553857       309.050030       86.896336       6         407.818881       358.353584       5532.849961       6         520       23 Feb 2022 21:02:58.990       6761.093617       6761.185269       0         .00368181       51.553974       311.635769       83.654937       6         407.941669       358.154869       5532.803363       6         530       24 Feb 2022 12:23:09.125       6761.054860       6761.147776       0         .00370711       51.554051       314.179885       80.413534       6         408.075061       357.946490       5532.757340       6         25 Feb 2022 03:43:18.760       6761.013287       6761.107530       0         .00373349       51.554074       316.686038       77.172098         408.213073       357.727987			
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entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
25 Feb 2022 19:03:27.885 .00376116 51.554039 408.360854 560	6760.972775	6761.068419	0
.00376116 51.554039	319.152835	73.930597	
408.360854	357.501984	5532.659932	6
560	CECO 02140E	6861 000610	•
26 Feb 2022 10:23:36.504 .00379000 51.553954	6760.931497	6761.028612 70 689008	0
408.515886			6
570			
27 Feb 2022 01:43:44.597	6760.887613	6760.986257	0
.00381972 51.553838	323.976532	67.447315	
.00381972 51.553838 408.674319	357.024196	5532.559082	6
580			0
27 Feb 2022 17:03:52.160 .00385055 51.553715	326 334861	64 205513	U
408.841862	356.775196	5532.509089	6
590			
28 Feb 2022 08:23:59.191	6760.801069	6760.902967	0
.00388223 51.553610	328.660163	60.963615	
409.013342	356.518592	5532.456846	6
600	CRCO REE14R	6860 050853	•
28 Feb 2022 23:44:05.670 .00391464 51.553541	6/60./5514/ 330 954513	6/60.858/53 57 721630	0
.00391464 51.553541 409.188110	356.255396	5532.402576	6
1 Mar 2022 15:04:11.597 .00394793 51.553519	6760.710581	6760.815956	0
.00394793 51.553519	333.216351	54.479611	
409.370178	355.987735	5532.350045	6
620	6760 662482	6760 770674	0
2 Mar 2022 06:24:16.965 .00398181 51.553544	335 449563	5/60.//06/ <del>4</del> 51 237557	U
409.553749	355.713599	5532.294464	6
630			
2 Mar 2022 21:44:21.757		6760.724748	0
.00401628 51.553610		47.995497	
409.740735 640	355.434760	5532.238092	6
3 Mar 2022 13:04:25.975	6760 568743	6760 679710	0
.00405137 51.553703			U
409.932734		5532.182812	6
650			
4 Mar 2022 04:24:29.610			0
.00408687 51.553806		41.511406	-
410.124984	354.865299	5532.124425	6
660 4 Mar 2022 19:44:32.648	6760.469905	6760.584820	0
.00412284 51.553902	344.112884	38.269375	3
410.320655	354.574985	5532.066341	6

rage so		
Time (UTCG)		
entricity Inclination (deg		
of Apogee (km) Height of	Perigee (km) Sidereal	Period (sec) Orbit Co
unt		
670		
5 Mar 2022 11:04:35.093 .00415919 51.5539' 410.519120	6760.420779	6760.537729 0
.00415919 51.5539	78 346.216113	35.027343
410.519120	354.282337	35.027343 5532.008540 6
680	331123237	
6 Mar 2022 02:24:36.934	6760 3604FF	6760 400474
6 Mar 2022 02:24:36.934	6/60.369455	6/60.4884/4 0
.00419584 51.55402		
410.717418	353.985530	5531.948084 6
690		
6 Mar 2022 17:44:38.164	6760.318959	6760.440085 0
.00423282 51.55403	36 350.359057	28.543209
410.918843		
700	333.007327	3331.000090
700	6760 060140	CTC0 00140T
7 Mar 2022 09:04:38.787	6760.268143	6760.391405 0
.00427002 51.55403	16 352.398643	25.301074
7 Mar 2022 09:04:38.787 .00427002 51.55403 411.121389	353.387421	5531.828941 6
710		
8 Mar 2022 00:24:38.792	6760.215630	6760.341059 0
.00430740 51.55396	58 354 420681	22 058873
411 22250	353 004534	5531.767146 6
411.323585	353.004534	5551.767146
720		
8 Mar 2022 15:44:38.176	6760.164325	
.00434499 51.55390	356.423550	18.816595
411.528361	352.781543	5531.706872 6
720		
9 Mar 2022 07:04:36.945 .00438266 51.55383	6760.112348	6760.242197 0
00438266 51 5538	358 409204	15 574238
411 52200	250.409204	13.374230
411.733064	352.4//330	5531.645803 6
740		
9 Mar 2022 22:24:35.088	6760.059334	6760.191430 0
.00442043 51.55376	0.380298	12.331800
411.937384	352.171476	5531.583492 6
750		
10 Mar 2022 13:44:32.609	6760 007612	6760.141977 0
.00445826 51.55370	2.334/83	9.089287
412.143423	351.866532	5531.522794 6
760		
11 Mar 2022 05:04:29.511		
.00449606 51.55366	67 <b>4.</b> 275700	5.846710
412.348338	351.560818	5531.460935 6
770	332333323	333_1133733
	6750 001603	6760 040650
11 Mar 2022 20:24:25.786		
.00453383 51.5536		
412.552544	351.254756	5531.398427 6
780		
12 Mar 2022 11:44:21.439	6759.849878	6759.991155 0
.00457154 51.5536	8.119435	359.361407
32,3330	5,24,100	

Page 59			
Time (UTCG) Ser			
entricity Inclination (deg)			
of Apogee (km) Height of Po	erigee (km) Sidereal	Period (sec) Or	bit Co
unt			
			_
412.757722	350.950587	5531.337678	6
790			_
13 Mar 2022 03:04:16.474	6759.796803	6759.940410	0
.00460910 51.553690			_
412.960635	350.646186	5531.275396	6
800	<b>6750 74070</b>	<b>6750</b> 000647	_
13 Mar 2022 18:24:10.883	6759.743701	6759.889647	0
.00464651 51.553727	11.918707	352.875991	_
413.162533	350.342762	5531.213091	6
810	<b>6750 601040</b>	5550 040040	_
14 Mar 2022 09:44:04.676 .00468371 51.553762	6759.691948	6759.840240	0
.00468371 51.553762	13.802430	349.633260	_
413.364391	350.042088	5531.152451	6
820			
15 Mar 2022 01:03:57.852	6759.638694	6759.789331	0
.00472063 51.553784	15.678526	346.390518	_
413.562793	349.741870	5531.089968	6
830			_
15 Mar 2022 16:23:50.407	6759.585927	6759.738911	0
.00475728 51.553780	17.546361	343.147755	_
15 Mar 2022 16:23:50.407 .00475728 51.553780 413.759870	349.443952	5531.028085	6
840			
16 Mar 2022 07:43:42.351	6759.534204	6759.689530	0
.00479357 51.553743			_
413.955561	349.149499	5530.967477	6
850	<b>6750 401045</b>	<b>6750 63070</b>	_
16 Mar 2022 23:03:33.681			0
.00482944 51.553666	21.260299	336.662123	_
414.146995	348.856412	5530.905096	6
860	6850 400680	6850 500650	•
17 Mar 2022 14:23:24.394	6/59.4286/0	6/59.588652	U
.00486491 51.553551		333.419217	_
	348.566829	5530.843666	6
870	6850 286050	6850 530141	•
18 Mar 2022 05:43:14.501			0
.00489988 51.553405			_
	348.281219	5530.782899	6
880	6850 202805	6850 400000	•
18 Mar 2022 21:03:03.995			0
.00493431 51.553241		326.933133	_
	347.997842	5530.720479	6
890 19 Mar 2022 12:22:52.878	6750 071704	CEEO 400ECO	^
		6/59.438569	0
.00496823 51.553078			_
	347.719150	5530.659465	6
900 20 Mar 2022 03.42.41 157	6750 210601	6750 200767	^
20 Mar 2022 03:42:41.157	0/39.213081	0/39.388/67	0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
.00500151 51.552934 415.058889	30.449206 347.444645	320.446610 5530.598343	6
910			
20 Mar 2022 19:02:28.824 .00503417 51.552827	6759.166533	6759.337835	0
415.228523	347.173146	5530.535833	6
920	CREO 114800	C750 0000C7	•
21 Mar 2022 10:22:15.884	6/59.114/80 34 097796	0/59.28820/ 313 050686	0
.00506621 51.552768 415.395250	346.907284	5530.474998	6
930	6759 062344	6750 227082	0
.00509753 51.552760	35.918566	310.716125	U
930 22 Mar 2022 01:42:02.340 .00509753 51.552760 415.556406	346.645557	5530.413282	6
940 22 Mar 2022 17:01:48.184			
.00512818 51.552795	6/59.009110 37 737443	307 472535	U
415.712194	346.387536	5530.350547	6
950			
23 Mar 2022 08:21:33.422	6758.957290	6759.137123	0
.00515810 51.552856 415.864400	39.554849 346.135847	304.228941 5530.289499	6
23 Mar 2022 23:41:18.055 .00518724 51.552918	6758.904451	6759.086321	0
.00518724 51.552918	41.372066	300.985361	
970	345.888307		6
24 Mar 2022 15:01:02.075	6758.851019	6759.034883	0
.00521563 51.552955	43.188924	297.741798	
416.150487 980			6
25 Mar 2022 06:20:45.485	6758.798799	6758.984609	0
.00524316 51.552948	45.006237	294.498239	
416.286069	345.409149	5530.102321	6
990			_
25 Mar 2022 21:40:28.286			0
.00526984 51.552884 416.414403		291.254664 5530.038858	7
000			
26 Mar 2022 13:00:10.466			0
.00529565 51.552764 416.536645		288.011042 5529.975173	7
010			
27 Mar 2022 04:19:52.032 .00532047 51.552602	6758.638556 50.467041	6758.829881 284.767343	0
416.653057		5529.912428	7
020			

Time (UTCC) Se	mi-parameter (km) Sem	i-major Avia (km)	Faa
Time (UICG)	mir-parameter (km) sem	II-Major Axis (KM)	
entricity Inclination (deg)			
of Apogee (km) Height of F	erigee (km) Sidereal	Period (sec) Or	bit Co
unt			
27 Mar 2022 19:39:32.977 .00534434 51.552420 416.761278	6850 504050	6850 888006	•
27 Mar 2022 19:39:32.977	6758.584053	6758.777096	Ü
.00534434 51.552420	52.291908	281.523542	
416.761278	344.518915	5529.847647	7
030			
28 Mar 2022 10:59:13.296	6758.529921	6758.724619	0
.00536720 51.552244	54 119486	278 279624	•
416 062021	244 212207	FF00 703044	7
416.863031	344.312207	5529./83244	,
040			
29 Mar 2022 02:18:52.991	6758.476109	6758.672388	0
.00538897 51.552100 416.957677	55.950793	275.035585	
416.957677	344.113098	5529.719143	7
050			-
20 Mars 2022 17:20:22 0EC	C7E0 420712	C7E0 C10E00	0
29 Mar 2022 17:38:32.056 .00540969 51.552009	0/30.420/13	6/56.616502	U
.00540969 51.552009	57.785946	271.791435	
417.043526	343.919478	5529.653011	7
060			
30 Mar 2022 08:58:10.485	6758.366086	6758.565310	0
.00542929 51.551980	59 625054	268 547192	•
417 100506	242 524002	5500 505520	7
417.122526	343./34093	5529.58//32	,
070			
070 31 Mar 2022 00:17:48.282 .00544772 51.552015	6758.311249	6758.511826	0
.00544772 51.552015	61.469271	265.302879	
417.193315	343.556336	5529.522094	7
080			-
31 Mar 2022 15:37:25.438 .00546503 51.552106	C7E0 2EE122	C7E0 4EC07E	^
31 Mar 2022 15:37:25.438	6/58.255123	6/58.4569/5	0
.00546503 51.552106	63.318518	262.058521	
417.255155	343.384795	5529.454780	7
090			
1 Apr 2022 06:57:01.950 .00548113 51.552236	6758.199962	6758.403003	0
.00548113 51.552236	65.173094	258.814140	
417.309678	242 22227	EE20 200E44	7
	343.222327	3329.366344	,
100			
1 Apr 2022 22:16:37.822	6758.144287	6758.348430	0
.00549600 51.552386	67.034272	255.569752	
417.355340	343.067520	5529.321571	7
110			
2 Apr 2022 13:36:13.045	6750 007601	6759 202940	0
<del>-</del>			U
.00550969 51.552534		252.325368	
417.391913	342.919768	5529.253350	7
120			
3 Apr 2022 04:55:47.617	6758.032067	6758.238147	0
.00552207 51.552661		249.080987	
			7
417.420608	342.781687	5529.186230	,
130			
3 Apr 2022 20:15:21.541	6757.975707		0
.00553318 51.552751	72.658864	245.836607	
417.439848	342.651383	5529.118081	7

Page 62			
Time (UTCG) Ser	ni-parameter (km) Sem:	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) I	Teight
of Apogee (km) Height of Pe			
	erigee (km) Sidereal	Period (sec) Ori	oit Co
unt			
140			
4 Apr 2022 11:34:54.807 .00554302 51.552794 417.449995	6757 010005	6750 126520	0
4 Apr 2022 11:34:54.807	0/3/.910093	0/30.120339	U
.00554302 51.552794	74.549372	242.592217	
417.449995	342.529084	5529.049264	7
150			
E 3 0000 00 E4 0F 410	6858 063064	6850 081240	•
5 Apr 2022 02:54:27.419	6/5/.863064	6/58.0/1342	U
.00555150 51.552787	76.448547	239.347801	
417.451759	342,416925	5528.981526	7
160			_
			_
5 Apr 2022 18:13:59.377	6757.806468	6758.015281	0
.00555865 51.552733	78.357458	236.103346	
417.443757	342 312806	5528 912729	7
100	342.312000	5520.512725	,
170			
6 Apr 2022 09:33:30.675 .00556446 51.552642 417.426444	6757.749778	6757.959026	0
.00556446 51.552642	80.275909	232.858834	
417 426444	242 217600	EE20 042602	7
417.420444	342.21/608	5526.843693	,
180			
7 Apr 2022 00:53:01.318	6757.694088	6757.903664	0
.00556885 51.552527	92 204722	220 614254	_
.00550005 51.552527	02.204/22	229.014254	_
417.400416	342.132913	5528.775754	7
190			
7 Apr 2022 16:12:31.306	6757.637737	6757.847540	0
00555100	07571057757	0737.017310	·
.00557188 51.552403	84.144836	226.369595	
417.364475	342.056606	5528.706880	7
8 Apr 2022 07:32:00.636 .00557349 51.552290 417.318949	6757 50157 <i>6</i>	6757 701409	0
6 Apr 2022 07:32:00.636	0/3/.3013/0	0/5/./91490	U
.00557349 51.552290	86.096056	223.124853	
417.318949	341.990048	5528.638107	7
210			
	6858 F06405	4858 BO4440	_
8 Apr 2022 22:51:29.315			0
.00557365 51.552203	88.059278	219.880027	
417.264648	341.934188	5528.570514	7
	3121331200	33201373321	•
220			
9 Apr 2022 14:10:57.344	6757.470831	6757.680669	0
.00557241 51.552155	90.035281	216.635122	
417.200219		5528.502101	7
	341.00/119	5526.502101	,
230			
10 Apr 2022 05:30:24.723	6757.415655	6757.625285	0
.00556968 51.552154		213.390146	
			-
417.126081	341.850489	5528.434136	7
240			
10 Apr 2022 20:49:51.459	6757 361533	6757 570847	0
.00556549 51.552203			
417.043072	341.824622	5528.367332	7
250			
11 Apr 2022 12:09:17.556	6757.306990	6757.515880	0
			U
.00555988 51.552296	96.042266	206.900031	

rage 63			
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			
	singee (Am) biderear	reriod (Bec) or	DIC CO
unt			
416 040056	241 005004	5500 000000	_
416.949856	341.80/904	5528.299880	,
260			
260 12 Apr 2022 03:28:43.015 .00555275 51.552422 416.847048	6757.253222	6757.461575	0
.00555275 51.552422	98.072504	203.654915	
416 847048	341 802102	5528 233240	7
270	541.002102	3320.233240	,
- · ·			
12 Apr 2022 18:48:07.844	6757.200485	6757.408193	0
.00554417 51.552562	100.118041	200.409773	
416.735392	341.806993	5528.167732	7
280		00_01_01/0_	-
	<b>6555 145000</b>	<b>4858 354348</b>	_
13 Apr 2022 10:07:32.048	6757.147392	6757.354347	0
.00553413 51.552694	102.179102	197.164612	
416.613415	341.821278	5528.101656	7
200			
14 Apr 2022 01:26:55.628 .00552258 51.552794 416.482224	6757 005367	6757 201459	0
14 Apr 2022 01:20:55.626	0/5/.09530/	6/5/.301456	U
.00552258 51.552794	104.255666	193.919429	
416.482224	341.846691	5528.036755	7
300			
14 Apr 2022 16:46:18.597	6757 044322	6757 249445	0
.00550962 51.552839	106 240255	100 (74017	U
.00550962 51.552639	106.349355	190.6/421/	
416.342319	341.882571	5527.972928	7
310			
15 Apr 2022 08:05:40.950 .00549515 51.552813	6756.992079	6757.196124	0
00549515 51 552813	108 459858	187 428965	_
416 100040	241 027200	FF27 007407	-
416.190948	341.92/300	5527.907497	7
15 Apr 2022 23:25:02.688	6756.941183	6757.144045	0
15 Apr 2022 23:25:02.688 .00547923 51.552708	110.587738	184.183654	
416.030987	341 983103	5527.843591	7
	341.703103	3327.043331	,
330			
16 Apr 2022 14:44:23.820	6756.891097	6757.092679	0
.00546192 51.552529	112.734686	180.938267	
	342.048958		7
340		3027073000	-
15 3	6556 040402	CDED 040C01	•
17 Apr 2022 06:03:44.347	6756.840493	6757.040691	0
.00544316 51.552293	114.899988	177.692788	
		5527.716764	7
350			
17 Apr 2022 21:23:04.275	6756 701526	6756 000242	0
1/ Apr 2022 21:23:04.2/5	0/50./91520	6/56.990242	U
.00542300 51.552026			
415.496412	342.210073	5527.654859	7
360			
18 Apr 2022 12:42:23.613	6756.743030	6756 940172	0
			U
.00540151 51.551763			
	342.305513	5527.593418	7
370			
19 Apr 2022 04:01:42.360	6756.693982	6756.889454	0
	<del></del>		·

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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) Or	bit Co
unt			
.00537859 51.551539	121.516334	167.955746	
415.095002	342.409906	5527.531182	7
200			
19 Apr 2022 19:21:00.523	6756.646860	6756 840571	0
00535434 51 551394	122 763082	164 700800	·
•00222424 21.227204	123.703902	104.709090	
414.881990	342.525153	5527.471199	7
390			
20 Apr 2022 10:40:18.110 .00532879 51.551313	6756.599580	6756.791445	0
.00532879 51.551313	126.033902	161.463978	
414.659955	342.648936	5527.410917	7
400	312.010330	3327.110317	,
	6856 550046	CDEC D41000	•
21 Apr 2022 01:59:35.117	6756.552046	6/56./419//	0
.00530188 51.551329	128.325524	158.218033	
414.428436	342.781519	5527.350217	7
44.0			
21 Apr 2022 17:18:51.554 .00527371 51.551415 414.190253	6756.506510	6756.694427	0
00527271 51 551415	130 641405	154 972074	
414 100050	130.041403	134.9/20/4	7
414.190253	342.924602	5527.291869	,
420			
22 Apr 2022 08:38:07.426	6756.460057	6756.645882	0
.00524429 51.551544	132.980719	151.726113	
413.942662	343.075103	5527.232301	7
430	0101070100	301,110101	-
	C7EC 4139CE	6756 507522	0
22 Apr 2022 23:57:22.725	0/50.413005	0/50.59/522	U
.00521362 51.551681	135.343830	148.480148	
413.686880	343.234165	5527.172960	7
23 Apr 2022 15:16:37.464 .00518179 51.551793	6756.369435	6756.550854	0
.00518179 51.551793	137.733311	145.234169	
413.424866	343.402843	5527.115696	7
450	343.402043	3327.113090	,
			_
24 Apr 2022 06:35:51.641			0
.00514883 51.551854		141.988158	
413.153794	343.577646	5527.056632	7
460			
24 Apr 2022 21:55:05.253	6756 278726	6756 455481	0
			Ū
.00511478 51.551850		138.742093	_
412.876271	343.760692	5526.998668	7
470			
25 Apr 2022 13:14:18.308			0
.00507970 51.551782	145.056139	135.495953	
412.592686		5526.941827	7
480	010.701027	3320.511027	,
	CREC 100505	6856 361463	_
26 Apr 2022 04:33:30.801			0
.00504368 51.551660			
412.301370	344.147550	5526.883300	7
490			

