

Space Activities in 2024

Jonathan McDowell

planet4589@gmail.com

2025 Jan 2

Rev 1.2

Contents

Preface	4
1 Orbital Launch Attempts	4
1.1 Launch statistics by country	4
1.2 Launch failures and uncataloged orbital launches	6
1.3 Commercial Launches	7
2 Satellite Launch Statistics	9
2.1 Satellites of the major space powers	9
2.2 Satellite ownership by country	10
2.3 Satellite manufacture by country	14
3 Military Space Activities	15
3.1 Space Surveillance	15
3.2 Optical Imaging	15
3.3 Radar Imaging	15
3.4 Signals Intelligence	15
3.5 USA satellite designations in 2024	15
4 Special Topics	17
4.1 Scientific Programs	17
4.2 Chinese LEO communications satellites	17
5 Space Stations in 2024	20
5.1 ISS traffic	20
5.2 Chinese Space Station	24
6 Orbital Traffic, Debris and Decay	25
6.1 Disposal of launch vehicle upper stages	31
6.2 Orbituaries	34
6.3 New sun-synchronous satellites in 2024	42
6.4 New geosynchronous satellites in 2024	50
6.5 Retirements in the GEO belt	50
6.6 Debris events	53
7 Acknowledgements	54
References	55
Appendix 1: 2024 Orbital Launch Attempts	56

List of Tables

1	(a) Orbital Launch Attempts	4
1	(b) Launches Reaching Orbit	5
2	F and U launches in 2024	6
3	Commercial vs. government launches	8
4	Payloads launched per year	9
5	Payloads deployed per year	9
6	2024 payloads launched by owner country and class	11
7	Mass (tonnes) of 2024 payloads launched by owner country and class	13
8	2024 payloads by manufacturer country - 100 kg and up only	14
9	USA satellite designations 2024	16
11	Debris objects in orbit at end of year, 2014-2024	25
12	Mass of objects in orbit at end of year, 2014-2024(tonnes)	26
13	Launches by orbit and launch-associated Earth orbit debris, 2024	31
14	Uncontrolled Reentries 2024	34
15	Most massive uncontrolled reentries, 2024	36
16	Landings and deorbits, 2024	37
17	Vehicles deorbited soon after launch, 2024	38
18	Vehicles deorbited soon after separation, 2024	41
19	SSO satellites launched in 2024, ordered by local time of descending node	43
19	SSO satellites launched in 2024, ordered by local time of descending node	44
19	SSO satellites launched in 2024, ordered by local time of descending node	45
19	SSO satellites launched in 2024, ordered by local time of descending node	46
19	SSO satellites launched in 2024, ordered by local time of descending node	47
19	SSO satellites launched in 2024, ordered by local time of descending node	48
19	SSO satellites launched in 2024, ordered by local time of descending node	49
20	Geostationary satellites launched in 2024, ordered by longitude	50
21	GEO Population	50
22	GEO retirements	52
23	Breakups and debris events 2024	53

Rev 1.0 - initial release

Rev 1.0.1 - fixed incorrect reference to space23.pdf

Rev 1.1 - Added some reentries and updated some satellite masses, regenerated tables.

Rev 1.2 - Fixed some small errors pointed out by readers.

Preface

In this paper I present some statistics characterizing astronomical activity in calendar year 2024. In the 2014 edition of this review [1], I described my methodological approach and some issues of definitional ambiguity; that discussion is not repeated here, and it is assumed that the reader has consulted the earlier document, available at <https://planet4589.org/space/papers/space14.pdf> (The present work may be found as [space24.pdf](#) at the same location).

Most of the data in this paper is derived from my General Catalog of Artificial Space Objects [2]. Principal sources for orbital data are Space-Track [3], Celestrak [4], Mike McCants’ hobbyist elements [5], and the United Nations [6].

1 Orbital Launch Attempts

1.1 Launch statistics by country

During 2024 there were 263 orbital launch attempts from Earth, with 258 reaching orbit or marginal orbit. This includes four near-orbital Starship launches, to which I assigned launch designations 2024-U01, U03, U04 and U06, but does not include a missile flight from North Korea which was suborbital but reached orbital energy (2024-U05); also excluded is 2024-U02, a Chinese launch from the surface of the Moon.

Table 1(a) gives statistics for all orbital attempts; Table 1(b) includes only launches that reached orbit.