Page 65			
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) Orl	bit Co
unt			
26 Apr 2022 19:52:42.732 .00500672 51.551507 412.005013	6756 145692	6756 215044	0
20 Apr 2022 19:52:42.732	0/50.145002	100 003400	U
.005006/2 51.55150/	150.073559	129.003400	_
412.005013	344.351075	5526.826345	7
500			
27 Apr 2022 11:11:54.107 .00496892 51.551348	6756.101927	6756.268740	0
.00496892 51.551348	152.626084	125.756982	
411.703087	344.560394	5526.769530	7
510			-
28 Apr 2022 02:31:04.918	6756 057220	6756 221453	0
20 Apr 2022 02:31:04.910	0/50.05/220	100 510400	U
.00493036 51.551206	155.206057	122.510480	_
411.395026	344.773880	5526.711507	7
520			
28 Apr 2022 17:50:15.167	6756.013878	6756.175499	0
28 Apr 2022 17:50:15.167 .00489102 51.551102 411.083061	157.816681	119.263910	
411.083061	344.993938	5526.655120	7
530	3111333330	3320.033120	•
20 7 2022 00:00:24 050	6755 070160	6756 100153	•
29 Apr 2022 09:09:24.858 .00485107 51.551050	6/55.9/0162	6/56.129153	U
.00485107 51.551050	160.457815	116.017292	
410.766592	345.217714	5526.598252	7
540			
30 Apr 2022 00:28:33.981	6755.925720	6756.082061	0
.00481050 51.551054			
410 445162	345 444960	5526 540470	7
410.445162 550			-
30 Apr 2022 15:47:42.540 .00476937 51.551113	<b>6777</b> 000600	<b>4774</b> 004000	
30 Apr 2022 15:47:42.540	6755.882620	6756.036299	0
.00476937 51.551113 410.121331	165.829841	109.523982	
410.121331	345.677266	5526.484319	7
560			
1 May 2022 07:06:50.536 .00472786 51.551217	6755.838769	6755.989783	0
.00472786 51.551217	168.562851	106.277322	
409.794167	345 911400	5526 427244	7
570	343.711400	3320.12/211	,
	CREE RO4100	6855 040481	•
1 May 2022 22:25:57.958			0
.00468588 51.551353		103.030668	
409.462999	346.147944	5526.369192	7
580			
2 May 2022 13:45:04.810	6755.751074	6755.896755	0
.00464366 51.551503		99.784020	
409.131820	346.387690	5526.313098	7
590	340.307030	3320.313030	,
	CD55 D0CD05		
3 May 2022 05:04:11.091			0
.00460124 51.551653	176.947732	96.537376	
408.798144	346.627509	5526.255517	7
600			
3 May 2022 20:23:16.790	6755.662233	6755.802626	0
.00455862 51.551786		93.290722	•
408.462746	346.868505	5526.197602	7
100.102/10	340.000303	3320.137002	,

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
 610		
4 May 2022 11.42.21 915	6755,619171	6755.756956 0
.00451611 51.551891	182.693971	90.044045
.00451611 51.551891 408.129668	347.110244	5526.141566 7
620		
5 May 2022 03:01:26.461		
.00447360 51.551961 407.795034	183.612233	5526.083575 7
630		
5 May 2022 18:20:30.421 .00443126 51.551993 407.462024	6755.530304	6755.662958 0
.00443126 51.551993	188.560695	83.550559
407.462024	347.589892	5526.026233 7
640		
6 May 2022 09:39:33.804 .00438937 51.551990	6/55.48/282 191 541173	80 303717
407.133328	347.827550	5525.970382 7
650		
7 May 2022 00:58:36.605		
.00434776 51.551960	194.547561	77.056794
406.804956	348.061818	5525.912650 7
660 7 May 2022 16:17:38 820	6755 399169	6755.524470 0
7 May 2022 16:17:38.820 .00430673 51.551915	197.583231	73.809781
.00430673 51.551915 406.481683	348.293258	5525.856312 7
n / U		
8 May 2022 07:36:40.460 .00426646 51.551868	6755.356261	6755.479229 0
.00426646 51.551868 406.164211	200.647144	70.562680 5525.800802 7
680	340.520247	5525.600602
8 May 2022 22:55:41.517	6755.311981	6755.432673 0
.00422682 51.551834	203.734178	67.315495
405.849661	348.741686	5525.743681 7
690	4555 040054	
9 May 2022 14:14:41.992		6755.387766 0 64.068237
.00418817 51.551825 405.543512	348.958021	5525.688582 7
700		
10 May 2022 05:33:41.895		
.00415057 51.551853		
	349.167447	5525.633583 7
710 10 May 2022 20:52:41.220	6755 182952	6755.297284 0
.00411397 51.551920		57.573572
404.951373		5525.577565 7
720		
11 May 2022 12:11:39.972	6755.141116	6755.253498 0
.00407875 51.552027	216.317809	54.326203

mima (IIIIGG)	ni (1)	i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit Co
unt		
404 660510	240 562405	FF0F F03040 F
404.669512	349.563485	5525.523842
12 May 2022 03:30:38.158	6755.098776	6755.209296 0
12 May 2022 03:30:38.158 .00404484 51.552165	219.510745	51.078835
404.396069	349.748524	5525.469610 7
740		
12 May 2022 18:49:35.771	6755.055789	6755.164537 0
00401230 51 552321	222 718714	47 831479
.00401230 51.552321 404.131311	240 022762	5525.414693 7
404.131311	349.923/63	5525.414695
750		
13 May 2022 10:08:32.821 .00398150 51.552477 403.880492	6755.014905	6755.121990 0
.00398150 51.552477	225.941175	44.584138
403.880492	350.089487	5525.362490 7
14 May 2022 01:27:29.314	6754.973047	6755.078563 0
.00395224 51.552614	229 171051	41 336811
402 620205	250 242042	5525.309209 7
403.639285	350.243842	5525.309209 /
770		
14 May 2022 16:46:25.243	6754.930842	6755.034890 0
.00392467 51.552716	232.409407	38.089480
403.409199		
15 May 2022 08:05:20.620 .00389913 51.552770 403.195206	6754.890908	6754.993605 0
.00389913 51.552770	235.652871	34.842126
403 195206	350 519005	5525.204973 7
103.133200	330.318003	3323.204973
790	6774 0404F6	
15 May 2022 23:24:15.448	6754.849156	6754.950603 0
.00387531 51.552774		
402.991150	350.636055	5525.152212 7
800		
16 May 2022 14:43:09.719	6754.807912	6754.908217 0
.00385347 51.552734		
		5525.100209 7
810	550.741412	3323.100203
	6854 860686	CRE4 0CR0C1 0
17 May 2022 06:02:03.450		
.00383383 51.552664		
402.628007	350.833914	5525.050818 7
820		
17 May 2022 21:20:56.638	6754.727028	6754.825393 0
.00381604 51.552582		
	350.911679	
	550.511075	JJ21.JJUJJ2 /
830	CBE4 COCC40	CBE4 BO4011
18 May 2022 12:39:49.279		
.00380046 51.552510		18.604287
402.318510	350.975912	5524.948066 7
840		
19 May 2022 03:58:41.389	6754.647606	6754.744487 0

entricity Inclination (deg) of Apogee (km) Height of Pe	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
.00378717 51.552463 402.188879	255.032438 351.026096	15.356466 5524.899329 7
850 19 May 2022 19:17:32.961		
.00377584 51.552449 402.069966	258.220996	12.108595
860		
20 May 2022 10:36:23.994 .00376687 51.552468	261.391492	8.860696
401.968946	351.081104	5524.798156 7
21 May 2022 01:55:14.500 .00376017 51.552508 401.883764	6754.526756	6754.622259 0
401.883764	351.086754	5.612/92 5524.749368 7
21 May 2022 17:14:04.473	6754.485198	6754.580465 0
.00375555 51.552554 401.810624	267.660270 351.076307	2.364894 5524.698092 7
890		
22 May 2022 08:32:53.912 .00375335 51.552587	270.755994	359.117002
401.756063 900	351.051747	5524.649557 7
22 May 2022 23:51:42.827 .00375331 51.552593	6754.405319	6754.500472 0
.00375331 51.552593 401.715208	273.821270 351.011735	355.869109 5524.599950 7
910		
23 May 2022 15:10:31.206 .00375544 51.552560	6754.363705 276.857116	6754.458965 0 352.621199
401.687931 920	350.955999	5524.549027 7
24 May 2022 06:29:19.057	6754.324369	6754.419858 0
.00375996 51.552487 401.679184		349.373248 5524.501049 7
930		
24 May 2022 21:48:06.383 .00376647 51.552377		
401.682103	350.801714	5524.450809 7
940 25 May 2022 13:06:53.173	6754.241273	6754.337535 0
.00377515 51.552241 401.699203		342.877155 5524.400049 7
950		
26 May 2022 04:25:39.436 .00378607 51.552093	6754.201586 288.658511	6754.298405 0 339.628982
401.733674 960	350.589135	5524.352042 7

entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
26 May 2022 19:44:25.172 .00379884 51.551949 401.778194			_
26 May 2022 19:44:25.172	6754.159399	6754.256871	0
401.778194	350.461547	5524.301086	7
970	330.101317	3321.301000	,
27 May 2022 11:03:10.370	6754.117454	6754.215688	0
.00381368 51.551822	294.342976	333.132372	
401.837109	350.320267	5524.250561	7
980	6754 076010	6754 176021	0
28 May 2022 02:21:55.042	0/54.0/0919 297 127529	329 883947	U
.00383049 51.551722 401.910815	350.167226	5524.201895	7
990			
28 May 2022 17:40:39.182 .00384900 51.551656	6754.033834	6754.133895	0
.00384900 51.551656	299.875397	326.635461	
401.993548	350.000242	5524.150214	8
000			_
29 May 2022 08:59:22.783	6753.991826	6754.092952	0
.00386944 51.551624 402.090502	302.585524	323.386928	8
010			
30 May 2022 00:18:05.857	6753.950263	6754.052545	0
.00369132 31.331623	303.236061	320.138366	
402.199057	349.632034	5524.050412	8
020			
30 May 2022 15:36:48.395 .00391515 51.551642	6753.906481	6754.010010	0
.00391515 51.551642 402.315956	307.890695	316.889789	8
030	349.430063	5525.996227	0
31 May 2022 06:55:30.394	6753.864256	6753,969127	0
.00394047 51.551671	310.487649	313.641206	
402.445959	349.218294	5523.948072	8
040			
31 May 2022 22:14:11.863		6753.927795	0
.00396715 51.551698		310.392623	•
402.584649 050	348.996941	5523.897365	8
1 Jun 2022 13:32:52.791	6753 777356	6753 885160	0
.00399521 51.551709		307.144040	J
402.731359		5523.845059	8
060			
2 Jun 2022 04:51:33.183			0
.00402467 51.551693		303.895448	_
402.889220	348.525230	5523.794840	8
070 2 Jun 2022 20:10:13.043	6753.691418	6753.802485	0
.00405526 51.551643	320.511071	300.646839	J
403.053891	348.277079	5523.743633	8

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
080 3 Jun 2022 11:28:52.363	6753 647219	6753.760033 0
.00408703 51.551556	322.931218	297.398197
403.225868	348.020198	5523.691553 8
090		
4 Jun 2022 02:47:31.150		
.00411992 51.551433		
403.407007 100	347.757457	5523.641498 8
4 Jun 2022 18:06:09.407	6753.560796	6753.677320 0
4 Jun 2022 18:06:09.407 .00415373 51.551282	327.671146	290.900748
403.593268	347.487372	5523.590080 8
110		
5 Jun 2022 09:24:47.128 .00418852 51.551113	6753.516783	6753.635267 0
403.786026	347 210507	5523.538489
120	347.210307	3323.330409
6 Jun 2022 00:43:24.322	6753.474318	6753.594827 0
.00422418 51.550943	332.288317	284.402976
403.986240	346.929415	5523.488879 8
130		
6 Jun 2022 16:02:00.992 .00426057 51.550788	6753.430388	6753.552981 0
.00426057 51.550788 404.189933	334.553889	5523.437543 8
7 Jun 2022 07:20:37.132 .00429773 51.550665	6753.386782	6753.511522 0
.00429773 51.550665	336.792190	277.904817
404.399282	346.349763	5523.386681 8
150	6752 244012	CRE2 48115C 0
7 Jun 2022 22:39:12.751 .00433552 51.550588	339.003322	6/53.4/1156 U
404.613974	346.054339	
160		
8 Jun 2022 13:57:47.851		6753.429575 0
.00437386 51.550564 404.831130	341.190913	
	345.754020	5523.286150 8
170 9 Jun 2022 05:16:22.430	6753 257337	6753.388844 0
.00441278 51.550593		
	345.450641	
180		
9 Jun 2022 20:34:56.497	6753.214843	6753.348702 0
.00445209 51.550667		264.907608
405.278203 190	345.145200	5523.186937 8
10 Jun 2022 11:53:30.052	6753.171242	6753.307497 0
.00449178 51.550768	347.615425	261.658239

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		
405.504890	344.836105	5523.136390 8
200		
11 Jun 2022 03:12:03.095	6753.128769	6753.267465 0
.00453185 51.550870	349.714866	258.408883
405.735240	344.525689	5523.087279 8
210		
11 Jun 2022 18:30:35.635	6753.086270	6753.227438 0
.00457208 51.550947	351.795662	255.159551
405.966713	344.214164	5523.038176 8
220		
12 Jun 2022 09:49:07.668 .00461254 51.550975 406.198984	6753.042957	6753.186635 0
.00461254 51.550975	353.858910	251 910242
406.198984	343.900286	5522.988121 8
230	313.300200	3322.300121
13 Jun 2022 01:07:39.197	6753.000897	6753.147115 0
.00465315 51.550934	355 904224	248 660940
406 433551	3/3 596670	5522.939640 8
406.433551 240	343.300079	3322.939040
13 Jun 2022 16:26:10.229	6752 050206	6753.107165 0
.00469375 51.550821	357 03/150	245 411624
106 667526	242 272704	5522.890631 8
406.667536	343.272794	5522.890051
250 14 Jun 2022 07:44:40.759 .00473442 51.550644 406.901565 260	6752 015327	6753.066695 0
00472442	0/32.91332/	242 162266
406 001565	339.940033	5522.840985 8
260	342.93/023	5522.840965
260 14 Jun 2022 23:03:10.790	6752 072225	6753.027201 0
.00477504 51.550427	1 0/955	0753.027201 0
407.136147	1.940000	5522.792536 8
270	342.644255	5522.792556
15 Jun 2022 14:21:40.326	6752 920620	6752.987225 0
.00481550 51.550201		235.663322
407.369234		
280	342.331217	5522.743496 8
16 Jun 2022 05:40:09.362	6752 707602	6752.946915 0
.00485590 51.550002		232.413704
407.601550	342.018280	5522.694047 8
290	CREO RAFEOC	6750 007464 0
16 Jun 2022 20:58:37.904		
.00489607 51.549860		229.163987
407.833149	341.707778	5522.645650 8
300		
17 Jun 2022 12:17:05.953		
.00493598 51.549794		225.914184
408.062213	341.398164	5522.596244 8
310	CDE0 (5055)	CREO 004545
18 Jun 2022 03:35:33.504	6752.659564	6752.826747 0

Page /2			
Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) He	ight
of Apogee (km) Height of Pe			
	singee (Am) bideredi	reriod (Bec) Orbi	
unt			
00408560 51 540010	11 866558	000 664315	
.00497568 51.549810	11.766557	222.664315	
408.289669	341.089824	5522.546633	8
220			
18 Jun 2022 18:54:00.561 .00501500 51.549897 408.515207	6752,617123	6752.786957	0
00501500 51 549897	13 600732	219 414405	_
100 51 500 51 500 51 500 51 500 51	13.099732	219.414403	_
408.515207	340.784707	5522.497823	8
330			
19 Jun 2022 10:12:27.121	6752.573446	6752.745929	0
.00505396 51.550035			
400 535053	240 400005	5500 445400	_
408.737053	340.480805	5522.44/492	8
340			
20 Jun 2022 01:30:53.180	6752.529841	6752.704966	0
.00509255 51.550193	17.543431	212.914539	
400 056456	240 170476	EE00 207042	8
.00509255 51.550193 408.956456	340.1/94/6	5542.39/243	•
350			
20 Jun 2022 16:49:18.740 .00513061 51.550343	6752.486484	6752.664235	0
00513061 51 550343	19 455074	209 664604	
400 170405	220 001075	EE22 247270	8
409.172495	339.0019/5	5522.34/2/8	0
360			
21 Jun 2022 08:07:43.794	6752.441605	6752.621968	0
.00516818 51.550456	21.361307	206.414670	
400 202711	220 506224	EE32 20E420	8
409.383711	339.300224	3522.295429	0
370			
21 Jun 2022 23:26:08.334 .00520520 51.550516	6752.396880	6752.579835	0
.00520520 51.550516	23,261732	203.164725	
400 501350	220 20/212	EE22 24274E	8
409.591358	339.294313	3522.243/45	0
22 Jun 2022 14:44:32.361 .00524154 51.550513	6752.351944	6752.537462	0
.00524154 51.550513	25.158076	199.914756	
409.794162	339.006761	5522.191765	8
200	339.000701	3322.131703	O
390			
23 Jun 2022 06:02:55.864	6752.305551	6752.493607	0
.00527728 51.550448		196.664746	
	338.721773		8
	330.722773	3322.137303	·
400			
23 Jun 2022 21:21:18.839	6752.259515	6752.450073	0
.00531231 51.550332 410.184205	28.938925	193.414681	
410.184205	338.441942	5522.084567	8
410	330,112,12	3322.001307	•
24 Jun 2022 12:39:41.281			0
.00534653 51.550182	30.825201	190.164547	
410.370483	338.166598		8
420			•
	CREO 164	CREO 25222	_
25 Jun 2022 03:58:03.180	6/52.164575	6752.360023	0
.00538007 51.550018	32.708844	186.914337	
410.551204	337.894843	5521.974105	8
430			
<del></del>			

unt	
25 Jun 2022 19:16:24 531 6752 116868 6752 314695	٥
25 Jun 2022 19:16:24.531 6752.116868 6752.314695 .00541273 51.549864 34.590500 183.664050 410.726157 337.629234 5521.918502	Ū
410.726157 337.629234 5521.918502	8
110	
26 Jun 2022 10:34:45.328 6752.067769 6752.267924 .00544451 51.549737 36.471674 180.413687	0
410.893690 337.368158 5521.861129	8
450	
27 Jun 2022 01:53:05.562 6752.018369 6752.220811	0
.00547554 51.549654 38.351544 177.163256	0
411.055861 337.111762 5521.803337 460	8
27 Jun 2022 17:11:25.230 6751.968764 6752.173428	0
.00550553 51.549626 40.231409 173.912767	
411.210739 336.862117 5521.745214	8
470 28 Jun 2022 08:29:44.322 6751.917859 6752.124692	0
.00553464 51.549655 42.112196 170.662232	U
411.358258 336.617125 5521.685431	8
400	
28 Jun 2022 23:48:02.832 6751.866875 6752.075823	0
.00556289 51.549740 43.993149 167.411663	8
411.499859 336.377787 5521.625486 490	
29 Jun 2022 15:06:20.756 6751.815331 6752.026317 .00558997 51.549870 45.875994 164.161069	0
.00558997 51.549870 45.875994 164.161069	
<b>411.632948 336.145686 5521.564760</b>	8
30 Jun 2022 06:24:38.086 6751.762971 6751.975939	0
.00561619 51.550033 47.760918 160.910456	
411.759289 335.918588 5521.502964	8
510	_
30 Jun 2022 21:42:54.816 6751.710529 6751.925411 .00564139 51.550211 49.647570 157.659826	0
411.878659 335.698163 5521.440984	8
520	
1 Jul 2022 13:01:10.941 6751.657205 6751.873914	0
.00566534 51.550385 51.537814 154.409177 411.988597 335.485230 5521.377816	8
530	0
2 Jul 2022 04:19:26.455 6751.603609 6751.822085	0
.00568842 51.550538 53.431170 151.158502	
412.092278 335.277892 5521.314241	8
540 2 Jul 2022 19:37:41.352 6751.549640 6751.769797	0
.00571029 51.550653 55.327866 147.907790	Ū
412.187341 335.078253 5521.250104	8

Page /4			
Time (UTCG) Ser	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			
550			
3 Jul 2022 10:55:55.626 .00573087 51.550721	6751 494851	6751 716597	0
00572007 51 550721	E7 220E42	144 657026	Ū
410 070000	27.225343	144.05/020 FF31 104047	8
.00573087 51.550721 412.272803	334.000390	3321.164647	0
300			
4 Jul 2022 02:14:09.272	6751.440137	6751.663403	0
.00575050 51.550738	59.135332	141.406195	
412.351847	334.700960	5521.119599	8
570			
4 Jul 2022 17:32:22.285	6751.384748	6751.609429	0
.00576873 51.550706	61.045986	138,155283	
412.420612	334 524246	5521 053394	8
FOA			
5 Jul 2022 08:50:34.659 .00578568 51.550638 412.480272	C7E1 2200E2	6751 554054	0
5 Jul 2022 08:50:34.659	6/51.328952	0/51.554954	U
.00578568 51.550638	62.962735	134.904279	
412.480272	334.355637	5520.986575	8
590			
6 Jul 2022 00:08:46.392	6751.273294	6751.500535	0
.00580154 51.550551	64.884621	131.653180	
412.532644	334.194425	5520.919824	8
600			
6 Jul 2022 15:26:57.479	6751,216886	6751 445248	0
.00581585 51.550468	66.812705	128 401987	·
A12 573673	224 042022	EE20 9E2000	8
412.573673 610			
7 Jul 2022 06:45:07.916 .00582893 51.550412 412.606439	CDE4 4 CO C 4 O	<b>4774 200000</b>	•
7 Jul 2022 06:45:07.916	6751.160640	6751.390028	0
.00582893 51.550412	68.747847	125.150713	
412.606439	333.899618	5520.784277	8
620			
7 Jul 2022 22:03:17.703	6751.104238	6751.334556	0
.00584076 51.550404			
412.630464	333.764648	5520.716236	8
630			
8 Jul 2022 13:21:26.836	6751 047470	6751 278594	0
			Ū
.00585099 51.550459	/2.03/99/	110.04/995	•
412.643236	333.639952	5520.647594	8
640			
9 Jul 2022 04:39:35.317			0
.00586002 51.550580		115.396601	
412.648475	333.523816	5520.579582	8
650			
9 Jul 2022 19:57:43.146	6750.934683	6751.167122	0
.00586765 51.550760		112.145213	
412.643614		5520.510865	8
660	<b></b>		•
10 Jul 2022 11:15:50.320	6750.878275	6751.111193	0
.00587373 51.550979	70 530160	108.893845	U
.00307373 51.330979	/0.532162	100.073043	

Page /5		
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		
412.628389	333.319998	5520.442265 8
670		
11 Jul 2022 02:33:56.845 .00587861 51.551209 412.605718	6750.822559	6751.055862 0
.00587861 51.551209	80.514482	105.642499
412 605719	333 333006	5520 374309 9
680	333.232000	3320.374390
880		
11 Jul 2022 17:52:02.719	6750.766111	6750.999678 0
.00588196 51.551419	82.505751	102.391164
412.571784	333.153573	5520.305485 8
690		
12 Jul 2022 09:10:07.942	6750.710608	6750.944323 0
00000004	0/301/10000	00 130917
.00588384 51.551580 412.528770	04.50/400	99.139017
412.528770	333.085875	5520.237589 8
13 Jul 2022 00:28:12.523	6750.655438	6750.889199 0
700 13 Jul 2022 00:28:12.523 .00588444	86.519761	95.888428
412.477416	333.026982	5520.169977 8
710	333.020302	3320.203377
7 = 0		
13 Jul 2022 15:46:16.455	6750.599521	6750.833197 0
.00588340 51.551694		
412.414044	332.978349	5520.101288 8
720		
14 Jul 2022 07:04:19.744	6750.545138	6750.778617 0
.00588094 51.551647	90.577808	89 385399
410 340573	222 040661	5520.034344 8
412.342573	332.940661	5520.034344 8
730		
14 Jul 2022 22:22:2393 .00587707 51.551554	6750.490356	6750.723526 0
.00587707 51.551554	92.624876	86.133716
412.261014	332.912037	5519.966773 8
740		
15 Jul 2022 13:40:24.398	6750 435197	6750 667922 0
.00587149 51.551438		
	332.894421	5519.898574 8
750		
16 Jul 2022 04:58:25.765	6750.381780	6750.613952 0
.00586452 51.551329	96.756977	
412.066090		5519.832378 8
760	3321007021	55231052570
16 Jul 2022 20:16:26.495	6750 227167	67E0 EE0660 0
16 Jul 2022 20:16:26.495	6/50.32/16/	6750.558660 0
.00585598 51.551248		
411.952830	332.890491	5519.764563 8
770		
17 Jul 2022 11:34:26.582	6750.272774	6750.503458 0
.00584576 51.551210		
		5519.696856 8
	332 • 30±030	3319.090030
780	CREO 010010	CEEO 440COO
18 Jul 2022 02:52:26.034	6750.219843	6750.449609 0

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
	102 056455	60 052500
.00583414 51.551220 411.695684	103.056455	69.873788 5519.630810 8
130		
18 Jul 2022 18:10:24.847	6750.165003	6750.393721 0
.00582084 51.551273	105.184596	66.621652
411.549710	332.963733	5519.562264 8
800	C750 11111 <i>4</i>	6750 220661 0
19 Jul 2022 09:28:23.013 .00580594 51.551357	6/50.111114 107 327887	6750.338661 0
411.393755	333.009567	5519.494733 8
810		
20 Jul 2022 00:46:20.541	6750.057924	6750.284193 0
.00578964 51.551456	109.487089	60.117373
810 20 Jul 2022 00:46:20.541 .00578964 51.551456 411.228922 820	333.065464	5519.427928 8
820 20 Jul 2022 16:04:17.419		
.00577160 51.551554	111 661489	56 865237
411.049916	333.130627	5519.358114 8
830		
21 Jul 2022 07:22:13.641	6749.948549	6750.171888 0
.00575208 51.551634	113.852796	53,613090
410.862441	333.207335	5519.290188 8
21 Jul 2022 22:40:09.213 .00573112 51.551686	6/49.894295	6750.116008 0
410.664743	333 293272	5519.221652 8
850		
22 Jul 2022 13:58:04.115 .00570844 51.551704	6749.837735	6750.057694 0
.00570844 51.551704	118.286800	47.108710
410.452961	333.388427	5519.150132 8
860	CE40 E0220C	6750 001402
23 Jul 2022 05:15:58.345	6749.783296	6750.001403 0 43.856440
.00568438 51.551687 410.233946		5519.081093 8
870	3331131000	55151001035
23 Jul 2022 20:33:51.903		
.00565882 51.551639	122.794297	
410.003118	333.609635	5519.009926 8
880	6740 660440	6840 003518
24 Jul 2022 11:51:44.767		
.00563163 51.551569 409.759367	333.733666	
890		0
25 Jul 2022 03:09:36.936	6749.613812	6749.825725 0
.00560315 51.551487	127.379590	34.099144
409.508988	333.868461	5518.865632 8
900		

Page //			
Time (UTCG) Ser	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pount			
25 Jul 2022 18:27:28.406 .00557315 51.551405	CD40 FFFF6	6740 765100	^
25 Jul 2022 18:27:28.406	6749.555550	6749.765198	0
.00557315 51.551405	129.703206	30.846529	•
.00557315 51.551405 409.245623 910	334.010772	5518.791399	8
910	6840 406580	6840 802061	•
26 Jul 2022 09:45:19.154 .00554164 51.551334	6/49.4965/9	6/49./03861	U
.00554164 51.551334	132.048131	27.593823	•
408.971311	334.162410	5518.716173	8
920			
27 Jul 2022 01:03:09.184	6749.439282	6749.644121	0
.00550891 51.551283	134.416227	24.341034	_
408.690311	334.323932	5518.642906	8
930			_
27 Jul 2022 16:20:58.484	6749.378902	6749.581203	0
.00547471 51.551256	136.806529	21.088176	
27 Jul 2022 16:20:58.484 .00547471 51.551256 408.396170	334.492237	5518.565742	8
940			
28 Jul 2022 07:38:47.036	6749.318933	6749.518615	0
.00543917 51.551256	139.220485	17.835259	
408.093402	334.669827	5518.488982	8
950			
28 Jul 2022 22:56:34.846	6749.259942	6749.456938	0
.00540249 51.551280	141.659543	14.582296	
407.783823	334.856053	5518.413341	8
29 Jul 2022 14:14:21.900 .00536446 51.551323	6749.197948	6749.392179	0
.00536446 51.551323	144.122579	11.329300	
.00536446 51.551323 407.462007	335.048350	5518.333919	8
30 Jul 2022 05:32:08.185 .00532529 51.551373	6749.137277	6749.328680	0
.00532529 51.551373	146.611412	8.076276	
407.133836	335.249523	5518.256044	8
980			
30 Jul 2022 20:49:53.707	6749.076740	6749.265264	0
.00528511 51.551420		4.823227	
406.798886		5518.178271	8
990			
31 Jul 2022 12:07:38.452	6749.013953	6749.199537	0
.00524378 51.551452		1.570150	
406.453855	335.671218	5518.097664	9
000			
1 Aug 2022 03:25:22.415	6748.953004	6749.135610	0
.00520155 51.551459			•
406.104572	335.892648		9
010			,
1 Aug 2022 18:43:05.601	6748.891562	6749.071156	0
.00515850 51.551433		355.063867	J
405.749238		5517.940220	9
1001, 15200			

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
020 2 Aug 2022 10:00:47.997	6749 929991	6749 005426 0
.00511456 51.551372	159.458101	351.810631
.00511456 51.551372 405.386610	336.350242	351.810631 5517.859610 9
030		
3 Aug 2022 01:18:29.607	6748.768188	6748.941669 0
.00507000 51.551280	162.111408	348.557308
405.021793	336.587546	5517.781421 9
040 3 Aug 2022 16:36:10 434	6749 706669	6748.877073 0
3 Aug 2022 16:36:10.434 .00502487 51.551167 404.652335	164.793499	345.303883
404.652335	336.827810	5517.702202 9
050		
4 Aug 2022 07:53:50.471	6748.644856	6748.812172 0
.00497916 51.551047		
404.278592	337.071752	5517.622611 9
060	6840 505000	6540 540455
4 Aug 2022 23:11:29.726 .00493318 51.550937		
403.905257	170.245396 337.319697	5517.545725 9
070		
5 Aug 2022 14:29:08.204 .00488688 51.550854	6748.524373	6748.685543 0
.00488688 51.550854	173.015763	335.542932
403.528568	337.568517	5517.467319 9
NON		
6 Aug 2022 05:46:45.898 .00484033 51.550810	6748.463991	6748.622103 0
403.150690	1/5.815/80	5517.389520 9
090	337.019310	3317.303320
6 Aug 2022 21:04:22.823	6748.405643	6748.560733 0
.00479388 51.550809	178.646504	329.035169
402.775492	338.071975	5517.314261 9
100		
7 Aug 2022 12:21:58.981		
.00474735 51.550846 402.398439		325.781220 5517.237284 9
110	338.323487	5517.237264
8 Aug 2022 03:39:34.368	6748.287312	6748.436445 0
.00470095 51.550907		
402.023500	338.575390	
120		
8 Aug 2022 18:57:09.002	6748.230352	6748.376580 0
.00465496 51.550969		319.273298
401.652987 130	338.826173	5517.088429 9
9 Aug 2022 10:14:42.881	6748.171839	6748.315201 0
.00460914 51.551009	190.264743	316.019348

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
401 202125	220 074269	EE17 012160 0
401.282135 140	339.074200	5517.013160
10 Aug 2022 01:32:16.005 .00456384 51.551007	6748.115142	6748.255699 0
400.916645	339.320754	5516.940192 9
150 10 Aug 2022 16:49:48.389		
.00451920 51.550949	196.246893	309.511423
.00451920 51.550949 400.556492 160	339.563627	5516.868282 9
11 Aug 2022 08:07:20.028	6748.001975	6748.137113 0
.00447503 51.550834	199.277830	306.257400
11 Aug 2022 08:07:20.028 .00447503 51.550834 400.198241	339.801985	5516.794770 9
11 Aug 2022 23:24:50.928	6747.947057	6748.079593 0
.00443177 51.550671	202.335096	303.003294
399.848557	340.036630	5516.724234 9
180 12 Aug 2022 14:42:21.099	6747.891661	6748.021674 0
.00438939 51.550478	205.415959	299.749084
399.504399 190 13 Aug 2022 05:59:50.532 .00434789 51.550280 399.165449 200	340.264948	5516.653208 9
13 Aug 2022 05:59:50.532	6747.835514	6747.963078 0
.00434789 51.550280	208.519242	296.494753
399.165449 200	340.486708	5516.581354 9
13 Aug 2022 21:17:19.236	6747.781502	6747.906714 0
.00430763 51.550099	211.644393	293.240295
398.837200 210	340.702228	5516.512236 9
14 Aug 2022 12:34:47.217	6747.726390	6747.849340 0
.00426855 51.549957		289.985719
398.515887 220	340.908792	5516.441880 9
15 Aug 2022 03:52:14.467	6747.671088	6747.791869 0
.00423075 51.549864	217.948175	286.731041
398.203122 230	341.106616	5516.371405 9
15 Aug 2022 19:09:40.993	6747.617378	6747.736098 0
.00419452 51.549824	221.124272	
397.902639	341.295557	5516.303015 9
240 16 Aug 2022 10:27:06.800	6747.562449	6747.679211 0
.00415982 51.549833		280.221469
397.611323		5516.233257 9
250		
17 Aug 2022 01:44:31.879	6747.507443	6747.622354 0

Time (UTCG)	Semi-parameter (km)	Semi-major Axis (km)	Ecc
entricity Inclination (deg			
of Apogee (km) Height of unt			
.00412671 51.5498	76 227.	510547 276.966620	
397.330839	341.639869	5516.163536	9
260			
17 Aug 2022 17:01:56.237 .00409549 51.54993	6747.453579	6747.566756	0
.00409549 51.54993	39 230.	716401 273.711751	
397.064317	341.795195	5516.095360	9
270			
18 Aug 2022 08:19:19.874 .00406605 51.55000	6747.398338	6747.509893	0
.00406605 51.55000	233.	926886 270.456875	
396.808616	341.937170	5516.025632	9
280			
18 Aug 2022 23:36:42.783	6747.343374	6747.453421	0
.00403849 51.55004	18 237.	140231 267.201990	
396.565917	342.066925	5515.956384	9
290			
19 Aug 2022 14:54:04.970 .00401308 51.55000 396.338456	6747.288976	6747.397642	0
.00401308 51.55000	240.	351733 263.947094	
396.338456	342.182827	5515.887986	9
300			
20 Aug 2022 06:11:26.428	6747.232591	6747.339986	0
.00398956 51.55003	39 243.	560222 260.692175	
396.121926	342.284046	5515.817288	9
310			
20 Aug 2022 21:28:47.148	6747.176809	6747.283054	0
.00396816 51.5499	73 246.	762039 257.437218	_
395.920380	342.371728	5515.747477	9
320		<b>4747 204224</b>	
21 Aug 2022 12:46:07.137 .00394908 51.54980	6747.121101	6747.226326	0
.00394908 51.54980	249.	953487 254.182208	
395.734651	342.444000	5515.677915	9
330	6848 060043	CR4R 1 CR0FF	•
22 Aug 2022 04:03:26.379			0
		133355 250.927129 5515.605482	0
	342.500906	5515.605482	9
340	6747 006020	C747 100F4C	0
22 Aug 2022 19:20:44.870	6/4/.006020		0
.00391712 51.54958	32 ∠56. 240 E4221E	297255 247.671965	0
395.401777 350	342.543315	5515.534720	9
23 Aug 2022 10:38:02.610	6746 047040	6747 050010	0
.00390456 51.54943		442778 244.416708	U
			9
395.258103	342.3033 <u>4</u> 1	5515.462700	9
24 Aug 2022 01:55:19.582	6746 997727	6746 000042	0
.00389401 51.54929			U
		5515.388187	9
370	J42 • JUVEL /	3313.300107	9
3.0			

Page of					
Time (UTCG)	Semi-p	arameter (	(km) Sem	i-major Axis (km)	Ecc
entricity Inclinati	on (deg)	Arg of Per	rigee (deg)	RAAN (deg)	Height
of Apogee (km) Hei					
unt	giic or rerry	CC (1111)	Didcical .	rerred (Bee)	JIDIC CO
24 Aug 2022 17:12:35.7 .00388593 5	10.4	CT4C 000	1111	6846 03101	- ^
24 Aug 2022 1/:12:35./	84	6/46.825	1134	6/46.931016	, ,
.00388593 5	1.549192		265.669937	237.905893	
395.012122	342	.575910		5515.315808	9
25 Aug 2022 08:29:51.2 .00387991 5	12	6746 769	2111	6746 969690	0
25 Aug 2022 00.25.51.2	1 540136	0/40./00	,111	0740.009000	, ,
.0038/991 5	1.549136		268./45/59	234.650340	
394.909937	342	.555422		5515.240598	9
390					
25 Aug 2022 23:47:05.8	48	6746.706	5232	6746.807591	L 0
.00387600 5	1 5/0125	0, 200, 00	271 705266	221 204701	_
.00367600	1.349133		2/1./95200	231.394701	_
394.821198	342	.519984		5515.164467	9
400					
26 Aug 2022 15:04:19.6	95	6746.645	5171	6746.746451	L 0
00387449 5	1 549192		274 813574	228 138988	_
304 740600	11.545152	460001	2/4.0133/4	5515 000400	•
26 Aug 2022 15:04:19.6 .00387449 5 .394.749620	342	.469281		5515.089498	9
410					
27 Aug 2022 06:21:32.7 .00387486 5	39	6746.581	172	6746.682470	0
00387486 5	1 549303		277 800778	224 883218	
304 687002	240	402020	277.000770	FF1F 011040	9
394.687902	342	.403038		5515.011048	9
420					
27 Aug 2022 21:38:44.9	66	6746.517	7005	6746.618432	2 0
.00387735 5	1.549458		280.756974	221.627404	
304 640453	342	222412		5514 932527	9
394.640453	312	. 322412		3314.932327	9
430					
28 Aug 2022 12:55:56.3 .00388205 5	76	6746.452	2900	6746.554573	0
.00388205 5	1.549638		283.676324	218.371559	
.00388205 5 394.608007	342	. 227139		5514.854226	9
440		•==/==5		33111031220	_
440	- 4	<b>6746 30</b>		CT 4 C 40001	
29 Aug 2022 04:13:06.9	54	6746.386	0005	6746.488015	0
29 Aug 2022 04:13:06.9 .00388850 5	1.549822		286.562211	215.115694	
394.584744	342	.117285		5514.772616	9
450					
	.0.0	C74C 21C	1250	6746 40101	- 0
29 Aug 2022 19:30:16.6					5 0
.00389702 5	1.549985			211.859808	
394.575748	341	.993883		5514.691446	9
460					
30 Aug 2022 10:47:25.5	73	6746 252	2120	6746 355126	5 0
					, ,
.00390748 5			292.224421	208.603901	
394.579355	341	.856897		5514.609677	9
470					
31 Aug 2022 02:04:33.5	96	6746.182	2391	6746 286035	5 0
_				205.347962	
.00391958 5					-
394.591657	341	.706413		5514.524962	9
480					
31 Aug 2022 17:21:40.7	46	6746.113	3152	6746.217539	9 0
	1.550152			202.091974	•
					_
394.617638	341	.543441		5514.440978	9