Table 1: (a) Orbital Launch Attempts

	2017	2018	2019	2020	2021	2022	2023	2024
USA	29	31	21	37	45	78	109	145
Russia	19	17	22	12	16	21	19	17
China	18	39	34	39	56	64	67	68
Europe	11	11	9	10	15	6	3	3
<i>Japan</i>	7	6	2	4	3	1	3	7
<i>India</i>	5	7	6	2	2	5	7	5
<i>North Korea</i>	0	0	0	0	0	0	3	1
<i>Iran</i>	0	0	2	2	2	1	2	4
<i>Israel</i>	0	0	0	1	0	0	1	0
<i>South Korea</i>	0	0	0	0	1	1	2	0
<i>New Zealand</i>	1	3	6	7	6	9	7	13
Other	13	16	16	16	14	17	25	30
Total	90	114	102	114	146	186	223	263

Electron is licensed in the USA but can be launched from Mahia, on New Zealand territory, by the New Zealand subsidiary of the US-headquartered Rocket Lab. Mahia-launched Electron rocket stages are registered with the UN by New Zealand. (see, e.g. [7].) I go back and forth on this, but for now I consider Electron flights from Mahia to be a New Zealand launch of a US-manufactured rocket, and include them under New Zealand in Tables 1a and 1b.

Table 1: (b) Launches Reaching Orbit

	2017	2018	2019	2020	2021	2022	2023	2024
USA	29	31	21	34	43	76	104	145
Russia	18	16	22	12	16	21	19	17
China	17	38	32	35	53	62	66	66
Europe	11	11	8	10	15	5	3	3
<i>Japan</i>	6	6	2	4	3	0	2	5
<i>India</i>	5	7	6	2	1	5	7	5
<i>North Korea</i>	0	0	0	0	0	0	1	0
<i>Iran</i>	0	0	0	1	0	1	1	4
<i>Israel</i>	0	0	0	1	0	0	1	0
<i>South Korea</i>	0	0	0	0	0	1	2	0
<i>New Zealand</i>	0	3	6	6	5	9	6	13
Other	11	16	14	14	9	16	20	27
Total	86	112	97	105	136	180	212	258

1.2 Launch failures and uncataloged orbital launches

During the year there were five orbital launch failures. In general I award partial success scores to launches which reach orbit but do not successfully deploy all their payloads in their targeted orbits; there were three such cases this year.

By a historical quirk, the ‘international designations’ for successful orbital launches are assigned by the US Space Force. I assign special designations for those launches not cataloged by the US. Launches that are marginally orbital or fall just short of orbital are given ‘U’ designations. Launches that completely fail to reach orbit are assigned ‘F’ designations; for details, see GCAT [8],[9].

One North Korean suborbital missile launch had a trajectory whose energy was comparable to orbital flights, assigned designation 2024-U05. It is not included in the count of orbital launches, and neither is the Chinese launch from the surface of the Moon, 2024-U02.

Four Starship launches in 2024 reached marginal orbit with perigees either slightly negative (2024-U01, U03 and U04, around -50 to -15 km) or slightly positive (2024-U06, around +8 km by my estimate). These are included in the count of orbital launches even though they did not complete one orbit of the Earth.

Table 2: F and U launches in 2024

Table 2 (a): 2024 orbital launch failures and partial failures						
Designation	Date	LV Stage	LV	Payload	Type of failure	Launch Score
2024-F01	Mar 13	Japan	Kairos	Tanki Uchaigegata Kogata	St1 failure	0.00
2024-048	Mar 13	China	Chang Zheng 2C/YZ-1S	DRO-A/DRO-B	YZ-1S underburn	0.75
2024-F02	May 27	North Korea	NK Kerolox LV	Manligyeong-1 F4	Stage 1 explosion	0.00
2024-128	Jul 9	ESA	Ariane 62	Cubesats	Stage 2 no restart	0.85
2024-F03	Jul 10	China	Shuang Quxian 1	Yunyao-1	Stage 4 failed	0.00
2024-129	Jul 12	USA	Falcon 9	Starlink Group 9-3	Stage 2 no restart	0.40
2024-F04	Dec 18	Japan	Kairos	Tatara-1	St1 failure	0.00
2024-F05	Dec 27	China	Lijian-1	DEAR-3	Stage 3 failure	0.00
Table 2 (b): 2024 other additional launch designations						
Designation	Date	LV Stage	LV	Payload	Type of launch	Launch Score
2024-U01	Mar 14	USA	Starship V1.0	Ship 28	Marginally suborbital	1.00
2024-U02	Jun 3	China	CE-5 SSQ	CE-6 SSQ	Extraterrestrial launch	1.00
2024-U03	Jun 6	USA	Starship V1.0	Ship 29	Marginally suborbital	1.00
2024-U04	Oct 13	USA	Starship V1.0	Ship 30	Marginally suborbital	1.00
2024-U05	Oct 30	North Korea	Hwasong-19	-	Orbital energy	1.00
2024-U06	Nov 19	USA	Starship V1.0	Ship 31	Marginally suborbital	1.00