Page 82				
Time (UTCG)	Semi-parameter (	(km) Sem	i-major Axis (km)	Ecc
entricity Inclination (	deg) Arg of Per	rigee (deg)	RAAN (deg)	Height
of Apogee (km) Height	of Perigee (km)	Sidereal :	Period (sec) O	rbit Co
unt				
490				
1 Sep 2022 08:38:47.021	6746 043	2000	6746 149223	0
1 Sep 2022 00:30:47:021	0/10.013	200 441522	100 035031	U
.00394937 51.55	241 260106	300.441333	190.033921	•
394.654250	341.368196		5514.355988	9
500 1 Sep 2022 23:55:52.404 .00396663 51.54 394.698960 510				
1 Sep 2022 23:55:52.404	6745.970	0644	6746.076788	0
.00396663 51.54	19939	303.107983	195.579782	
394.698960	341.180615		5514.268400	9
2 Sep 2022 15:12:56.888	6745.899	025	6746.006189	0
.00398566 51.54	9775	305,735701	192.323542	
394.756467				9
520	340.901910		3314.101033	,
2 4 2022 06:20:00 451	6745 006	.040	6845 024515	•
3 Sep 2022 06:30:00.471 .00400615 51.54	6/45.826	248	6/45.934515	0
.00400615 51.54	19615	308.326027	189.067195	_
394.822710	340.772320		5514.093960	9
E30				
3 Sep 2022 21:47:03.141 .00402805 51.54 394.897393	6745.752	2265	6745.861718	0
.00402805 51.54	9491	310.883276	185.810740	
394.897393	340.552042		5514.004704	9
540				
4 Sep 2022 13:04:04.896	6745.678	8783	6745.789512	0
.00405148 51.54	0,13.0,0	212 402460	192 554196	ŭ
304 002021	240 222002	313.402409	102.JJ1100	9
394.982931	340.322092		5513.9161/4	9
550				_
5 Sep 2022 04:21:05.731 .00407610 51.54	6745.603	3774	6745.715851	0
.00407610 51.54	19450	315.887964	179.297551	
395.075078	340.082624		5513.825860	9
200				
5 Sep 2022 19:38:05.635	6745.528	3151	6745.641656	0
.00410201 51.54	9551	318.341010	176.040851	
395.175355	339.833957		5513.734892	9
570				_
6 Sep 2022 10:55:04.612	6745 453	2307	6745 568320	0
=				Ū
	19716			•
	339.577686		5513.644977	9
580				
7 Sep 2022 02:12:02.655				0
.00415731 51.54	19918	323.145641	169.527322	
395.399307	339.313110		5513.552886	9
590				
7 Sep 2022 17:28:59.757	6745.299	928	6745.418158	0
.00418658 51.55				
395.521421			5513.460870	9
600	2221010033			
8 Sep 2022 08:45:55.922	6745 223	2997	6745 242041	0
				U
.00421683 51.55	00209	341.645941	163.013639	

Time (UTCG) Ser	ni-parameter (km) Sem	i-maior Avia (km)	Faa
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbit	Co
unt			
205 650016	229 762065	EE12 260977	۵
395.650916 610	330.702903	3313.309077	9
010			_
9 Sep 2022 00:02:51.147 .00424791 51.550396	6745.146219	6745.267935	0
.00424791 51.550396	330.122894	159.756717	
395.784232	338.477639	5513.276692	9
620			
9 Sep 2022 15:19:45.423	6745.068907	6745.192466	0
.00427997 51.550426	332, 391124	156 499713	
395.924664	338 186269	5513 184165	9
630	550.100209	3313:104103	,
030	6744 00100F		
10 Sep 2022 06:36:38.758 .00431273 51.550378 .396.070317	6744.991985	6745.117442	0
.00431273 51.550378	334.630748	153.242608	
396.070317	337.890566	5513.092183	9
640			
10 Sep 2022 21:53:31.149	6744.914013	6745.041429	0
.00434630 51.550264	336.846191	149.985388	
306 220373	227 500405	EE12 998990	9
396.220373	337.366465	3312.996990	9
650			
11 Sep 2022 13:10:22.592	6744.836349	6744.965782	0
.00438060 51.550106			
396.375775	337.281790	5512.906247	9
12 Sep 2022 04:27:13.090 .00441539 51.549931 396.534298	6744.758458	6744.889955	0
.00441539 51.549931	341.199976	143.470567	
306 534208	336 971612	5512 913292	9
590.554290	330.971012	3312.013202	9
670			
12 Sep 2022 19:44:02.637	6744.679765	6744.813384	0
.00445092 51.549766	343.343199	140.212973	
396.696980	336.655789	5512.719407	9
680			
13 Sep 2022 11:00:51.234	6744.601743	6744.737533	0
.00448694 51.549633		136.955271	
396.863798		5512.626414	9
690	330.337200	3312.020414	9
	6744 500050	5744 550070	
14 Sep 2022 02:17:38.881			0
.00452331 51.549549			
397.032047	336.015693	5512.532427	9
700			
14 Sep 2022 17:34:25.571	6744.443244	6744.583504	0
.00456026 51.549521			
	335.689449		9
	JJJ • UUJTTJ	JJ14. IJ/J/O	3
710	4844 A41-A4	c=44	_
15 Sep 2022 08:51:11.306			0
.00459749 51.549550	351.702116	127.181691	
397.377860	335.362304	5512.343887	9
720			
16 Sep 2022 00:07:56.085	6744.284426	6744.429315	0
-	· · · <del>- ·</del>		-

Page 84		
		i-major Axis (km) Ecc
entricity Inclination (deg)		
of Apogee (km) Height of Pount	erigee (km) Sidereal	Period (sec) Orbit Co
.00463495 51.549627	353.745342	123.923725
397.552391	335.032239	5512.248549 9
730 16 Sep 2022 15:24:39.895 .00467281 51.549739	6744.203599	6744.350863 0
00467281 51 549739	355 772270	120 665722
207 720011	334 600014	5512.152370 9
397.720911	334.090014	5512.152370
'///		
17 Sep 2022 06:41:22.740 .00471074 51.549871	6744.123732	6744.273395 0
.00471074 51.549871	357.781389	117.407682
397.906940	334.365851	5512.057399 9
750		
17 Sep 2022 21:58:04.619	6744 042490	6744.194583 0
.00474886 51.550004	350 777344	114 140604
.004/4666 51.550004	339.///244	114.149004
398.084839	334.030327	5511.960780 9
760		
760 18 Sep 2022 13:14:45.520 .00478716 51.550124 398.263091	6743.960365	6744.114919 0
.00478716 51.550124	1.758643	110.891477
398.263091	333.692748	5511.863118 9
770		
19 Sep 2022 04:31:25.442	6742 070004	6744.036024 0
19 Sep 2022 04:31:23.442	0/43.0/0334	0/44.030024 0
.00482539 51.550216	3./25622	107.633287
398.441612	333.356437	5511.766399 9
780		
19 Sep 2022 19:48:04.380	6743.795709	6743.955241 0
.00486370 51.550271	5.681772	104.375021
398.618797	333.017686	5511.667365 9
790 20 Sep 2022 11:04:42.321 .00490202 51.550288	6742 712224	6743.874287 0
20 Sep 2022 11:04:42.321	0/43./12234	101.116660
	7.625084	101.116660
398.795879	332.678696	5511.568123 9
800		
21 Sep 2022 02:21:19.268	6743.628991	6743.793574 0
.00494014 51.550266	9.557247	97.858191
		5511.469176 9
810	332131223	3311113170
	C742 F424C9	6742 710506 0
21 Sep 2022 17:37:55.208		
.00497822 51.550214		94.599601
399.145300	332.001891	5511.367454 9
820		
22 Sep 2022 08:54:30.132	6743.458485	6743.628168 0
.00501617 51.550143		91.340881
399.318322		5511.266406 9
	221.004012	JJII. 200400 9
830	4840 0-0010	4840 84540
23 Sep 2022 00:11:04.041		
.00505381 51.550067		88.082031
399.488748	331.327621	5511.164678 9
840		

rage of	_		
Time (UTCG) Se	emi-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of I			
unt	Cligot (Imi) blacical	101104 (500) 01	D10 00
23 Sep 2022 15:27:36.919 .00509125 51.550003	6743 205241	6742 460026	•
23 Sep 2022 15:2/:36.919	6/43.285241	6/43.460036	U
.00509125 51.550003	17.193859	84.823054	
399.655668	330.990405	5511.060298	9
850			
24 Sep 2022 06:44:08.761 .00512841 51.549966	6743 108546	6743 375900	0
21 Sep 2022 00:11:00:701	0/43.130340	0743.373900	U
.00512841 51.549966	19.082213	81.563960	
399.821677	330.656124	5510.957159	9
860			
24 Sep 2022 22:00:39.567	6743.110888	6743.290792	0
			J
.00516517 51.549967	20.964969	/8.304/65	_
399.984034	330.323551	5510.852829	9
870			
25 Sep 2022 13:17:09.320	6743.021150	6743.203597	0
25 Sep 2022 13:17:09.320 .00520157 51.550016 400.141834	22 041020	75 045490	Ū
.0052015/ 51.550016	22.841928	/5.045489	_
400.141834	329.991359	5510.745940	9
880			
26 Sep 2022 04:33:38.015	6742 932581	6743.117557	0
.00523754 51.550113	0,12,552501	71 706140	J
.00525754 51.55011.	24./13220	/1./66149	_
400.297881	329.663233	5510.640469	9
890			
26 Sep 2022 19:50:05.651	6742.842333	6743.029819	0
.00527298 51.550253	26 501256	69 526766	·
.00327290 31.33023.	20.381230	00.320700	_
400.448692	329.336945	5510.532916	9
000			
27 Sep 2022 11:06:32.210 .00530791 51.550425	6742.750795	6742.940771	0
00530701 51 550431	29 445270	65 267352	
100550751 51.55042.	20.4432//	55.207552	•
.00530791 51.550429 400.594723	329.012818	5510.423759	9
28 Sep 2022 02:22:57.692 .00534226 51.550610	6742.660247	6742.852687	0
00534226 51 550610	30 306403	62 007914	
400.737760	220 602612	FE10 315705	9
	320.093013	5510.315765	9
920			
28 Sep 2022 17:39:22.090	6742.567702	6742.762572	0
.00537593 51.550788	32,166191	58.748450	
400.874206		5510.205321	9
	320.3/0930	5510.205321	9
930			
29 Sep 2022 08:55:45.391	6742.474678	6742.671946	0
.00540894 51.550940	34.023939	55.488945	
401.005673	328.064220	5510.094232	9
	320.004220	3310.034232	9
940			
30 Sep 2022 00:12:07.594	6742.382100	6742.581725	0
.00544120 51.551052	35.881156	52.229381	
401.132429		5509.983639	9
	327.131020	5509.905039	9
950			
30 Sep 2022 15:28:28.692	6742.287718	6742.489653	0
.00547262 51.551115	37.738401	48.969733	
401.251731	327.453574	5509.870779	9
			,

entricity Inclination (deg) of Apogee (km) Height of Pount	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
960		
1 Oct 2022 06:44:48.675 .00550324 51.551131		
.00550324 51.551131 401.365835	39.595340	45./099/4 5509 758158 9
970		
1 Oct 2022 22:01:07.547	6742.099555	6742.305961 0
.00553295 51.551112	41.453474	42.450086
401.473809	326.864113	5509.645615 9
980 2 Oct 2022 13:17:25 297	6742 003907	6742.212461 0
.00556171 51.551075	43.312595	39.190058
2 Oct 2022 13:17:25.297 .00556171 51.551075 401.573667	326.577255	5509.531006 9
330		
3 Oct 2022 04:33:41.921	6741.908907	6742.119552 0
.00558955 51.551041	45.172899	35.929893 5509.417123 10
401.667967 000	320.29/130	5509.41/125
3 Oct 2022 19:49:57.420	6741.813401	6742.026067 0
.00561634 51.551029	47.035726	32.669605
401.754609	326.023525	5509.302535 10
010	CE41 E1E004	6741 021705 0
4 Oct 2022 11:06:11.785 .00564214 51.551051	48 900449	6/41.931/05 0
.00564214 51.551051 401.833632	325.755778	5509.186872 10
020		
5 Oct 2022 02:22:25.016 .00566693 51.551110	6741.621370	6741.837878 0
.00566693 51.551110	50.768014	26.148750
401.906406 030	325.495351	5509.071867 10
5 Oct 2022 17:38:37.113	6741.525003	6741.743319 0
.00569058 51.551198	52.639298	22.888234
401.970779	325.241859	
040		
6 Oct 2022 08:54:48.070	6741.428472 54.513854	6741.648525 0
.00571322 51.551300 402.028013	324.995037	19.627683 5508.839774 10
050	321.333037	3300.033771
7 Oct 2022 00:10:57.890	6741.332222	6741.553932 0
.00573473 51.551399		
402.077915	324.755950	5508.723832 10
060 7 Oct 2022 15:27:06.570	6741 235556	6741.458836 0
.00575503 51.551475		13.106489
402.119138		5508.607273 10
070		
8 Oct 2022 06:43:14.109 .00577425 51.551515	6741.138966	6741.363736 0 9.845827
.00577425 51.551515	60.166626	9.04302/

entricity Inclination (deg) of Apogee (km) Height of Pe	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
400 153064	204 200400	5500 400511 10
402.153064 080		
8 Oct 2022 21:59:20.509 .00579222 51.551510	6741.042759	6741.268927 0
402.178810	324.085044	5508.374506 10
090		
9 Oct 2022 13:15:25.769	6740.946017	6741.173485 0
.00580888 51.551461 402.195184	323.877787	5508.257527 10
100		
10 Oct 2022 04:31:29.884 .00582438 51.551373 402.203485	6740.849229	6741.077909 0
.00582438 51.551373	65.872845	0.063351
402.203485 110	323.678333	5508.140383
10 Oct 2022 19:47:32.857		
.00583846 51.551258	67.788988	356.802298
402.202562	323.488595	5508.023541 10
120		
11 Oct 2022 11:03:34.685	6740.655762	6740.886546 0
.00585119 51.551130 402.191730	323.307362	5507.905840 10
130	323.307302	3307.303010
12 Oct 2022 02:19:35.362	6740.558513	6740.790196 0
.00586262 51.551004	71.645067	350.279797
130 12 Oct 2022 02:19:35.362 .00586262 51.551004 402.171917	323.134476	5507.787751 10
140 12 Oct 2022 17:35:34.889	6740 461654	6740 694118 0
.00587253 51.550890	73.585615	347.018353
402.142071	322.972165	5507.669996 10
150		
13 Oct 2022 08:51:33.263		
.00588104 51.550797		343.756792
402.101723 160	322.818263	5507.550958 10
14 Oct 2022 00:07:30.474	6740.265882	6740.499578 0
.00588816 51.550729	77.494701	340.495126
402.051730	322.673426	5507.431566 10
170	5740 150000	<b>6740 400000 0</b>
14 Oct 2022 15:23:26.523 .00589367 51.550685		6740.402228 0 337.233371
401.990908		5507.312255 10
180		
15 Oct 2022 06:39:21.403		
.00589777 51.550660		333.971538
401.919315 190	322.413744	5507.191291 10
15 Oct 2022 21:55:15.106	6739.970316	6740.204975 0
	0.0000	0,1012019,0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
00590040 51 550645	83 433324	330 709636	
.00590040 51.550645 401.837895	322.298054	5507.070504	10
16 Oct 2022 13:11:07.630			0
.00590137 51.550630	85.434557	327.447671	
401.744536	322.192851	5506.948829	10
210 17 Oct 2022 04:26:58.962	6720 770265	6740 005061	0
.00590097 51.550603	87.448244	324.185644	U
401.640624	322.095499	5506.825498	
17 Oct 2022 19:42:49.095	6739.670136	6739.904673	0
.00589901 51.550555	89.473679	320.923547	
17 Oct 2022 19:42:49.095 .00589901 51.550555 401.526414	322.008932	5506.702468	10
18 Oct 2022 10:58:38.023	6739.568726	6739.802973	0
.00589539 51.550477	91.512068	317.661372	
401.399759	321.932186	5506.577830	10
240 19 Oct 2022 02:14:25.732	6739 466295	6739.700144	0
.00589044 51.550367	93.564346	314.399104	
401.262950	321.863339	5506.451810	10
230			
19 Oct 2022 17:30:12.215 .00588385 51.550223	6739.364168 95.629867	6739.597491	Ü
401.115298	321.805683	5506.326006	10
260			
20 Oct 2022 08:45:57.464	6739.260502	6739.493174	0
.00587569 51.550052	97.710448	307.874224	
400.955334 270			10
21 Oct 2022 00:01:41.461	6739.156006	6739.387922	0
.00586617 51.549863	99.806103		10
400.785343 280	321.716502	5506.069178	10
21 Oct 2022 15:17:24.203	6739.051651	6739.282678	0
.00585498 51.549670			•
400.604015	321.687342		10
290			
22 Oct 2022 06:33:05.676			0
.00584230 51.549487			10
400.411026 300	321.000414	3303.003T71	10
22 Oct 2022 21:48:45.869	6738.839197	6739.068112	0
.00582824 51.549331	106.188936	294.822705	
400.208004	321.654219	5505.677256	10
310			

Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Po		RAAN (deg)	Height
23 Oct 2022 13:04:24.773 .00581247 51.549216	6729 722546	6729 060221	0
.00581247 51.549216	108.350459	291.559432	U
399.993238	321.653204	5505.545040	10
24 Oct 2022 04:20:02.377	6738.624373	6738.850703	0
.00579533 51.549151			10
399.767538 330	321.659867	5505.410830	10
24 Oct 2022 19:35:38.670	6738.515967	6738.740843	0
.00577673 51.549138	112.727805	285.032490	-
399.531752	321.675934	5505.276203	10
340			
25 Oct 2022 10:51:13.645 .00575647 51.549171	6738.407240	6738.630538	0
.00575647 51.549171	114.944718	281.768864	10
399.284254 350	321.702822	5505.141032	10
26 Oct 2022 02:06:47.291			0
.00573489 51.549236			
399.026467	321.737105	5505.004088	10
260			
26 Oct 2022 17:22:19.599 .00571183 51.549311	6738.187310	6738.407150	0
.00571183 51.549311	119.436365	275.241415	
398.758778 370	321.781523	5504.867288	10
27 Oct. 2022 08:37:50.565	6738.076907	6738.294851	0
27 Oct 2022 08:37:50.565 .00568719 51.549372	121.712730	271.977620	J
398.479794	321.835908	5504.729676	10
380			
27 Oct 2022 23:53:20.177	6737.965541	6738.181501	0
.00566129 51.549394	124.009405	268.713781	
398.191307 390	321.897695	5504.590778	10
28 Oct 2022 15:08:48.432	6737.854740	6738.068612	0
.00563391 51.549359		265.449886	J
397.893269	321.969956	5504.452446	10
400			
29 Oct 2022 06:24:15.325			0
.00560511 51.549259		262.185913	
397.584849 410	322.050931	5504.313094	10
29 Oct 2022 21:39:40.847	6737 631355	6737.840781	0
.00557513 51.549098		258.921831	·
397.268134	322.139428	5504.173269	10
420			
30 Oct 2022 12:55:04.999		6737.727193	0
.00554371 51.548895		255.657611	4.0
396.942206	322.238180	5504.034084	10

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
430			
31 Oct 2022 04:10:27.777	6737.408201	6737.612834	0
.00551106 51.548677	135.817532	252.393229	
396.607223	322.344445	5503.893955	10
440			
31 Oct 2022 19:25:49.177			0
.00547731 51.548479	138.247346	249.128668	
396.265142 450	322.458379	5503.754178	10
1 Nov 2022 10.41.09 202	6737 185536	6737 385081	0
.00544220 51.548328	140.701801	245.863929	· ·
1 Nov 2022 10:41:09.202 .00544220 51.548328 395.914291	322.581870	5503.614883	10
400			
2 Nov 2022 01:56:27.851	6737.074123	6737.271022	0
.00540604 51.548247	143.181635	242.599022	
395.555989	322.712054	5503.475125	10
470	6836 063416	6838 158610	•
2 Nov 2022 17:11:45.124 .00536885 51.548243	6736.963416 145.685943	6737.157612	0
395.191375	322 849848	239.333909 5503 336164	10
400			
3 Nov 2022 08:27:01.025 .00533042 51.548311	6736.853046	6737.044468	0
.00533042 51.548311	148.217286	236.068797	
394.818726	322.996210	5503.197530	10
490			
3 Nov 2022 23:42:15.555 .00529110 51.548431	6736.742689	6736.931295	0
394.440089	150.775797	232.803530	10
500	323.146501	5505.050002	10
4 Nov 2022 14:57:28.717	6736.633290	6736.819034	0
.00525085 51.548577	153.360166	229.538191	-
394.056041	323.308026		10
510			
5 Nov 2022 06:12:40.518	6736.524212		0
.00520954 51.548719	155.973784		1.0
393.665217 520	323.474866	5502.784092	10
5 Nov 2022 21:27:50.958	6736 415465	6736 595356	0
.00516755 51.548832			J
	323.646674		10
530			
6 Nov 2022 12:43:00.043			0
.00512474 51.548896			
	323.824825	5502.511504	10
540 7 Nov 2022 03:58:07.780	6736.200214	6736 27/12/	0
.00508114 51.548900	163.984639	216.476214	J
	=======================================		

entricity Inclination (deg) of Apogee (km) Height of Pe	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
392.465575	324.008692	5502.376201	10
550	6736 003050	6726 262960	•
7 Nov 2022 19:13:14.168 .00503704 51.548843	6/36.092959 166 712962	213 210526	U
392.057667	324.196072	5502.241103	10
560			
8 Nov 2022 10:28:19.214	6735.986739	6736.154626	0
.00499232 51.548733	169.470009	209.944731	
391.646673	324.388579	5502.107256	10
570 9 Nov 2022 01:43:22.923 .00494711 51.548587 391.232611 580	CE35 000004	CF2C 04FCC1	•
9 Nov 2022 01:43:22.923	6735.880804	6736.045661	0
301 232611	1/2.259151	200.0/0015 5501 973753	10
580	321.301/11	3301.773733	
9 Nov 2022 16:58:25.293			
.00490161 51.548422	175.075871	203.412768	
390.816373			
590			
10 Nov 2022 08:13:26.329			0
.00485578 51.548262	177.923283	200.146585	1.0
390.399312 600 10 Nov 2022 23:28:26.034 .00480976 51.548124 389.980461 610	324.983907	5501.707825	10
10 Nov 2022 23:28:26.034	6735.564437	6735.720259	0
.00480976 51.548124	180.802767	196.880266	
389.980461	325.186058	5501.575078	10
610 11 Nov 2022 14:43:24.402	6735 459887	6725 611729	0
.00476371 51.548025	183 708739	193 613817	U
389.561243	325.388232	5501.442121	10
620			
12 Nov 2022 05:58:21.440	6735.354855	6735.504764	0
.00471768 51.547977		190.347245	
389.143737	325.591790	5501.311062	10
630 12 Nov 2022 21:13:17.148	C725 2405C7	C72E 20CE71	•
.00467179 51.547983		187.080562	0
388.725911	325.793231	5501.178512	10
640	3231,73231	33011170311	
13 Nov 2022 12:28:11.517	6735.144244	6735.288388	0
.00462615 51.548042			
	325.992955	5501.045973	10
650	4888 ACCCCC	480- 4044	_
14 Nov 2022 03:43:04.551			0
.00458088 51.548146 387.897388		180.546906 5500.914780	10
660	J20 • 171210	JJ00+J11100	10
14 Nov 2022 18:57:56.246	6734.933874	6735.072457	0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
00453611 51 549393	100 601051	177 270051	
.00453611 51.548282 387.486503	326.384410	5500.781432	10
15 Nov 2022 10:12:46.590	6734.828009	6734.963900	0
.00449188 51.548432	201.771243	174.012918	
387.079523	326.574276	5500.648439	10
680	CE24 E00000	6824 055251	•
16 Nov 2022 01:27:35.583 .00444837 51.548579	6734.722082	6734.855351	0
386.677496	326.759206	5500.515458	10
690			
16 Nov 2022 16:42:23.214 .00440575 51.548703	6734.614405	6734.745130	0
.00440575 51.548703	208.012673	167.478609	
386.279707 700	326.936553	5500.380428	10
17 Nov 2022 07:57:09.471	6734.506736	6734.634988	0
.00436390 51.548790	211.168336	164.211317	
385.887294	327.108682	5500.245496	10
710			
17 Nov 2022 23:11:54.344	6734.397568		0
.00432319 51.548826	214.348812	160.943919	10
385.501091 720			
18 Nov 2022 14:26:37.820 .00428372 51.548809	6734.287793	6734.411372	0
.00428372 51.548809	217.545559	157.676397	
385.122721	327.426022	5499.971554	10
730			
19 Nov 2022 05:41:19.889	6734.177224	6734.298594	0
.00424530 51.548740	220.762718	154.408738	10
384.750710 740	327.572477	5499.833396	10
19 Nov 2022 20:56:00.537	6734.065023	6734.184294	0
.00420849 51.548630		151.140929	•
384.388039		5499.693376	10
750			
20 Nov 2022 12:10:39.753			0
.00417317 51.548498			
384.035341 760	327.830550	5499.553297	10
21 Nov 2022 03:25:17.525	6733 838698	6733 954073	0
.00413923 51.548366			U
383.690450	327.943695		10
770			
21 Nov 2022 18:39:53.838	6733.723757		0
.00410735 51.548262			
383.358612 780	328.042107	5499.268378	10
700			

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Deriod (sec) Ori	Height
22 Nov 2022 09:54:28.685	6733.608444	6733.720379	0
.00407713 51.548209	237.032544	138.068144	
22 Nov 2022 09:54:28.685 .00407713 51.548209 383.037659	328.129099	5499.125078	10
790 23 Nov 2022 01:09:02.052			
.00404870 51.548227	240.306213	134.799611	· ·
382.726807	328.202117	5498.979407	10
800	6822 282401	6822 400280	•
23 Nov 2022 16:23:33.925	6733.373421 242 E77742	6733.482379	0
.00402263 51.548324 382.431675	328.259082	5498.833535	10
810			
24 Nov 2022 07:38:04.299 .00399836 51.548498	6733.254999	6733.362645	0
.00399836 51.548498	246.844421	128.262281	
382.148036	328.303253	5498.686866	10
820 24 Nov 2022 22:52:33.156			0
.00397626 51.548732	250.106800	124.993523	U
381.876633	328.330384	5498.537256	10
830			
25 Nov 2022 14:07:00.486 .00395665 51.549002	6733.013844 253.356035	6733.119251	0
.00395665 51.549002 381.622864	328.341639		10
840			
26 Nov 2022 05:21:26.286 .00393895 51.549275	6732.892138	6732.996602	0
.00393895 51.549275	256.592777	118.455845	
381.380540 850	328.338664	5498.238488	10
26 Nov 2022 20:35:50.538	6732.768781	6732.872438	0
26 Nov 2022 20:35:50.538 .00392373 51.549519	259.815333	115.186904	•
381.153443	328.317433	5498.086398	10
860			
27 Nov 2022 11:50:13.239	6732.646491 263.014511	6732.749472	0
.00391097 51.549711 380.944025		5497.935778	10
870	320.200920	3437.333770	10
28 Nov 2022 03:04:34.384	6732.521696	6732.624107	0
.00390015 51.549836	266.194868	108.648694	
380.745342	328.228872	5497.782219	10
880 28 Nov 2022 18:18:53.957	6722 206062	6732 40804E	0
.00389201 51.549895		6732.498945 105.379371	U
380.564895	328.158995	5497.628911	10
890			
29 Nov 2022 09:33:11.964			0
.00388610 51.549904		102.109874	
380.399924	328.074580	5497.476179	10

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Time (UTCG) Ser			
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Or	bit Co
unt			
900			
30 Nov 2022 00:47:28.393	6732 145683	6732 247148	0
.00388222 51.549885	0752.145005	0/32.24/140	U
.00366222 51.549665	275.57640	5407 320406	10
380.246190	32/.9/410/	549/.320496	10
910 30 Nov 2022 16:01:43.239 .00388103 51.549866 380.112326 920			
30 Nov 2022 16:01:43.239	6732.020326	6732.121728	0
.00388103 51.549866	278.64260	0 95.570351	
380.112326	327.857130	5497.166875	10
920			
1 Dec 2022 07:15:56.507	6731.893787	6731.995225	0
.00388175 51.549869	281.67515	8 92.300348	
379.990175	327.726274	5497.011930	10
930		0.107.000000	
1 Dec 2022 22:30:08.183	6721 765727	6721 967214	0
00300464	0/31./03/2/	0/31.00/314	U
.00388464 51.549914	204.07/05	0 69.030212	1.0
379.881222	327.579405	5496.855262	10
940			
2 Dec 2022 13:44:18.274	6731.640167	6731.742036	0
.00389007 51.550007	287.63945	5 85.759970	
2 Dec 2022 13:44:18.274 .00389007 51.550007 379.791950	327.418121	5496.701821	10
250			
3 Dec 2022 04:58:26.783	6731.512302	6731.614537	0
	290.56680		
379.711256			
960			
3 Dec 2022 20:12:33.704	6731 385199	6731 487923	0
.00390643 51.550319	293.45859	8 79 219251	·
270 647022	227 054014		10
379.647033 970	327.054614	5496.390566	10
4 Dec 2022 11:26:39.054	6831 050884	6821 262101	•
			0
.00391793 51.550511			
379.599115	326.853087	5496.237708	10
980			
5 Dec 2022 02:40:42.831	6731.132049	6731.236058	0
.00393087 51.550701	299.12199	0 72.678286	
379.558654		5496.082110	10
990			
5 Dec 2022 17:54:45.039	6731.007019	6731.111837	0
.00394615 51.550873			•
379.536844	326.412829	5495.929970	11
	320.412029	3493.929970	11
000	6730 001007	6830 008540	^
6 Dec 2022 09:08:45.696			0
.00396308 51.551013			_
379.525966	326.175121	5495.777743	11
010			
7 Dec 2022 00:22:44.796			0
.00398143 51.551109	307.32879	7 62.866268	

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Time (UTCG) Ser			
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Or	cbit Co
unt			
379.523740	325 926804	5495 624320	11
020	323.320004	3433.024320	
7 Dec 2022 15:36:42.355	6730.632645	6730.740443	0
.00400197 51.551160	309.986128	59.595377	•
379.539646	325.667240	5495.475113	11
8 Dec 2022 06:50:38.383	6730.507645	6730.616611	0
.00402363 51.551168	312.604299	56.324349	
379.561135	325.398087	5495.323456	11
8 Dec 2022 22:04:32.870 .00404680 51.551138	6730.383064	6730.493286	0
.00404680 51.551138	315.189107	53.053168	
379.593238	325.119335	5495.172421	11
050			
9 Dec 2022 13:18:25.839	6730.261289	6730.372873	0
.00407176 51.551084	317.732321	49.781824	
379.640305	324.831440	5495.024952	11
060			
10 Dec 2022 04:32:17.290	6730.136503	6730.249501	0
.00409750 51.551015	320.240726	46.510316	11
10 Dec 2022 04:32:17.290 .00409750 51.551015 379.689665	324.535336	5494.873862	11
070			
10 Dec 2022 19:46:07.220 .00412475 51.550946	6730.013883	6730.128387	0
.004124/5 51.550946	322./1648/	43.238643	11
379.751491 080	324.231282	5494./25539	11
11 Dec 2022 10:59:55.648	6720 802001	6720 000001	0
.00415326 51.550887	325.152690	30 066814	U
379 822554	323.132090	5494 578218	11
379.822554 090	323.313027	3434.370210	
12 Dec 2022 02:13:42.563	6729.767249	6729.884969	0
.00418237 51.550847	327.559578	36.694841	·
379.894812		5494.427438	11
100			
12 Dec 2022 17:27:27.967	6729.645376	6729.764815	0
.00421283 51.550831	329.934355	33.422733	
379.979154		5494.280294	11
110			
13 Dec 2022 08:41:11.870	6729.522131	6729.643343	0
.00424401 51.550839			
380.067025	322.945660	5494.131537	11
120			
13 Dec 2022 23:54:54.253	6729.396654	6729.519679	0
.00427568 51.550869			
380.155932	322.609427	5493.980098	11
130	6800 OFFI	CB00 000550	_
14 Dec 2022 15:08:35.118	6729.273756	6729.398668	0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) I Period (sec) Orl	Height bit Co
00430838 51 550013	226 872784	23 605746	
.00430838 51.550913 380.254473	322.268862	5493.831908	11
15 Dec 2022 06:22:14.465	6729.147736	6729.274566	0
.00434136 51.550961	339.127179	20.333226	
380.351753 150	321.923379	5493.679935	11
15 Dec 2022 21:35:52.264	6729.019738	6729.148520	0
.00437468 51.551001	341.361399	17.060613	
380.449371	321.573668	5493.525582	11
16 Dec 2022 12:49:28.516	6728.893812	6729.024600	0
.00440867 51.551023	343.564995	13.787901	
160 16 Dec 2022 12:49:28.516 .00440867 51.551023 380.553644 170	321.221555	5493.373835	11
17 Dec 2022 04:03:03.207	6728.763324	6728.896129	0
.00444257 51.551016	345.746536	10.515082	
380.652724	320.865534	5493.216516	11
180			
17 Dec 2022 19:16:36.306	6728.631884	6728.766734	0
.00447670 51.550976 380.752404	347.909186 320.507064	7.242134 5493.058067	11
18 Dec 2022 10:30:07.811 .00451114 51.550903	6728.501065	6728.637996	0
380.854802	320.044036	5492 90042	11
200	320.21,203	3132.300121	
19 Dec 2022 01:43:37.693	6728.364856	6728.503861	0
.00454523 51.550801	352.163508	0.695789	
380.949442	319.784280	5492.736174	11
210	6729 220141	6720 270246	0
19 Dec 2022 16:57:05.925 .00457949 51.550682	354.263779	6728.370246	0
381.045765		5492.572563	11
220	0-000-000	017107100	
20 Dec 2022 08:10:32.502	6728.092227	6728.235447	0
.00461373 51.550561		354.148740	
381.140729	319.056166	5492.407503	11
230			
20 Dec 2022 23:23:57.384			0
.00464749 51.550453 381.226699			11
240	318.689181	J174.433133	11
21 Dec 2022 14:37:20.552	6727.809403	6727.956852	0
.00468143 51.550374	0.455312	347.600964	
381.316310	318.323393	5492.066371	11
250			

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
22 Dec 2022 05:50:42.002	6727.666040	6727.815610	0
22 Dec 2022 05:50:42.002 .00471504 51.550331 381.400526	2.486137 317.956694	344.326833 5491.893427	11
260 22 Dec 2022 21:04:01.692			
.00474821 51.550326	4.508838	341.052569	
381.477682 270	317.588890	5491.715487	11
23 Dec 2022 12:17:19.614	6727.374119	6727.527929	0
.00478150 51.550351 381.558576	6.513106 317.223282	337.778192 5491.541181	11
280			0
24 Dec 2022 03:30:35.761 .00481417 51.550390	8.507169	334.503726	Ū
381.630621 290	316.857084	5491.361099	11
24 Dec 2022 18:43:50.096			0
.00484656 51.550422 381.699316			11
300			
25 Dec 2022 09:57:02.624 .00487885 51.550426	6726.926084 12.464168	6727.086210 327.954538	0
381.769676 310	316.128745	5491.000342	11
26 Dec 2022 01:10:13.330 .00491034 51.550385	6726.772621	6726.934817	0
.00491034 51.550385 381.829376	14.429141	324.679799	11
320			
26 Dec 2022 16:23:22.191 .00494169 51.550293	6726.620594 16.385918	6726.784864	0
381.889558	315.406170	5490.631384	11
330 27 Dec 2022 07:36:29.220	6726.469069	6726.635399	0
.00497264 51.550151	18.329993	318.129910	11
381.947507 340		5490.448387	
27 Dec 2022 22:49:34.392 .00500271 51.549973		6726.481267 314.854709	0
381.994879	314.693655	5490.259678	11
350 28 Dec 2022 14:02:37.702	6726.160481	6726.330847	0
.00503273 51.549778	22.203351	311.579305	
382.045633 360	314.342062	5490.075517	11
29 Dec 2022 05:15:39.165 .00506201 51.549587	6726.006608	6726.178959 308.303695	0
382.089921	313.993997	5489.889560	11

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Time (UTCG) Ser			
entricity Inclination (deg)			
of Apogee (km) Height of Po	erigee (km) Sidereal	Period (sec) On	rbit Co
unt			
370			
29 Dec 2022 20:28:38.757	6725 850195	6726 024491	0
.00509054 51.549422	26 047162	305 027881	ŭ
202 126616	20.047102	505.027661	11
382.126616 380	313.040303	3409.700440	
380 30 Dec 2022 11:41:36.488 .00511894 51.549296 382.166331	CROF CORRER	6805 084010	^
30 Dec 2022 11:41:36.488	6/25.69////	6/25.8/4019	U
.00511894 51.549296	27.959386	301.751873	
382.166331	313.307706	5489.516227	11
31 Dec 2022 02:54:32.368	6725.542700	6725.720829	0
.00514634 51.549217	29.865187	298.475696	
382.196672	312.970987	5489.328683	11
400			
31 Dec 2022 18:07:26.378	6725.387292	6725.567281	0
.00517319 51.549181	31.769854	295.199370	
382.222929	312.637632	5489.140702	11
<i>1</i> 10			
1 Jan 2023 09:20:18.537 .00519965 51.549182 382.249663	6725 235051	6725 416881	٥
00510065 51 540100	0723.233031	201 022017	U
.00519965 51.549162	33.000300	291.922917	
382.249663	312.310100	5488.9565/8	11
420			
2 Jan 2023 00:33:08.848			0
.00522500 51.549204	35.559536	288.646358	
382.266116	311.987052	5488.768908	11
430			
2 Jan 2023 15:45:57.301 .00524992 51.549229	6724.926207	6725.111563	0
.00524992 51.549229	37.451993	285.369700	
382.280877	311.668248	5488.582802	11
440			
3 Jan 2023 06:58:43.917	6724.774330	6724.961393	0
.00527412 51.549241			•
382.292614	311.356173	5488.398966	11
450	311.330173	3400.330300	
3 Jan 2023 22:11:28.693	C724 C10025	6724 808627	0
			U
.00529721 51.549225			
	311.048875	5488.211953	11
460			
4 Jan 2023 13:24:11.629	6724.468053	6724.658367	0
.00531986 51.549169	43.106447	275.539148	
382.295576	310.747158	5488.028010	11
470			
5 Jan 2023 04:36:52.744			0
.00534148 51.549070		272.262073	_
382.290548	310.452939		11
480			
5 Jan 2023 19:49:32.033	6724.164111	6724.357450	n
.00536209 51.548926		268.984862	J
.00000200	40.003/02	200.704002	