1.3 Commercial Launches

Of the 263 orbital launch attempts: 81 were carried out by governments; 14 by commercial companies under contract to their host governments, and 169 by commercial companies for commercial customers, including foreign governments.

I count US Commercial Cargo and Crew flights as ‘under contract to host government’; although the launch contract is through a commercial intermediary, the choice of vehicle is negotiated as part of a government contract.

In this table Rocket Lab is counted as a US launch provider, although in other contexts I count the New-Zealand-based launches as belonging to New Zealand, consistent with the UN registration documents.

Here G = Government; CO = Commercial operation of government developed rocket; CG = commercial service provision to government; CX = Fully commercial service (but customers may include govt); C = Fully commercial (no govt involved); A = Amateur, academic, non-profit. See the 2014 document for full discussion; in 2022 the letter codes were altered to the current list and are now used in the online GCAT launch database.

Table 3: Commercial vs. government launches

Launch Provider	Launches	Type	Customers		
			Gov.	Comm.	Other gov
US Launch Providers					
BOE Delta 4	1	CG	1	0	0
FFLY Alpha	1	C	0	1	0
LM Atlas V	2	CG	1	1	0
LM Vulcan	2	C	0	2	0
RLA BLB Electron	14	C	3	10	1
SPX Falcon 9	132	CX	3	128	1
SPX Falcon Heavy	2	CX	1	1	0
SPX Starship	4	C	0	4	0
European Launch Providers					
AESP Vega	2	C	2	0	0
ESA Ariane 5	1	G	1	0	0
Russian Launch Providers					
KHRO Angara	2	G	2	0	0
MORF Soyuz	4	G	4	0	0
ROSK Soyuz	11	G	11	0	0
Chinese Launch Providers					
CALT CZ-2C	7	G	7	0	0
CALT CZ-2F	2	G	2	0	0
CALT CZ-3	8	G	8	0	0
CALT CZ-4	1	G	1	0	0
CALT CZ-5	3	G	3	0	0
CALT CZ-7	4	G	4	0	0
CALT CZ-8	1	G	1	0	0
CASC CE-5 SSQ	1	G	1	0	0
CASIC KZ-11	1	CO	0	1	0
CASIC KZ-1A	4	C	0	4	0
CZHJ JL-3	2	C	0	2	0
DFK Yinli-1	1	C	0	1	0
LANDSP Zhuque-2E	1	C	0	1	0
SAST CZ-2D	9	G	9	0	0
SAST CZ-4	5	G	5	0	0
SAST CZ-6	8	G	8	0	0
SAST Chang Zheng 12	1	G	1	0	0
XIDO Gushenxing-1	5	C	0	5	0
XJRY	1	C	0	1	0
ZKYT ZK-1	4	C	0	4	0
Other Launch Providers					
IRGC Qaem-100	2	G	2	0	0
IRSA Simorgh	2	G	2	0	0
ISRO PSLV/GSLV	4	G	4	0	0
ISRO SSLV	1	G	1	0	0
JAXA H3	3	G	3	0	0
MHI H-II	2	CG	2	0	0
NADA Cheonlima	1	G	1	0	0
SPONE Kairos	2	C	1	1	0
Total	264		95	167	2

2 Satellite Launch Statistics

2.1 Satellites of the major space powers

Here I give total payloads (1) launched (Table 4) and (2) deployed (Table 5). Some satellites launched in previous years (e.g. to the ISS) were not deployed until 2024.