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Time (UTCG) Ser			
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) Orbi	t Co
unt			
382.277087	310.163814	5487.659645	11
490			
6 Jan 2023 11:02:09.505	6724 014141	6724 208920	0
.00538208 51.548745	48 745799	265 707494	·
202 262170	200 001661	E407 477025	11
382.262178	309.001001	3467.477625	11
500 7 Jan 2023 02:14:45.173 .00540086 51.548537 382.238728			_
7 Jan 2023 02:14:45.173	6723.863901	6724.060036	0
.00540086 51.548537	50.622351	262.429956	
382.238728	309.607344	5487.295576	11
310			
7 Jan 2023 17:27:19.033	6723.712852	6723.910283	0
.00541871 51.548317	52.503057	259.152235	
382.208218	309.338347	5487.112262	11
520	307,33031,	310,1111101	
9 Tan 2022 09.20.51 004	6722 564400	6722 762066	0
8 Jan 2023 08:39:51.094 .00543570 51.548100	0/23.304400	0723.703000	U
.00543570 51.548100	54.383020	255.874320	
382.174439	309.077694	5486.932058	11
530			
8 Jan 2023 23:52:21.366	6723.414808	6723.614617	0
8 Jan 2023 23:52:21.366 .00545138 51.547903	56.262235	252.596210	
382.130582	308.824652	5486.750345	11
540			
9 Jan 2023 15:04:49.841	6723.265070	6723.465960	0
.00546617 51.547740			
382.080536	308 577385	5486.568381	11
550	300.377303	3100.300301	
10 Tan 2022 06.17.16 E20	6722 117200	6722 210202	^
10 Jan 2023 06:17:16.530 .00547985 51.547622	6/23.11/309	0/23.319202	U
.00547985 51.547622	60.031373	246.039418	
.00547985 51.547622 382.024999	308.339405	5486.388743	11
560			
10 Jan 2023 21:29:41.432			0
.00549219 51.547553	61.918121	242.760755	
381.958209		5486.206440	11
570			
11 Jan 2023 12:42:04.539	6722.818354	6723.021994	0
.00550362 51.547535			
		5486.024953	11
580	307.004033	3400.024333	
	6722 670126	6722 074521	0
12 Jan 2023 03:54:25.860	6/22.6/0136	0/22.8/4521	U
.00551375 51.547558	65.703700		
381.805784	307.669258	5485.844447	11
590		-	
12 Jan 2023 19:06:45.388			0
.00552255 51.547612			
381.714181	307.460988	5485.660926	11
600			
13 Jan 2023 10:19:03.114	6722.370391	6722.576001	0

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) H Period (sec) Orb	eight
.00553037 51.547677 381.617340	69.506495 307.260661	229.644652 5485.479063	11
610			
14 Jan 2023 01:31:19.045 .00553673 51.547733	6722.220595	6722.426673	0
381.509954			11
620	307.003333	3103.270272	
14 Jan 2023 16:43:33.164	6722.069016	6722.275467	0
.00554180 51.547759	73.326214	223.085890	
381.391989	306.884945	5485.111224	
15 Jan 2023 07:55:45.470	6721.919122	6722.125866	0
.00554579 51.547739	75.245149	219.806337	
15 Jan 2023 07:55:45.470 .00554579 51.547739 381.268366			
15 Jan 2023 23:07:55.959			0
.00554819 51.547662			
381.131769	306.542160	5484.742206	11
650	CEO1 C14520	CE01 001 F30	•
16 Jan 2023 14:20:04.614	6721.614532	6721.821532	U
.00554934 51.547526 380.986206	79.101868 306.382857	5484.555643	11
660			0
17 Jan 2023 05:32:11.437 .00554926 51.547342	01 02000	200 066947	U
380.833341	306.232722	5484.370223	11
670	300.232,22	3101.370223	
17 Jan 2023 20:44:16.418	6721.308738	6721.515591	0
.00554751 51.547132	82.985736	206.686683	
380.666285 680	306.090898	5484.181207	11
18 Jan 2023 11:56:19.542	6721.155255	6721.361882	0
.00554453 51.546926	84.942793	203.406328	·
380.491685		5483.993087	11
690			
19 Jan 2023 03:08:20.810			0
.00554015 51.546755	86.904907		
380.307081	305.834133	5483.804278	11
700 19 Jan 2023 18:20:20.206	CR00 04510B	6801 050066	•
.00553407 51.546651			0
380.108761	305.719171		11
710		3103.0123/3	
20 Jan 2023 09:32:17.722	6720.690338	6720.895630	0
.00552678 51.546634	90.863379	193.564133	
379.903531	305.613729	5483.422471	11
720			

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Time (UTCG) Ser	mi-parameter (km) Sem	ni-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Orl	bit Co
unt			
21 Jan 2023 00:44:13.354 .00551790 51.546713	6720.533460	6720.738088	0
.00551790 51.546713	92.854862	190.283068	
379.685465	305.516710	5483.229670	11
379.685465 730			
21 Jan 2023 15:56:07.083 .00550739 51.546878	6720 275670	6720 E70E24	0
21 Uaii 2023 13:50:07.003	0/20.3/30/9	107 001000	U
.00550759 51.546676	94.001334	167.001669	
379.455391	305.429656	5483.035620	11
740			
22 Jan 2023 07:07:58.907			0
.00549565 51.547105	96.878212	183.720553	
379.217934	305.351793	5482.842679	11
750			
22 Jan 2023 22:19:48.815 .00548221 51.547359 378.966076	6720.059236	6720.261210	0
.00548221 51.547359	98.904873	180.439132	
378.966076	305.282345	5482.646078	11
760		3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -	
22 Tan 2022 12:21:26 780	6710 200274	6720 100741	0
23 Jan 2023 13:31:36.789 .00546722 51.547602	100 040070	0/20.100/41	U
.00546722 51.547602	100.9409/3	5400 440503	
378.703999	305.223483	5482.449703	11
770			
24 Jan 2023 04:43:22.828			0
.00545096 51.547800	103.003292	173.875960	
378.432999	305.172818	5482.252887	11
24 Jan 2023 19:55:06.912 .00543293 51.547930	6719.577939	6719.776285	0
.00543293 51.547930 378.147350	105.071696	170.594187	
378.147350	305.131220	5482.052657	11
/90			
25 Jan 2023 11:06:49.030 .00541349 51.547981	6719.416756	6719.613680	0
00541349 51 547981	107 158735	167 312260	·
377.853232	305 100127	5491 953676	11
800	303.100127	3401.033070	11
	6810 053863	6710 440170	•
26 Jan 2023 02:18:29.175			0
.00539269 51.547958		164.030164	
377.548057	305.076287	5481.652370	11
810			
26 Jan 2023 17:30:07.326		6719.282990	0
.00537012 51.547877	111.374265	160.747881	
377.229373	305.062607	5481.449016	11
820			
27 Jan 2023 08:41:43.477	6718.925820	6719.117871	0
.00534629 51.547764			-
376.903211	305.058531		11
830		,	
27 Jan 2023 23:53:17.617	6718 759696	6718.949917	0
			U
.00532096 51.547643		154.182731	
376.564155	305.061678	5481.041450	11

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	mi-parameter (km) Sem		
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg)	Height
of Apogee (km) Height of F	erigee (km) Sidereal	Period (sec) O:	rbit Co
unt			
840			
28 Jan 2023 15:04:49.727	6718.593370	6718.781669	0
.00529394 51.547542	117 932261	150 999869	ŭ
276 212510	305 075010	E400 03EE70	11
376.213519	303.073619	3400.033376	11
850 29 Jan 2023 06:16:19.806 .00526576 51.547479 375.855421 860	6810 408400	6810 613800	•
29 Jan 2023 06:16:19.806	6718.427492	6718.613788	U
.00526576 51.547479	120.023189	147.616827	
375.855421	305.098154	5480.630155	11
29 Jan 2023 21:27:47.842	6718.259347	6718.443536	0
.00523598 51.547465	122.231811	144.333621	
375.484180	305.128892	5480.421835	11
870			
30 Jan 2023 12:39:13.821	6718.091717	6718.273705	0
.00520466 51.547504	124.465099	141.050263	•
30 Jan 2023 12:39:13.821 .00520466 51.547504 375.103031	305 170378	5480 214032	11
000			
31 Jan 2023 03:50:37.742 .00517220 51.547591 374.713593	6717 022474	6718 102104	0
31 Jan 2023 03:50:37.742	6/1/.9234/4	6/18.103194	U
.00517220 51.547591	126.717617	137.766765	
374.713593	305.218796	5480.005401	11
690			
31 Jan 2023 19:01:59.591			0
.00513806 51.547715	128.992178	134.483135	
374.311371	305.277037	5479.794962	11
900			
1 Feb 2023 10:13:19.363	6717.585215	6717.760126	0
.00510265 51.547859	131.292544	131.199374	
373.901509			11
910	303,011,12	31/30303011	
2 Feb 2023 01:24:37.053	6717 415097	6717 597402	0
.00506605 51.548007			U
373.482148	305.418838	5479.374422	11
920			_
2 Feb 2023 16:35:52.648			0
.00502782 51.548141			
373.051378	305.503516	5479.162699	11
930			
3 Feb 2023 07:47:06.150	6717.075111	6717.242278	0
.00498861 51.548246			
372.614981		5478.952051	11
940			
3 Feb 2023 22:58:17.553	6716.904101	6717 068563	0
.00494815 51.548311			3
372.168646			11
	305.694480	5478.739516	11
950	CR1 C R22222	CE4 C 004001	_
4 Feb 2023 14:09:26.848			O
.00490624 51.548330	143.161404	114.778372	

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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) Sidereal	reliod (sec) O	LDIC CO
unt			
371.712588	205 202122	- 4 - C - C - C - C - C - C - C - C - C	
371.712588	305.803180	5478.527026	11
960			
5 Feb 2023 05:20:34.034 .00486363 51.548304	6716.562745	6716.721628	0
.00486363 51.548304	145.616459	111.493637	
.00486363 51.548304	20E 017006		11
371.252250	303.91/006	5478.315058	11
970			
5 Feb 2023 20:31:39.103	6716.390765	6716.546786	0
.00481967 51.548237	148.098609	108.208690	
370.781323	306 038248	5478 101151	11
	300.030240	3470.101131	
980			
6 Feb 2023 11:42:42.049	6716.219564	6716.372680	0
.00477467 51.548140	150,614625	104,923522	
370.304127	306.167234	5477.888149	11
7 Feb 2023 02:53:42.872 .00472912 51.548027 369.822842	6816 048031	6816 100126	•
7 Feb 2023 02:53:42.872	6716.047931	6716.198136	0
.00472912 51.548027	153.158078	101.638128	
369.822842	306.299430	5477.674612	12
000			
7 Feb 2023 18:04:41.558	C71E 074043	6716 022182	^
/ FeD 2023 18:04:41.558	0/15.0/4945	6/16.022182	U
	155.732946		
369.331363	306.439001	5477.459353	12
010			
8 Feb 2023 09:15:38.106	6715 703299	6715 847570	0
0 red 2023 09.13.30.100	150 242505	0715:047570	U
.00463489 51.547818	158.343507		
368.837771	306.583368	5477.245739	12
020			
9 Feb 2023 00:26:32.513 .00458701 51.547755	6715.529979	6715,671281	0
00/150701	160 092200	01 700630	
.00456701 51.547755	100.902290	91.760636	
	306.729456	5477.030077	12
030			
9 Feb 2023 15:37:24.762	6715.355954	6715.494255	0
.00453809 51.547734	163.656959	88.494412	
			10
367.832791	300.881/20	54/6.813516	12
040			
10 Feb 2023 06:48:14.854	6715.183192	6715.318522	0
.00448915 51.547763			
367.327578	307.035467		12
	307:033407	5476.598539	12
050			
10 Feb 2023 21:59:02.783			0
.00443975 51.547840	169.107385	81.921476	
366.817154	307.190036		12
	30, 12, 300	3170030001	
060	484 4 000010		_
11 Feb 2023 13:09:48.534			0
.00438983 51.547957	171.887054	78.634800	
	307.348171		12
070			
12 Feb 2023 04:20:32.106	6714.658248	6714.784736	0
12 1GD 2023 01.20.32.100	0/11.030210	0/14./04/30	U

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Heigh Period (sec) Orbit Co	ιt
			-
			- -
00434018 51 548102	174 701166	75 348000	
.00434018 51.548102 365.791136	307.504335	75.348000 5475.945567 1	.2
080 12 Feb 2023 19:31:13.482			^
.00429026 51.548255	177.545865	72.061079	U
365.275010	307.660181	5475.725210 1:	2
090			
13 Feb 2023 10:41:52.655	6714.304878	6714.425613	0
.00424044 51.548396	180.432529	68.774027	
364.760731 100			
14 Feb 2023 01:52:29.616	6714.126477	6714.244412	0
.00419105 51.548508	183.349871	65.486830	
100 14 Feb 2023 01:52:29.616 .00419105 51.548508 364.247164 110	307.967660	5475.284624 1	.2
14 Feb 2023 17:03:04.346	6713.947261	6714.062435	0
.00414177 51.548578	186.300701	62.199463	
363.733549	308.117322	5475.062031	.2
120			_
15 Feb 2023 08:13:36.843	6713.768714	6713.881194	0
.00409309 51.548601	189.291582	58.911901 5474.840339 1	2
363.224717 130			
15 Feb 2023 23:24:07.091 .00404504 51.548583	6713.587285	6713.697137	0
.00404504 51.548583	192.308437	55.624119	
362.717332	308.402943	5474.615207	.2
140			
16 Feb 2023 14:34:35.074	6713.406067	6713.513352	0
.00399755 51.548539	195.362008	52.336101	_
362.213944 150			.2
17 Feb 2023 05:45:00.786	6713.223849	6713.328648	0
.00395102 51.548489	198.448976	49.047841	
361.716114	308.667182	5474.164492	.2
160			
17 Feb 2023 20:55:24.203			0
.00390533 51.548456	201.558936	45.759345	_
361.221242 170	308.787194	54/3.935243	.2
18 Feb 2023 12:05:45.312	6712.854578	6712.954631	n
.00386063 51.548457			Ū
360.733851			.2
180			
19 Feb 2023 03:16:04.104	6712.668178	6712.765992	0
.00381723 51.548505	207.876391	39.181725	
360.253191	309.004793	5473.476306	.2
190			

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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 (han) braciear	101104 (500)	DIC CO
19 Feb 2023 18:26:20.553 .00377488 51.548599	6810 480500	6810 585036	•
19 Feb 2023 18:26:20.553	6/12.4/9583	6/12.5/5236	U
.00377488 51.548599	211.068746	35.892655	
359.777383 200	309.099088	5473.242999	12
200			
20 Feb 2023 09:36:34.648 .00373392 51.548732	6712 201309	6712 284084	0
20 Feb 2025 09:50:51:010	0712.291390	0/12.304904	U
.00373392 51.548732	214.292876	32.603443	
359.311521	309.184446	5473.010312	12
210			
21 Feb 2023 00:46:46.378	6712.101039	6712.192661	0
			·
.00369459 51.548887	217.531498	29.314108	
358.854470	309.256851	5472.775095	12
220			
21 Feb 2023 15:56:55.718	6711.908827	6711.998564	0
21 Feb 2023 15:56:55.718 .00365645 51.549043 358.403653	220 780754	26 024652	ŭ
.00363645 51.549043	220.769754	20.024652	
358.403653	309.319475	5472.537711	12
230			
22 Feb 2023 07:07:02.659	6711.716788	6711.804749	0
.00362014 51.549181	224 070027	22 735069	•
.00362014 51.549161	224.070027	22.735066	
357.965439	309.370059	5472.300677	12
240			
22 Feb 2023 22:17:07.192	6711.523304	6711.609593	0
.00358562 51.549286			•
357.537907	309.407279	5472.062005	12
23 Feb 2023 13:27:09.296 .00355251 51.549349	6711.327423	6711.412123	0
00355251 51 549349	230 657295	16 155452	
357 117461	200 422706	E471 000E00	12
.00355251 51.549349 357.117461	309.432766	5471.820508	12
24 Feb 2023 04:37:08.958 .00352162 51.549371	6711.132180	6711.215411	0
.00352162 51.549371	233.968520	12.865377	
356.712752	309 444070	5471 579940	12
	309.444070	3471.373340	12
270			
24 Feb 2023 19:47:06.171	6710.934801	6711.016660	0
.00349252 51.549357	237.277078	9.575097	
356.318017		5471.336883	12
	505.111505	3471.330003	12
280			
25 Feb 2023 10:57:00.912			0
.00346517 51.549317	240.592947	6.284599	
355.933497	309.425227	5471.091937	12
290		01/1000100/	
			_
26 Feb 2023 02:06:53.177			0
.00344028 51.549264	243.905981	2.993874	
355.566379	309.393530	5470.848084	12
300			
26 Feb 2023 17:16:42.952	6710 226240	6710.414597	0
			U
.00341715 51.549211		359.702925	
355.208068	309.347125	5470.600626	12

Page 106		- 1 - 1 - 1 - 1	_
Time (UTCG) Ser			
entricity Inclination (deg) of Apogee (km) Height of Po			
unt	erigee (km) sid	ereal Period (Sec)	rbit co
310			
27 Feb 2023 08:26:30.220	6710.134968	6710.212364	0
.00339619 51.549167	250.	507434 356.411753	
354.864544	309.286185	5470.353327	12
320			
27 Feb 2023 23:36:14.986	6709.934177	6710.010732	0
00337771 51 549139	253	789995 353 120371	
354.538210	309.209253	5470.106763	12
330			
28 Feb 2023 14:45:57.231 .00336102 51.549128	6709.729666	6709.805463	0
.00336102 51.549128	257.	054715 349.828790	
354.220257 340	309.116668	5469.855757	12
340			^
1 Mar 2023 05:55:36.941 .00334688 51.549133	0/09.520505	0/09.601/24 204992 246 E27021	U
353.920939	200.	5460 606626	12
353.920939	309.006309	3409.000020	12
1 Mar 2023 21.05.14 124	6709 322855	6709 397484	0
1 Mar 2023 21:05:14.124 .00333513 51.549147 353.637168	263.	525818 343.245074	J
353.637168	308.883800	5469.356887	12
.360			
2 Mar 2023 12:14:48.760 .00332525 51.549160	6709.116180	6709.190366	0
.00332525 51.549160	266.	722893 339.952955	
353.363070	308.743661	5469.103631	12
370			
3 Mar 2023 03:24:20.843	6708.911515	6708.985381	0
.00331813 51.549163	269.	892455 336.660664	
353.109678	308.587083	5468.852988	12
380			
3 Mar 2023 18:33:50.380			
.00331323 51.549145	273.	025526 333.368201	
352.869794	308.414403	5468.600763	12
390			_
4 Mar 2023 09:43:17.351			0
.00331031 51.549096		127904 330.075556	10
	308.226460	5468.346233	12
400 5 Mar 2023 00:52:41.759	6700 201565	6709 365073	0
.00331021 51.549011		192372 326.782715	U
352.434187		5468.094535	12
410	300.021337	3100.031333	14
5 Mar 2023 16:02:03.603	6708.082872	6708.156454	0
.00331195 51.548888	282.	217796 323.489665	J
352.236552		5467.839465	12
420			
6 Mar 2023 07:11:22.863	6707.873807	6707.947561	0
.00331589 51.548727	285.	204670 320.196388	

entricity Inclination (deg) of Apogee (km) Height of Pe	Arg of Perigee (deg) erigee (km) Sidereal	Period (sec) Orbit Co
	225	-4604060
352.053359 430		
6 Mar 2023 22:20:39.553 .00332243 51.548535	6707.667068	6707.741111 0
.00332243 51.548535	288.149445	316.902867
351.890136	307.318087	5467.331653 12
440		
7 Mar 2023 13:29:53.657	6707.455003	6707.529401 0
.00333043 51.548323	291.053326	313.609091
.00333043 51.548323 351.731354	307.053448	5467.072814 12
450	6000 044041	CROR 210C00
8 Mar 2023 04:39:05.155 .00334083 51.548103 351.590600	6707.244741	6707.319602 0
.00334083 51.548103	293.912/86	310.315045
460	306.774605	5400.01031/
8 Mar 2023 19:48:14.059	6707 034318	6707 109738 0
.00335334 51.547891	296.730280	307.020726
351.463966	306.481511	5466.559743 12
470	3000101311	21000333713
9 Mar 2023 10:57:20.337	6706.818604	6706.894645 0
.00336715 51.547700		
351.340780	306.174511	5466.296781 12
480 10 Mar 2023 02:06:23.977 .00338338 51.547543 351.236997		
10 Mar 2023 02:06:23.977	6706.605946	6706.682720 0
.00338338 51.547543	302.234324	300.431285
351.236997	305.854443	5466.037696 12
10 Mar 2023 17:15:24.975	6706.389339	6706.466914 0
.00340105 51.547427	304.922769	297.136186
351.138955	305.520872	5465.773871 12
500 11 Mar 2023 08:24:23.292	6706 160026	6706.248383 0
.00342017 51.547352	0700.109930 207 E69432	6706.248383 0 293.840857
351.047874		5465.506719 12
511.047074	303:17:4033	3403.300719 12
11 Mar 2023 23:33:18.930	6705.953193	6706.032614 0
.00344140 51.547312		290.545319
350.973749		5465.242948 12
520		
12 Mar 2023 14:42:11.862	6705.729380	6705.809826 0
.00346358 51.547293	312.734681	287.249596
350.898926	304.446726	5464.970600 12
530		
13 Mar 2023 05:51:02.049	6705.505741	6705.587293 0
	315.257449	
350.835210	304.065377	5464.698570 12
540 13 Mar 2023 20:59:49.487	6705.281382	6705.364121 0
13 Mai 2023 20:33:43:40/	0/03.201302	0,00.304121

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Time (UTCG) Ser				
entricity Inclination (deg)	Arg of Peri	gee (deg)	RAAN (deg)	Height
of Apogee (km) Height of Pount				
.00351272 51.547234	3	17.740895	280.657626	
350.781205	303.673036		5464.425761	12
550				
14 Mar 2023 12:08:34.137	6705.0506	69	6705.134644	. 0
.00353893 51.547152	3	20.187166	277.361384	
350.726679	303.268609		5464.145251	12
15 Mar 2023 03:17:15.951 .00356660 51.547016	6704.8185	47	6704.903838	3 0
.00356660 51.547016	3	22.596108	274.064948	
350.680550	302 853125		5463 863121	12
570	302.033123		5405.005121	12
15 Mar 2023 18:25:54.900	6704 5927	65	6704 660421	0
.00359530 51.546820	0704.3027	24 060520	270 760202	. 0
.00359530 51.546620	202 427161	24.900000	2/0./00293	12
350.637701				
580 16 Mar 2023 09:34:30.937 .00362494 51.546573 350.597044	6804 040B		<b>6704 40006</b>	
16 Mar 2023 09:34:30.937	6704.3427	67	6704.430864	<u> </u>
.00362494 51.546573	3	27.308300	267.471388	
350.597044	301.990684		5463.284988	12
390				
17 Mar 2023 00:43:04.036	6704.1024	91	6704.192089	0
.00365576 51.546295	3	29.614293	264.174201	
350.563997	301.546182		5462.993132	12
600				
17 Mar 2023 15:51:34.171	6703.8581	20	6703.949272	2 0
.00368739 51.546015	3	31.886977	260.876712	
350.532321	301.092224		5462.696341	12
610				
18 Mar 2023 07:00:01.301	6703.6107	80	6703.703543	0
.00371989 51.545764	3	34.132067	257.578906	
350.503602			5462.395996	12
620				
18 Mar 2023 22:08:25.399	6703.3619	06	6703.456332	2 0
.00375316 51.545568			254.280784	
	300.160170		5462.093846	12
630				
19 Mar 2023 13:16:46.435	6703.1093	62	6703.205504	. 0
.00378717 51.545446			250.982362	
	299.682309	30.332733	5461.787280	12
640	299.002309		3401.707200	12
20 Mar 2023 04:25:04.370	6702 0527	00	6702 0F1613	3 0
			247.683661	, ,
.00382178 51.545401				10
	299.197390		5461.476976	12
650	6800 E0=1	0.1	CEAA	
20 Mar 2023 19:33:19.171				0
.00385684 51.545424			244.384706	
350.409571	298.707080		5461.163750	12
660				

Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Po		RAAN (deg) H	<b>Teight</b>
21 Mar 2023 10:41:30.808 .00389252 51.545495 350.388787	6702 334852	6702 436405	0
.00389252 51.545495	344.941666	241.085524	· ·
350.388787	298.210023	5460.847312	12
22 Mar 2023 01:49:39.241	6702.069968	6702.173399	0
.00392842 51.545585			12
350.365367 680	297.707432	5400.525666	12
22 Mar 2023 16:57:44.438	6701.803662	6701.909005	0
.00396464 51.545666	349.097976	234.486533	
350.342650	297.201361	5460.202772	12
23 Mar 2023 08:05:46.373	6701.534503	6701.641795	O
23 Mar 2023 08:05:46.373 .00400121 51.545713 .350.319480	296.690110	5459.876220	12
700	250.050220	31331070220	
23 Mar 2023 23:13:45.005	6701.261180	6701.370432	0
.00403768 51.545709	353.175509	227.886713	
350.291428	296.175436	5459.544602	12
710	6700 007670	6701 000001	0
710 24 Mar 2023 14:21:40.308 .00407440 51.545645	355.185538	224.586461	U
350.264858	295.658985	5459.212810	12
120			
25 Mar 2023 05:29:32.257 .00411112 51.545525	6700.710051	6700.823304	0
.00411112 51.545525	357.180049	221.285956	
350.234177 730	295.138431	5458.876006	12
25 Mar 2023 20:37:20.806	6700.429132	6700.544396	0
25 Mar 2023 20:37:20.806 .00414756 51.545357	359.155815	217.985175	•
350.198304	294.616489	5458.535187	12
740			
26 Mar 2023 11:45:05.942	6700.148862		0
.00418410 51.545160 350.163777		214.684102 5458.195199	12
750	294.094340	3430.133133	12
27 Mar 2023 02:52:47.634	6699.862916	6699.982250	0
.00422032 51.544954	3.066843	211.382726	
350.121297	293.569203	5457.848281	12
760 27 Mar 2023 18:00:25.844	6600 576295	6699.697653	0
.00425622 51.544758		208.081036	U
350.076024	293.045281	5457.500533	12
770			
28 Mar 2023 09:08:00.566		6699.412443	0
.00429195 51.544592		204.779034	10
350.028977	292.521909	5457.152043	12

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	mi-parameter (km) Sem		
entricity Inclination (deg)			
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) O	rbit Co
unt			
780			
29 Mar 2023 00:15:31.759	6698.995792	6699.121227	0
.00432712 51.544469	8.834669	201.476722	
.00432712 51.544469 349.972155	291.996299	5456.796223	12
790			
29 Mar 2023 15:22:59.399	6698.704350	6698.831805	0
.00436194 51.544398	10.734850	198.174105	
349.914735	291.474875	5456.442602	12
800			
30 Mar 2023 06:30:23.479 .00439630 51.544379	6698.409762	6698.539228	0
.00439630 51.544379	12.628285	194.871195	
349.851045	290.953411	5456.085134	12
810 30 Mar 2023 21:37:43.957			^
.00443002 51.544410	14 51028	101 560001	U
349.779005	290 432241	5455 722753	12
820			
31 Mar 2023 12:45:00.821 .00446321 51.544478 349.705392	6697.814594	6697.948019	0
.00446321 51.544478	16.386226	188.264529	·
349.705392	289.916645	5455.362823	12
8.30			
1 Apr 2023 03:52:14.051	6697.512742	6697.648114	0
1 Apr 2023 03:52:14.051 .00449575 51.544570	18.256324	184.960788	
349.622083	289.400144	5454.996426	12
840			
1 Apr 2023 18:59:23.608	6697.209314	6697.346600	0
.00452754 51.544668	20.117760	181.656777	
349.532110	288.887090	5454.628072	12
850 2 Apr 2023 10:06:29.487	6606 006759	6697.045930	^
2 Apr 2023 10:06:29.487 .00455863 51.544752			
349.438253		5454.260757	12
860	200.379000	3434.200737	12
3 Apr 2023 01:13:31.658	6696.598207	6696.739229	0
.00458894 51.544807			· ·
349.333185		5453.886083	12
870			
3 Apr 2023 16:20:30.085	6696.289867	6696.432695	0
.00461832 51.544818			
349.221957	287.369432	5453.511620	12
880			
4 Apr 2023 07:27:24.765	6695.980657	6696.125253	0
.00464692 51.544//5	27.526489	168.43/92/	
349.104636	286.871870	5453.136058	12
890	6605 665055	6605 010100	_
4 Apr 2023 22:34:15.660		6695.812183 165.132455	0
.00467461 51.544677	29.369909	103.132455	

Time (UTCG) Ser entricity Inclination (deg) of Apogee (km) Height of Po	Arg of Perigee (deg)	
348.975484 900	286.374882	5452.753630 12
5 Apr 2023 13.41.02 739	6695 351817	6695 499792 0
5 Apr 2023 13:41:02.739 .00470113 51.544527	31.212175	161.826647
348.839207	285.886376	5452.372039 12
910		
6 Apr 2023 04:47:45.992	6695.035212	6695.184805 0
.00472688 51.544339	33.054371	158.520495
348.695138	285.400472	5451.987287 12
920		
6 Apr 2023 19:54:25.372	6694.713323	6694.864463 0
.00475137 51.544129	34.894067	155.213989
6 Apr 2023 19:54:25.372 .00475137 51.544129 348.537226	284.917700	5451.596003 12
930		
7 Apr 2023 11:01:00.851	6694.392360	6694.544979 0
.00477467 51.543922	36.735558	151.907123
348.372238 940	284.443720	5451.205776 12
8 Apr 2023 02:07:32.409	6694 066963	6694 221010 0
.00479709 51.543742	38 577666	148 599906
348 196807	283 971212	5450.810080 12
348.196807 950		
8 Apr 2023 17:13:59.989 .00481788 51.543610	6693.736683	6693.892062 0
.00481788 51.543610	40.420308	145.292345
348.005405	283.504718	5450.408313 12
960		
9 Apr 2023 08:20:23.566 .00483766 51.543544	6693.407278	6693.563926 0
.00483766 51.543544	42.266644	141.984453
347.808087	283.045766	5450.007549 12
970		
9 Apr 2023 23:26:43.106		
.00485623 51.543549		138.676250
347.595709	282.587994	5449.598319 12
980 10 Apr 2023 14:32:58.543	6600 531004	6600 000010 0
.00487297 51.543622		6692.890012 0 135.367746
347.367261		5449.184502 12
990	202:130703	3449.104302 12
11 Apr 2023 05:39:09.856	6692.391243	6692.551204 0
.00488890 51.543746		
347.133401	281.695007	
000		
11 Apr 2023 20:45:16.990	6692.042377	6692.203260 0
.00490310 51.543898		128.749867
346.878774	281.253747	5448.345819 13
010		
12 Apr 2023 11:51:19.881	6691.691946	6691.853645 0

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		ni-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		
.00491564 51.544046	51.553020	125.440479
346.611367	280.821922	5447.918874 13
020		
13 Apr 2023 02:57:18.507 .00492731 51.544162	6691.339366	6691.501825 0
.00492731 51.544162	53.426622	122.130768
346.335959	280.393690	5447.489248 13
030		
13 Apr 2023 18:03:12.793 .00493679 51.544224	6690.977126	6691.140202 0
.00493679 51.544224	55.306095	118.820707
346.035971	279 970433	5447.047664 13
040	273.370433	5447.047004 15
	6600 615313	6600 778034
14 Apr 2023 09:09:02.684	6690.615313	0090.778924 0
.00494502 51.544221	57.194619	115.510259
345.727948	279.555900	5446.606512 13
050		
15 Apr 2023 00:14:48.149 .00495201 51.544159 345.406111	6690.248056	6690.412121 0
.00495201 51.544159	59.088766	112.199402
345.406111	279.144132	5446.158627 13
060		
15 Apr 2023 15:20:29.103	6689.872554	6690.036915 0
.00495662 51.544053	60.991503	108.888114
345.059893	278.739937	5445.700492 13
070		
16 Apr 2023 06:26:05.502	6689 498138	6689.662737 0
.00496035 51.543930	62 903761	105 576386
244 700705	279 242679	5445.243626 13
344.708795 080	270.342079	3443.243020 13
16 Apr 2023 21:31:37.298 .00496233 51.543818	6600 114074	6600 000605
16 Apr 2023 21:31:3/.298	6689.1149/4	6689.279695 0
.00496233 51.543818	64.821832	102.26422/
344.337128	277.948263	5444.775951 13
090		
17 Apr 2023 12:37:04.407		
.00496210 51.543743		
343.945285	277.563379	5444.301792 13
100		
18 Apr 2023 03:42:26.795	6688.338275	6688.502896 0
.00496110 51.543724	68.689167	95.638675
	277.183594	5443.827558 13
110		
18 Apr 2023 18:47:44.399	6687 939587	6688.103983 0
.00495786 51.543769		92 325332
343.125661		5443.340548 13
	2/0.000303	J113.34U340 I3
120	6607 530470	6600 000000
19 Apr 2023 09:52:57.142		
.00495285 51.543873		
342.688686	276.442377	5442.850453 13
130		

Page II3			
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			
	silgee (Am) blueleal	rerroa (Bec)	DIC CO
unt			
			_
20 Apr 2023 00:58:04.994 .00494685 51.544024	6687.135299	6687.298946	0
.00494685 51.544024	74.559020	85.697600	
342,243002	276.080889	5442.357767	13
342.243002 140			
20 Apr 2023 16:03:07.878 .00493832 51.544203	6606 801 800	5505 004555	•
20 Apr 2023 16:03:07.878	6686.721503	6686.884576	0
.00493832 51.544203	76.535721	82.383233	
341.769528	275.725623	5441.851932	13
150			
		5505 450540	_
21 Apr 2023 07:08:05.729			0
.00492848 51.544390	78.527062	79.068524	
341.287301	275.378979	5441.346032	13
160			
100		5505 05000	•
21 Apr 2023 22:12:58.513 .00491721 51.544564 340.789965	6685.888620	6686.050282	0
.00491721 51.544564	80.524627	75.753462	
340.789965	275.036599	5440.833529	13
170			
			_
22 Apr 2023 13:17:46.142	6685.460739	6685.621481	0
22 Apr 2023 13:17:46.142 .00490336 51.544709	82.538255	72.438029	
340.266487	274.702475	5440.310126	13
180	2,11,021,3	3110.310120	
			_
23 Apr 2023 04:22:28.575	6685.034772	6685.194532	0
.00488853 51.544816	84.564042	69.122195	
339.738273	274 . 376791	5439.789002	13
23 Apr 2023 19:27:05.770 .00487163 51.544880			
23 Apr 2023 19:27:05.770	6684.600467	6684.759114	0
.00487163 51.544880	86.599002	65.805944	
339.187780	274.056449	5439.257556	13
.00487163 51.544880 339.187780	2,10000119	313311237330	
200			
24 Apr 2023 10:31:37.641	6684.160580	6684.317975	0
24 Apr 2023 10:31:37.641 .00485252 51.544902	88.654296	62.489251	
338.616736			
210		010007.20210	
			_
25 Apr 2023 01:36:04.169	6683.723204	6683.879287	0
.00483241 51.544890	90.718137	59.172095	
		5438.183744	13
	2,3.1130,3	31301103711	
220			
25 Apr 2023 16:40:25.299	6683.274653	6683.429264	0
.00480973 51.544854	92.797846	55.854472	
337.437743	273.146785	5437.634527	13
230		01010001011	
			_
26 Apr 2023 07:44:40.960			0
.00478549 51.544806	94.898251	52.536367	
336.823327	272.860628	5437.085007	13
240			
	6600 076055	6600 <b></b>	_
26 Apr 2023 22:48:51.148			0
.00475987 51.544758	97.006869	49.217783	
336.199280	272.583385	5436.535068	13
			_

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height bit Co
250 27 Apr 2023 13:52:55.795	6681 917259	6682.066857	0
27 Apr 2023 13:52:55.795 .00473160 51.544719	99.139040	45.898726	J
335.546718	272.312997	5435.971932	13
260			
28 Apr 2023 04:56:54.869	6681.463163	6681.610913	0
.00470244 51.544699 334.893782			13
270			
28 Apr 2023 20:00:48.375 .00467120 51.544699 334.222224	6681.004419	6681.150203	0
.00467120 51.544699	103.449929	39.259210	
334.222224	271.804181	5434.853400	13
200			
29 Apr 2023 11:04:36.240 .00463789 51.544720	6680.538940 105 641061	6680.682642 35 039779	Ü
333.529906	271.561378	5434.282896	13
290			
30 Apr 2023 02:08:18.475	6680.081792	6680.223387	0
.00460394 51.544758	107.844319	32.617903	
332.841706	271.331068	5433.722547	13
300	6670 614797	6670 754120	0
300 30 Apr 2023 17:11:55.068 .00456731 51.544804	110.069454	29.296602	U
.00456731 51.544804 332.125606	271.108651	5433.150011	13
310			
1 May 2023 08:15:25.963 .00452960 51.544849	6679.148812	6679.285853	0
.00452960 51.544849	112.324369	25.974867	
331.403366 320	270.894341	5432.578696	13
1 May 2023 23:18:51.192	6678.687036	6678.821730	0
.00449081 51.544882	114.590418	22.652699	·
330.678062	270.691399		13
330			
2 May 2023 14:22:10.712			0
.00444933 51.544890 329.923630		19.330096 5431.432692	13
340	2/0.49334/	J431.432092	13
3 May 2023 05:25:24.505	6677.749951	6677.879686	0
.00440768 51.544867	119.210437	16.007033	
329.176620	270.308752	5430.863233	13
350	6688 000043	CCER 400411	•
3 May 2023 20:28:32.601 .00436400 51.544805		6677.409411 12.683505	0
		5430.289557	13
360			
4 May 2023 11:31:34.930	6676.806736	6676.931248	0
.00431835 51.544705	123.924513	9.359489	

Page IIS			
Time (UTCG) Ser	ni-parameter (km) Sem	i-major Axis (km)	Ecc
entricity Inclination (deg)			
of Apogee (km) Height of Pe			
	singee (Am) Siderean	reliod (sec) Oi	.DIC CO
unt			
327.627581			
327.627581	269.960915	5429.706282	13
370			
370 5 May 2023 02:34:31.506 .00427276	6676.341639	6676.463528	0
.00427276 51.544573	126.320892	6.034962	
226 052472	260 700503	E420 13E764	1 2
320.053473	209.799303	5429.135/64	13
500			
5 May 2023 17:37:22.324	6675.865377	6675.984509	0
.00422431 51.544415	128.741651	2.709922	
326.048908			13
	209.040110	3420.331404	13
390			
6 May 2023 08:40:07.308	6675.388391	6675.504750	0
.00417500 51.544249	131.201987	359.384346	
.00417500 51.544249 325.238003	269.497497	5427.966324	13
400			
6 May 2023 23:42:46.489 .00412513 51.544087 324.429066			_
6 May 2023 23:42:46.489	6674.917120	6675.030707	0
.00412513 51.544087	133.680759	356.058237	
324.429066	269.358348	5427.388156	1.3
410	203.000010	3127 (300130	
410			
7 May 2023 14:45:19.809	6674.431231	6674.541915	0
.00407223 51.543943	136.195670	352.731607	
323.585192	269.224639	5426.792020	13
420			
9 Mars 2022 0F 47 47 210	6672 050257	6674 059176	0
8 May 2023 05:47:47.210	00/3.93035/	00/4.0501/0	U
.00401933 51.543829	138.748030	349.404457	
322.746395	269.095957	5426.202069	13
430			
8 May 2023 20:50:08.697 .00396471 51.543745	6673 465718	6673 570619	0
00206471	141 22214	246 076914	Ū
.003964/1 51.543/45	141.323314	346.076814	
321.892362	268.974876	5425.607482	13
440			
9 May 2023 11:52:24.174	6672.969517	6673.071415	0
.00390768 51.543688	143.946207		
321.010649	268.858181	5424.998715	13
450			
10 May 2023 02:54:33.609	6672.479620	6672.578568	0
.00385085 51.543645			
320.136660			1.0
	268.746477	5424.397723	13
460			
10 May 2023 17:56:36.979	6671.980018	6672.075929	0
.00379142 51.543598		336.091068	
319.235595		5423.784812	13
	200.042203	3423.764612	13
470			
11 May 2023 08:58:34.169	6671.471650	6671.564492	0
.00373044 51.543529	152.040736	332.761565	
		5423.161198	13
	200.0000	3-23-10-170	-5
480			_
12 May 2023 00:00:25.153	6670.967856	6671.057674	0