The 8 ANDESITE Node satellites launched in 2019 attached to the ANDESITE satellite [10] have not been deployed. Neither has the second DRUMS Target nor the CAS-5B amateur radio satellite, as far as I can tell.

Not included are satellites which did not reach orbit due to launch failures.

Also not included in the count, but listed at the end of Appendix 2c, are several objects which are marginal cases.

Note that the correlation of specific satellites from a multi-satellite launch with specific catalog numbers (and thus, tracked objects) is uncertain in some case. This is indicated in the appendices with a question mark following the piece (international) designation.

Table 4: Payloads launched per year

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Russia	27	15	24	23	31	22	20	50	67	98
USA	112	94	282	303	281	974	1237	1938	2228	2272
China	44	40	36	97	73	74	111	182	212	263
Europe	23	22	42	60	50	134	357	190	256	109
Other	31	50	60	84	65	59	99	127	144	113
Total	237	221	444	567	500	1263	1824	2487	2907	2855

The 2852 satellites listed here and in Appendix 2b as having been deployed during 2024 include some satellites launched in previous years and deployed in 2024.

Table 5: Payloads deployed per year

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Russia	27	14	25	23	29	22	19	50	67	98
USA	106	105	288	188	366	985	1234	1941	2229	2271
China	44	40	36	95	74	72	113	181	210	264
Europe	23	21	43	57	50	135	355	187	249	109
Other	31	44	65	83	63	58	93	123	145	110
Total	231	224	457	446	582	1272	1814	2482	2900	2852

2.2 Satellite ownership by country

I now break this down by class for 2024 (first the launch powers, then other countries).

In 2024 the satellites deployed were owned by 41 countries.

In general I consider western Europe, loosely defined, as a single 'space power' because of the tight integration of its aerospace industry. Within this view, the four leading space powers are USA, China, Russia and (W) Europe. The second tier of space powers is comprised of Japan and India; all others are lumped as 'Other', further broken down regionally (and arbitrarily) for convenience. The 'Other' powers have limited or no launch capability of their own. (South Korea and Canada have space industries that make them candidates for the second tier in the near future). Countries which owned satellites covered in previous editions of the report are included in the table even if they had no new satellites this year.

Table 6: 2024 payloads launched by owner country and class

		A Academic/ NonProfit	B Business/ Commercial	C Civil	D Defense	SS Spaceship	Total Number
USA		18	2108	15	122	9	2272
China		2	178	36	43	4	263
Russia		21	57	7	7	6	98
S	Sweden	0	1	0	1	0	2
E	Spain	1	6	0	0	0	7
FI	Finland	0	7	0	0	0	7
F	France	1	21	0	0	0	22
D	Germany	3	3	0	0	0	6
L	Luxembourg	0	3	0	0	0	3
B	Belgium	0	4	0	0	0	4
UK	UK	0	26	0	0	0	26
P	Portugal	1	1	0	0	0	2
I-EU	EU	0	0	6	0	0	6
I-ESA	ESA	0	0	9	0	0	9
SK	Slovakia	1	0	0	0	0	1
N	Norway	0	2	1	0	0	3
I	Italy	0	10	1	0	0	11
Europe (W)		7	84	17	1	0	109
Japan		9	11	1	3	0	24
India		1	1	8	0	0	10
PL	Poland	0	2	0	0	0	2
HU	Hungary	0	1	0	0	0	1
HR	Croatia	1	0	0	0	0	1
CZ	Czech Republic	1	0	0	0	0	1
Europe (E)		2	3	0	0	0	5
MX	Mexico	0	0	5	0	0	5
UY	Uruguay	0	4	0	0	0	4
CL	Chile	0	1	0	0	0	1
Latin America		0	5	5	0	0	10
IR	Iran	0	2	3	6	0	11
EG	Egypt	0	0	1	0	0	1
PK	Pakistan	1	0	1	0	0	2
TR	Turkey	0	5	0	0	0	5
UAE	UAE	0	1	0	0	0	1
OM	Oman	0	1	0	0	0	1
Middle East		1	9	5	6	0	21
ID	Indonesia	0	1	1	0	0	2
TW	Taiwan	1	1	3	0	0	5
KR	South Korea	0	2	1	2	0	5
MN	Mongolia	0	12	0	0	0	12
Asia (other)		1	16	5	2	0	24