Page 116			
Time (UTCG) Se			
entricity Inclination (deg)			
of Apogee (km) Height of P	erigee (km) Sidereal	Period (sec) Orb	it Co
unt			
.00366932 51.543422	15/ 01006	: 220 /21570	
217 202047	269 442401	5422 543232	12
317.398947 490	200.442401	5422.543236	13
12 May 2023 15:02:09.874	6670 450604	6670 537307	0
.00360527 51.543268	157 65315	226 101092	U
316.449363	269 351252	5421 909792	13
510.445303	200.331232	3421.900703	13
500 13 May 2023 06:03:48.214 .00354060 51.543069	6669 927891	6670 011505	0
00354060 51 543069	160 54066	322 770067	U
315 490344	268 258667	5421 267726	13
315.490344 510		5421.267726	
13 May 2023 21:05:20.138 .00347513 51.542837	6669 404766	6669 485310	0
.00347513 51.542837	163.468647	319.438473	Ū
314.525635	268.170986	5420.626216	13
520	200:170300	3120.020210	13
14 May 2023 12:06:45.553	6668.867523	6668.944936	0
.00340705 51.542588	166.469678	316,106292	·
313.529344	268.086527	5419.967445	13
530		01_0000	_
530 15 May 2023 03:08:04.370 .00333934 51.542346 312.535255	6668.329804	6668.404165	0
.00333934 51.542346	169.521112	2 312.773500	
312.535255	267.999075	5419.308218	13
540			
15 May 2023 18:09:16.555	6667.787303	6667.858611	0
.00327020 51.542131	172.631210	309.440102	
311.526827	267.916395	5418.643186	13
550			
16 May 2023 09:10:21.999	6667.231844	6667.300102	0
.00319964 51.541957	175.824869	306.106107	
310.496037	267.830167	5417.962391	13
560			
17 May 2023 00:11:20.646	6666.680262	6666.745581	0
.00313012 51.541836	179.067740	302.771520	
309.476315		5417.286485	13
570			
17 May 2023 15:12:12.456	6666.118472	6666.180845	0
.00305887 51.541763	182.395292	299.436373	
308.434795	267.652896	5416.598158	13
580			
18 May 2023 06:12:57.329	6665.550495	6665.610014	0
.00298817 51.541732	185.806218	3 296.100677	
307.391019	267.555008	5415.902430	13
590			
18 May 2023 21:13:35.226	6664.982373	6665.039136	0
.00291830 51.541728	189.272292	2 292.764446	
306.352724	267.451548	5415.206675	13
600			

Page II/			
Time (UTCG) Ser entricity Inclination (deg)	mi-parameter (km) Sem	i-major Axis (km)	Ecc
of Apogee (km) Height of Pe	erigee (km) Sidereal	Period (sec) On	rbit Co
unt			
19 May 2023 12:14:06.090 .00284756 51.541733	6664 405226	6664 450075	0
19 May 2023 12:14:06.090	0004.405236	0004.4592/5	U
.00284756 51.541733	192.845793	289.427693	
305.299692	267.344857	5414.500003	13
20 May 2023 03:14:29.864 .00277905 51.541731	6663.827701	6663.879166	0
.00277905 51.541731	196.493580	286.090413	
304.261409	267 222924	5413 793060	13
504.201409	207.222324	3413.753000	13
620			_
20 May 2023 18:14:46.521	6663.246060	6663.295030	0
.00271097 51.541705	200.210940	282.752603	
303.222006	267.094055	5413.081240	13
630			
21 May 2023 09:14:56.000 .00264385 51.541645 302.183339	6662.658582	6662.705153	0
00264295	204 042272	279 414250	ŭ
.00204303 31.341043	201.013372	Z/3.414ZJU	1.2
302.183339	200.952908	5412.362456	13
640			
22 May 2023 00:14:58.261 .00257944 51.541545	6662.070410	6662.114737	0
.00257944 51.541545	207.933476	276.075332	
301.162286	266.793187	5411.643045	13
650			
22 May 2023 15:14:53.277	6661 470100	6661 E20262	0
22 May 2023 13:14:55.2//	0001.470190	0001.520303	U
	211.906245		
300.142998	266.623728	5410.918846	13
660 23 May 2023 06:14:40.989 .00245490 51.541229 299.135692			
23 May 2023 06:14:40.989	6660.880632	6660.920775	0
.00245490 51.541229	215.980382	269.395728	
299.135692	266.431857	5410.188325	13
670	2001131037	3120120323	
070 02 Mars 2002 21 14 21 247	6660 270661	6660 217012	0
23 May 2023 21:14:21.347 .00239651 51.541029	0000.2/9001	6660.31/913	U
.00239651 51.541029	220.087488	266.055000	
298.142400	266.219426	5409.453850	13
680			
24 May 2023 12:13:54.333	6659.679447	6659.715923	0
.00234033 51.540818			
297.164874	265.992972	5408.720470	13
	203.992972	3400.720470	13
690			_
25 May 2023 03:13:19.917			0
.00228757 51.540610	228.530963	259.371615	
296.203960	265.737588	5407.979620	13
700			
25 May 2023 18:12:38.061	6658.466597	6658.499938	0
.00223772 51.540418			•
295.262821		5407.239186	13
	203.403030	J40/.439100	13
710			
26 May 2023 09:11:48.761			0
.00219124 51.540256	237.113505	252.685613	
294.342843	265.164820	5406.497237	13

Page 110		
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) blueleal	reriod (Bec) Orbic Co
unt		
T00		
720		
27 May 2023 00:10:51.992	6657.248299	6657.279035 0
.00214869 51.540130	241.425229	249.341636
720 27 May 2023 00:10:51.992 .00214869 51.540130 293.446477	264.837592	5405.752046 13
730		
27 May 2023 15:09:47.740 .00210931 51.540045	6656 637762	6656 667379 0
27 May 2023 13.03.47.740	0050:057702	0050:007575
.00210931 51.540045	245./305/6	245.99/018
292.571332	264.489426	5405.007060 13
740		
28 May 2023 06:08:35.984	6656.023536	6656.052172 0
.00207420 51.539997	250.059015	242.651772
291.721170	264 100175	5404.257785 13
	204.1091/5	5404.257765
750		
28 May 2023 21:07:16.675	6655.404686	6655.432454 0
.00204262 51.539980	254.313335	239.305908
28 May 2023 21:07:16.675 .00204262 51.539980 290.889952	263.700957	5403.503049 13
760		
	6654 705610	6654 010610 0
29 May 2023 12:05:49.788	6654./85612	6654.812618 0
.00201449 51.539979	258.554316	235.959432
290.081669	263.269567	5402.748205 13
770		
30 May 2023 03:04:15.296	6654 162120	6654.188497 0
00100006	262 749502	222 612254
.00199096 51.539980	262.748592	232.012354
289.299715	262.803279	5401.988179 13
780		
30 May 2023 18:02:33.127 .00196972 51.539962	6653.531066	6653.556881 0
.00196972 51.539962	266.849306	229.264675
288.525500	262.314261	5401.219061 13
790	202.314201	5401.219001 15
31 May 2023 09:00:43.237		
.00195260 51.539906	270.909637	225.916385
287.778451	261.797481	5400.449616 13
800		
31 May 2023 23:58:45.578	6652 260767	6652.285776 0
31 May 2023 23:30:43.576	0052.200/0/	0052.205770 0
.00193892 51.539798		
287.047011	261.250541	5399.671350 13
810		
1 Jun 2023 14:56:40.056	6651,613183	6651.637879 0
.00192686 51.539627		219 217936
286.317643		
	200.004114	5398.882521 13
820		
2 Jun 2023 05:54:26.623		
.00191936 51.539392	282.537103	215.867734
285.619347	260.088035	
830		
	CCEO 2022CO	CCEO 200004
2 Jun 2023 20:52:05.187		
.00191326 51.539100	286.211875	212.516853

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal	RAAN (deg) Period (sec) Or	Height
	0.00 4.660.60	5005 005454	
284.914539 840			
3 Jun 2023 11:49:35.643 .00190947 51.538769	6649.638775	6649.663020	0
.00190947 51.538769	289.786793	209.165262	1.0
284.223359 850	258.828681	5396.478322	13
4 Jun 2023 02:46:57.958	6648.970186	6648.994427	0
.00190938 51.538424	293,277897	205.812947	
283.552902 860			
4 Jun 2023 17:44:12.005 .00190950 51.538095 282.866432	6648.284253	6648.308494	0
.00190950 51.538095	296.634515	202.459896	
282.866432	257.476557	5394.829525	13
870 5 Jun 2023 08:41:17.679			
.00191257 51.537813	200 010321	100 106005	U
282.199905	256.771782	5393.994981	1.3
880	2501772702	33331331301	
5 Jun 2023 23:38:14.918	6646.901710	6646.926154	0
.00191770 51.537601	303.082754	195.751554	
281.535949 890			
6 Jun 2023 14:35:03.564 .00192286 51.537472	6646.189851	6646.214425	0
.00192286 51.537472	306.135883	192.396278	
280.857166	255.297684	5392.280849	13
900		6645 400000	•
7 Jun 2023 05:31:43.510 .00193083 51.537425	6645.475197	100 040274	0
280.194308			13
910			
7 Jun 2023 20:28:14.624			0
.00193928 51.537444			
279.515372	253.743314	5390.518634	13
920 8 Jun 2023 11:24:36.729	6643 997305	6644 022518	0
.00194802 51.537502		182.326125	U
278.828181		5389.613525	13
930			
9 Jun 2023 02:20:49.728			0
.00195897 51.537563			
278.149685 940	252.121740	5388.701190	13
9 Jun 2023 17:16:53.444	6642.473839	6642.499597	0
.00196919 51.537593		175.609088	J
277.442965		5387.760547	13
950			
10 Jun 2023 08:12:47.686	6641.692408	6641.718451	0

				RAAN (deg)	
unt				Period (sec) (	
.00198019	51.537565		322.592372	172.249439	
276.733292		250.429610		5386.810189	13
960	10.22 225	6640 9	07255	6640 02361	- 0
00100236	,0:32.323 51 537465	0040.0	375 N34820	6640.923610 168.889000	<b>5</b>
276.017714	31.337403	249.555518	323.034023	5385.843233	13
910					
11 Jun 2023 14:0	04:07.133	6640.0	78506	6640.105148 165.527737	3 0
.00200308	51.537290		327.389082	165.527737	
275.268828		248.667469		5384.847588	13
980					
12 Jun 2023 04:5	59:31.950	6639.2	56866	6639.28383	2 0
.00201535	51.537057		329.681006	162.165613	
274.527344		247.766320		5383.848539	13
990	1.16 616	6630 1	11402	6620 12077	= ^
00202726	51 536786	0030.4.	11492 331 888550	6638.438779 158.802615 5382.820676	, ,
273.759605	31.330700	246.843945	331.000333	5382.820676	14
000				33021020070	
13 Jun 2023 10:4	19:50.856	6637.5	44625	6637.57219	0
.00203788	51.536504		334.028894	155.438716	
272.961742		245.908638		5381.766697	14
010					
				6636.70462	5 0
.00205039	51.536240		336.104228	152.073900	
272.175455		244.959795		5380.711594	14
020	00.27 410	6635 7	71 227	6625 700419	
00206079	51 536015	0035.7	71437 338 101956	6635.799418 148.708176	<b>5</b>
271.337381	31.330013	243.987456	330.101330	5379.610787	14
030		213.307130		5379.610787	
	33:59.208	6634.8	54283	6634.88274	4 0
.00207112			340.048352	145.341522	
270.487402		243.004085		5378.496109	14
040					
				6633.95190	L 0
.00208238	51.535731		341.922711	141.973941	
269.629333		242.000469		5377.364282	14
050	20.00 706	6630.0	40010	6632.97879	
.00209054				138.605431	3 0
268.708304		240.975292		5376.181156	14
060		240.9/3232		22/0.101130	14
	L6:25.811	6631.9	75559	6632.004809	<b>)</b> 0
.00210010					. •
267.795665				5374.997038	14
070					

Time (UTCG)	Semi-parameter (	(km) Sem	i-maior Axis (km)	Ecc
entricity Inclination (d				
of Apogee (km) Height of	or Perigee (km)	Sidereal .	Period (sec) Oi	rbit Co
unt				
17 Jun 2023 19:10:10.851 .00210857 51.535	6630 964	5677	6630 006150	0
00010057	670	247 100 <i>6</i> 12	131 065531	U
.0021065/ 51.555	0070	347.100012	131.005531	
266.841058	238.877260		5373.770875	14
080				
18 Jun 2023 10:03:43.393	6629.921	L134	6629.950768	0
.00211416 51.535	690	348.819797	128.494106	
265.830556	237.796980		5372.500145	14
090				
10 - 0000 00 00 014	6620 071	=1 / 2	6629 004094	^
19 Jun 2023 00:57:03.214 .00212172 51.535 264.832670	0020.073	252 42425	0020.904904	U
.00212172 51.535	5704	350.401959	125.121643	
264.832670	236.703299		5371.229038	14
100				
19 Jun 2023 15:50:09.966	6627.772	2255	6627.802210	0
19 Jun 2023 15:50:09.966 .00212591 51.535	689	351,908416	121.748128	
263.755350	235 575069		5369 888769	14
110	233.373003		3303.000703	
				_
20 Jun 2023 06:43:03.181	6626.649	9088	6626.679115	0
.00212868 51.535	6636	353.387346	118.373491	
262.648193	234.436038		5368.523920	14
20 Jun 2023 21:35:42.617 .00213236 51.535	6625.506	5543	6625.536669	0
.00213236 51.535	5541	354 786630	114 997693	•
261 527660	222 271660	334.700030	E367 13E670	14
261.527669	233.2/1668		5367.135670	14
21 Jun 2023 12:28:07.770 .00213125 51.535	6624.299	9814	6624.329903	0
.00213125 51.535	397	356.134024	111.620701	
260.311007	232.074799		5365.669393	14
140				
22 Jun 2023 03:20:18.215	6623.085	7700	6623.117765	0
.00213057 51.535	3212	257 /52021	108 242435	Ū
.00213037 31.333	230.869718	337.433931	100.242433	14
	230.869/18		5364.196/23	14
150				
22 Jun 2023 18:12:13.632	6621.827	7743	6621.857744	0
.00212854 51.534	1994	358.678676	104.862880	
257.815648	229.625841		5362.666022	14
160				
23 Jun 2023 09:03:53.389	6620 511	1604	6620 541500	0
				U
.00212178 51.534			101.481981	
256.451863	228.357137		5361.067174	14
170				
23 Jun 2023 23:55:17.113	6619.190	0096	6619.219749	0
.00211654 51.534			98.099680	
255.092615	227.072883		5359.461798	14
180	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	CC1 0 000	001E	6617 010400	^
24 Jun 2023 14:46:24.296		0015	6617.819402	0
.00210725 51.534			94.715978	
253.627808	225.736995		5357.761134	14

entricity Inclination (deg) of Apogee (km) Height of Pount	erigee (km) Sidereal :	RAAN (deg) F Period (sec) Ork	Height oit Co
190			
25 Jun 2023 05:37:14.241 .00209498 51.534043	6616.353863	6616.382901	0
252.107071	3.213654 224 384732	91.330801 5356 016751	14
200			
25 Jun 2023 20:27:46.541	6614.886069	6614.914784	0
.00208351 51.533854	4.205229	87.944127	
250.560004	222.995564	5354.234170	14
210 26 Jun 2023 11:18:00.437	6613.325093	6613.353325	0
.00206615 51.533698	5.173872	84.555938	J
26 Jun 2023 11:18:00.437 .00206615 51.533698 248.880531	221.552119	5352.338472	14
220			
27 Jun 2023 02:07:55.234 .00204831 51.533579	6611.742298	6611.770038	0
247.176005	220 090070	5350 416501	14
230	220.030070	3330.410301	
27 Jun 2023 16:57:30.352	6610.085459	6610.112669	0
.00202890 51.533490	6.990161	77.774762	
245.386929	218.564410	5348.404848	14
240	6609 335554	6600 363000	^
.00200350 51.533418	7.884075	74.381697	U
28 Jun 2023 07:46:44.777 .00200350 51.533418	216.985198	5346.280322	14
28 Jun 2023 22:35:37.738 .00197911 51.533353	6606.550995	6606.576872	0
.00197911 51.533353 241.514996	8.707453	70.986864	
241.514996	215.364/48	5344.1140/1	14
29 Jun 2023 13:24:08.283	6604.644096	6604.669210	0
.00194999 51.533271	9.442450	67.590226	
239.411265	213.653154	5341.799553	14
270	6600 651601	6600 685041	•
30 Jun 2023 04:12:15.153 .00191683 51.533157	10.257997	6602.675941	0
237.195159		5339.381527	14
280			
30 Jun 2023 18:59:57.352			0
.00188406 51.532999			
234.902274	210.030462	5336.867685	14
290 1 Jul 2023 09:47:13.353	6598.335490	6598.357921	0
.00184375 51.532782		57.388191	Ū
232.386613		5334.144608	14
300			
2 Jul 2023 00:34:01.550	6595.998283	6596.019706 53.983017	0
.00180216 51.532508	12.228849	53.983U17	

rage 123			
Time (UTCG) Ser	mi-parameter (km)    Sem	i-major Axis (km)    Eco	3
entricity Inclination (deg)	Arg of Perigee (deg)	RAAN (deg) Height	E
of Apogee (km) Height of Po			
unt	2		-
			-
			-
			-
229.769801	205 005611	E221 200E22 1/	4
229.769601	203.993011	5551.509525	Ŧ
310 2 Jul 2023 15:20:20.373 .00175770 51.532181 226.967097			
2 Jul 2023 15:20:20.373	6593.494282	6593.514653	)
.00175770 51.532181	12.665721	50.575363	
226.967097	203.788208	5328,272704 14	4
320	2001,00200	332012,2,01	-
3 Jul 2023 06:06:07.454	6590.766036	6590.785185	J
.00170455 51.531808	13.222180	47.165030	
223.882507			4
330			
	650E 005500	6505 003553	_
3 Jul 2023 20:51:20.519	6587.885588	6587.903553	J
.00165138 51.531412	13.593489	43.751781	
220.645681	198.887426	5321.472588 14	4
4 Jul 2023 11:35:56.772 .00158955 51.530998 217.041808	6594 605425	6594 712062	^
4 001 2023 11:35:56.772	0304.093423	0504.712002	J
.00158955 51.530998	13.763883	40.335466	
217.041808	196.108316	5317.606098 14	4
350			
5 Jul 2023 02:19:52.480	6581 197172	6581 212373 (	n
.00151979 51.530580	14 060940	36 01 5763	
.00151979 51.530560	14.009049	30.915/62	
213.077402	193.073344	5313.367303	4
360			
5 Jul 2023 17:03:03.797	6577.370842	6577.384616	0
.00144710 51.530160	13.869129	33 492377	
000 765701	100 500451	53.492377	
208.765781	189.729451	5308.732446	±
370			
6 Jul 2023 07:45:25.225	6572.962544	6572.974640	)
6 Jul 2023 07:45:25.225 .00135656 51.529712	13,609470	30.064979	
203.754250	185.921030	5303.394278 14	
	103.921030	5505.554270	-
380			
6 Jul 2023 22:26:49.886			)
.00125801 51.529222	13.138350	26.632961	
	181.608704		4
390			
	CTC0 1 C0001		_
7 Jul 2023 13:07:09.208	6562.169334	6562.177909	J
.00114315 51.528636	11.700313	23.195757	
191.542471	176.539348	5290.332657 14	4
400			
8 Jul 2023 03:46:09.763	6EE4 0006E0	6554.987115	^
			J
.00099238 51.527879			
183.355183	170.345047	5281.639369 14	4
410			
8 Jul 2023 18:23:32.596	6546,009334	6546.013732	า
			-
.00081968 51.526862			
	162.511118	5270.797711	Ŧ
420			
9 Jul 2023 08:58:44.476	6533.308204	6533.310338	0

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				i-major Axis (km)	
entricity Incli of Apogee (km)					
unt					
.00057162	51.525335		0.356967	12.841035	
158.907886		151.438791		5255.462152	14
430					
9 Jul 2023 23:30:					2 0
.00019793	51.522661		346.769612	9.366956	
135.209122		132.631221		5229.838619	14
440					
10 Jul 2023 00:55:	37.862	6505.7	42603	6505.743380	0
.00034562	51.485814		57.162488	353.630145	
129.854903		125.357857		5222.234546	14
450					
10 Jul 2023 02:22:	22.286	6496.0	57798	6496.057964	<u> </u>
.00015983					
118.959209					14
451					