		A Academic/ NonProfit	B Business/ Commercial	C Civil	D Defense	SS Spaceship	Total Number
SN	Senegal	0	0	1	0	0	1
MA	Morocco	2	0	0	0	0	2
ZW	Zimbabwe	0	0	1	0	0	1
RW	Rwanda	0	1	0	0	0	1
DJ	Djibouti	0	0	1	0	0	1
Africa		2	1	3	0	0	6
Canada		3	1	0	0	0	4
AU	Australia	6	2	0	1	0	9
Australasia		6	2	0	1	0	9
Total		73	2476	102	185	19	2855

Table 7: Mass (tonnes) of 2024 payloads launched by owner country and class

		A Academic/ NonProfit	B Business/ Commercial	C Civil	D Defense	SS Spaceship	Total Mass (tonne)
USA		0.4	1950.8	12.5	105.8	107.4	2177.0
China		0.1	40.8	41.5	49.4	42.6	174.4
Russia		0.1	0.9	37.1	12.3	44.1	94.6
S	Sweden	0.0	1.8	0.0	0.0	0.0	1.8
F	France	0.0	5.5	0.0	0.0	0.0	5.5
L	Luxembourg	0.0	5.0	0.0	0.0	0.0	5.0
UK	UK	0.0	6.5	0.0	0.0	0.0	6.5
I-EU	EU	0.0	0.0	6.2	0.0	0.0	6.2
I-ESA	ESA	0.0	0.0	11.9	0.0	0.0	11.9
N	Norway	0.0	7.2	0.0	0.0	0.0	7.2
Europe (W)		0.1	27.8	18.1	0.0	0.0	46.0
Japan		0.0	1.1	2.9	8.0	0.0	12.0
India		0.0	0.0	8.2	0.0	0.0	8.2
Europe (E)		0.0	0.1	0.0	0.0	0.0	0.1
Latin America		0.0	0.2	0.0	0.0	0.0	0.2
PK	Pakistan	0.0	0.0	5.4	0.0	0.0	5.4
TR	Turkey	0.0	4.3	0.0	0.0	0.0	4.3
Middle East		0.0	4.5	5.6	0.4	0.0	10.6
ID	Indonesia	0.0	4.0	0.0	0.0	0.0	4.0
KR	South Korea	0.0	3.5	0.1	1.6	0.0	5.2
Asia (other)		0.0	7.5	0.1	1.6	0.0	9.3
Africa		0.0	0.1	0.0	0.0	0.0	0.1
AU	Australia	0.0	0.3	0.0	4.0	0.0	4.3
Australasia		0.0	0.3	0.0	4.0	0.0	4.3
Total		0.8	2034.1	126.1	181.6	194.1	2536.7

2.3 Satellite manufacture by country

Most countries build only very small (cubesat) satellites, purchasing their larger satellites from one of the main space powers. Here I tabulate the manufacturers of the 26 satellites launched in 2024 with estimated launch masses of 100 kg or more.

HSF is 'Human spaceflight', including related robotic missions such as cargo ships to support ISS. 'Surv.' is surveillance, including early warning and space debris surveillance; visible and radar imaging recon satellites and weather sats are under 'Imaging'. Microgravity research, geodesy and planetary probes are included under Sci (Science). Satellites built in the UK, France, Germany, Italy, Spain and the Netherlands are lumped together as 'EUR' to reflect the integration of the western European aerospace industry.

Table 8: 2024 payloads by manufacturer country - 100 kg and up only

	HSF	Comms	Imaging	Nav	SIGINT	Surv.	Sci	Tech	Total
USA	9	2018	118	1	1	9	3	9	2168
RU	6	3	9	0	1	0	2	1	22
PRC	4	99	53	23	1	1	8	8	197
EUR	0	5	6	4	3	0	1	4	23
India	0	1	2	0	0	0	1	2	6
Japan	0	1	9	0	0	0	0	1	11
Iran	0	1	1	0	0	0	0	0	2
South Korea	0	0	3	0	0	0	0	0	3
Australia	0	0	0	0	0	0	0	1	1
Turkey	0	1	0	0	0	0	0	0	1
Total	19	2129	201	28	6	10	15	26	2434

3 Military Space Activities

Military satellites include navigation, communications, and technology development missions in addition to the intelligence gathering activities that I report here.

Notably, the OTV 7 spaceplane launched in Dec 2023 began aerobraking maneuvers from highly elliptical orbit in late 2024. The third flight of the Chinese spaceplane ended in Sep 2024 with a runway landing near Lop Nor.

3.1 Space Surveillance

The US Space Development Agency launched 4 Raptor satellites with LEO missile tracking payloads on Feb 14. The US Space Force launched the WSF-M wide field early warning satellite to GEO on Apr 11. Three unknown GEO satellites were launched on Jul 30 which may have a space surveillance role to monitor activities in GEO.

3.2 Optical Imaging

2024 saw the beginning of deployment of the NRO/SpaceX proliferated Starshield constellation. It is not clear whether these satellites carry communications, imaging, or signal payloads, or a mixture. 104 satellites were launched in five launches.

Two additional NRO satellites launched along with a batch of Starlinks on Nov 30 may also be Starshields of some kind.

Japan launched an IGS-O optical spy satellite on Jan 12.

China launched two Yaogan 42 satellites on Apr 2 and Apr 20, and the GF11-05 satellite on Jul 19. They are thought to be imaging satellites.

Russia launched a small EO-MKA satellite (Kosmos-2575), two small OO-MKA satellites, Kosmos-2577/2578, on Sep 17, a Bars mapping satellite (Kosmos-2579) on Oct 31, as well as what is possibly a Nivelir-L satellite, Kosmos-2576, on May 16.

3.3 Radar Imaging

Japan launched IGS Radar 8 on Apr 7; China launched Gao Fen 12-05 on Oct 15; S Korea launched two Project 425 SAR satellites on Apr 7 and Dec 21 aboard SpaceX rockets.

3.4 Signals Intelligence

On Apr 9 the US NRO launched a large geostationary signals intelligence satellite, possibly in the ORION series.

On Feb 2 China launched the TJS 11 satellite to geostationary orbit; it may have a signals intelligence role. TJS 12, launched on Dec 20 and destined for GEO, may be similar. The TJS 13 satellite, launched on Dec 3 to elliptical orbit, maneuvered to Molniya orbit and may also have a signals intelligence payload.

In low orbit, Russia launched a Lotos-S1 satellite (Kosmos-2580) on Dec 4.

3.5 USA satellite designations in 2024

The USA satellite designations were introduced in 1984 for US military satellites, to obscure the missions of the secret ones. Here is an index of USA names assigned in 2024, including satellites launched earlier but deployed and cataloged during the year.

The agency abbreviations are:

AFRL Air Force Research Lab
 Del 4 Delta 4, US Space Force
 Del 8 Delta 8, US Space Force
 Del 9 Delta 9, US Space Force
 NRO US National Reconnaissance Office
 SSC Space Systems Command, LAAFB, US Space Force

Table 9: USA satellite designations 2024

Cover name	Other name	Piece name	Agency	Orbit	Notes
USA 350	Starshield Proto 10?	2024-50W	NRO?	305 x 314 x 53.2	Unknown
USA 351	Starshield Proto 11?	2024-50X	NRO?	305 x 314 x 53.2	Unknown
USA 352	Unk smallsat	2024-53A	NRO?	417 x 430 x 50.0	Unknown
USA 353	ORION 12?	2024-67A	NRO	35556 x 36018 x 7.6	Sigint
USA 354-374	Starshield Launch 1	2024-96	NRO	310 x 315 x 70.0	Unknown
USA 375-395	Starshield Launch 2	2024-121	NRO	310 x 315 x 70.0	Unknown
USA 396-398	USSF 51 payloads	2024-134	USSF	36000? x 36000? x 1?	Space Surveillance?
USA 399	ESPASat?	2022-144K	USSF?	36000? x 36000? x 1?	Space Surveillance?
USA 400-420	Starshield Launch 3	2024-160	NRO	285 x 312 x 70.0	Unknown
USA 421-437	Starshield Launch 4	2024-192	NRO	510 x 515 x 70.0	Unknown
USA 438-439	Starshield Launch 5?	2024-225	NRO	305 x 315 x 70.0	Unknown
USA 440	GPS III SV07	2024-242	USSF	403 x 20189 x 55.0	Navigation
USA 441-462	Starshield Launch 6?	2024-243	NRO	300 x 320 x 70.0	Unknown

4 Special Topics

4.1 Scientific Programs

Significant scientific launches during 2024 included China's Einstein Tanzhen (Einstein Probe), the country's second X-ray astronomy observatory, and the Chinese-French SVOM gamma ray burst monitoring mission. Also launched in late 2024 was PROBA-3, an experimental ESA mission with two spacecraft to fly in formation, one of them occulting the Sun as seen from the other to create a dynamic coronagraph.

Russia launched a pair of Ionosfera-M satellites to study the ionosphere.

For Earth observing and climate studies, the NASA PACE satellite was launched, the privately funded MethaneSat, the ESA EarthCARE satellite, Planet's Tanager carbon mapping satellite, and the Chinese HY-4-01 ocean study satellite.

2024 saw a large number of deep space mission launches:

- The Astrobotic Peregrine mission was launched towards the Moon, but failed.
- Intuitive Machines' IM-1 mission successfully landed on the Moon despite a few problems.
- China's Queqiao-2 was launched into lunar orbit to provide far side communications relay capability.
- China's Chang'e-6 successfully returned a sample from the lunar surface.
- The DRO-A/B probes were launched by China. Despite a launch vehicle malfunction they are now operating in distant lunar retrograde orbit to demonstrate navigation in that orbit. The YS-1S stage reached a 128000 km apogee, lower than planned.
- The Chinese Tiandu-1 and 2 probes were sent to lunar orbit, as secondary payloads on the Queqiao-2 launch.
- The ICUBE-Q satellite from Pakistan was ejected from Chang'e-6 in lunar orbit.
- The ESA HERA mission was launched and is en route to the Didymos system.
- NASA's Europa Clipper mission was launched and is en route to the Jovian system.

4.2 Chinese LEO communications satellites

A bewildering variety of poorly documented Chinese low orbit communications satellite systems have debuted in the past six years, including an assortment of test satellites for future Chinese megaconstellations. This table represents a summary of these satellites according to my current, and likely faulty, understanding.

The deployment of the G60/Qianfan constellation began in 2024, with three launches of 18 satellites each. The government Guowang (Xingwang) constellation's first operational launch was on Dec 16, with ten large satellites referred to as Weixing Hulianwang Digui 01 zu Weixing (Satellite Internet Low Orbit Group 01). Their orbits do not seem to match the earlier plans for either the Guowang-A59 or Guowang-2 constellations.

Chinese LEO comms systems 2017-2023											
Name	Launches		Status	Operator	Manuf.	Mass kg	Height km	Inc deg	Mvr Y/N	Band	Notes
	First	Number									
Broadband megaconstellations											
Guowang	2024	10	Deploying	CNSA?	?	1000?	1100	86	Y	Ka?	BB
Guowang-A59	?	0	(6080 planned)	China SatNet	?	?	508,590,600	60,50,85	Y?	Ka?	BB
Guowang-2	?	0	(6912 planned)	China SatNet	?	?	1145	30,40,50,60	Y?	Ka?	BB
Qianfan (G60)	2024	36	12000 planned	Qianfan	GESIH/SECM	300?	800 to 1070	89	Y	Ka/Q/V	BB
Broadband? 1100 km tests (Guowang or Xinwang R&D?)											
Hongyun	2018	1	Merged -> Guowang	CASIC	CASIC	250?	1070	SSO	Y		BB, AIS, ADS-B
Hongyan	2018	1	Merged -> Guowang	CASC DFH Mobile	DFH Shenzhen	500?	1100	50.0	Y?	L, Ka	BB
RSW-1,2 [2021-076A,C]	2021	2	DFH-L Bus test	CAST	CAST	(300?)	1100	86.4	Y	?	BB?
DFH DTSW [2022-056B]	2022	1	? Test	CAST?	DFH Shenzhen	(100?)	1147	86.0	Y	?	?
XQG 1 A/B [2023-095A,B]	2023	2	Test	CAST?	CAST?	(300?)	1100	86.5	Y	?	BB
XQG 2 A-B [2023-181A-B]	2023	2	Test	SAST	SAST	(300?)	1100	50.0	Y	?	BB
CX-20 [2023-181C]	2023	1	Test	SECM	SECM	(300?)	1100	50.0	Y	?	BB
CX-19 [2023-190A]	2023	1	Test	SECM	SECM	(300?)	910	86.5	Y?	?	BB
HJSW 04 [2023-212A-C]	2023	3	Test	CAST	CAST	(300?)	935	50.0	Y?	?	BB
HJSW 05 [2024-226A]	2024	1	Test	?	?	?	1030?	50			BB
JSW-03 [2024-226B]	2024	1	Test	?	?	?	1030?	50			BB
GJZ [2024-238A-E]	2024	5	Laser test	HIT	HIT	150?	800-1150	60	Y?	?	BB
Broadband? 800-900 km tests (Guowang R&D?)											
RSW-3 [2021-076B]	2021	1	? Bus test	CAST	CAST	(50?)	870	86.4	Y	?	?
CGSTL DTSW [22-056A,C]	2022	2	? Test	Changguang	Changguang	(300?)	881	86.0	Y	?	?
Broadband, misc tests											
Longjiang-3	2023	1	Flat Bus test	HIT	HIT	120	500	49.1	N?	Ka	BB
Guangchuan 01/02	2024	2				500?	350	50			Laser
5G/Broadband, 500 km system											
Yinhe	2020	8	Active	Galaxy Space	SAST	190	500	63.5	Y	Q/V,Ka	5G

Chinese LEO comms systems 2017-2023

Name	Launches		Status	Operator	Manuf.	Mass kg	Height km	Inc deg	Mvr Y/N	Band	Notes
	First	Number									
IoT,AIS, VDES and ADS-B											
HEAD	2017-*	14	Active	HEAD Aerospace	SAST?	45	500	SSO	N	VHF	AIS
Kaidun-1 (Caton-1)	2017	1		Caton Tech	NJUST	3	540	SSO	N	VHF	VDES
Xingyun	2020	2	?	CASIC Xingyun	CASIC Sangjian	93	570	SSO	Y		IoT
Tianqi	2018	33	Active	Guodian	ASES	40	500	35, SSO	N		IoT
Jiading-1	2018	1		SPACEOK	SPACEOK	50	500	SSO	N		IoT
Dawan Zhitong [2021-91D]	2021	1		Lizheng Sat	Lizheng Sat	103	510	SSO	N	VHF?	VDES, GNSS-
Weihai	2024	2		Weihai		95	510	SSO	N	?	A
GNSS augmentation											
Weili Kongjian (Centispace)	2018-*	6	Active	Centispace	IMICAS	97	700	55.0,SSO	Y	L	GNSS- A

5 Space Stations in 2024

5.1 ISS traffic

Table 10 lists arrivals, departures, deployments and spacewalks at ISS during 2024 [11].

Updated: 2025 Jan 02 19:14:34

ISS event log, 2024

Date	Time	Module/VV	Object	Event	Desc
2024 Jan 12	1630	Progress MS-24	ISS TCM-352	Maneuver	dv = 1.7 m/s dt = 1053.7 s
2024 Jan 20	1042	PHA-2	Axiom Ax-3	Arrived	+ Lopez-Alegria, M.E., Villadei, W., Gezeravci, A., Wandt, M.
2024 Jan 27	1139	Progress MS-24	ISS TCM-353	Maneuver	dv = 1.2 m/s dt = 788.2 s
2024 Feb 1	0959	Unity	S. S. Patricia Robertson	Arrived	
2024 Feb 7	1420	PHA-2	Axiom Ax-3	Departed	- Lopez-Alegria, M.E., Villadei, W., Gezeravci, A., Wandt, M.
2024 Feb 13	0209:30	Zvezda	Progress MS-24	Departed	
2024 Feb 17	0606:13	Zvezda	Progress MS-26	Arrived	
2024 Feb 24	0021	Progress MS-26	ISS TCM-354	Maneuver	dv = 1.7 m/s dt = 1053.1 s
2024 Mar 5	0728	PHA-2	Dragon Endeavour (Crew-8)	Arrived	+ Dominick, M.S., Dominick, M.S., Barratt, M.R., Barratt, M.R., Epps, J.J., Epps, J.J., Grebyonkin, A.S., Grebyonkin, A.S.
2024 Mar 11	1520	PHA-3	Dragon Endurance (Crew-7)	Departed	- Meghelli, J., Mogensen, A.E., Furukawa, S., Borisov, K.S.
2024 Mar 14	1311	Progress MS-26	ISS TCM-355	Maneuver	dv = 1.6 m/s dt = 1098.7 s
2024 Mar 23	1119	PHA-3	Dragon CRS-30	Arrived	+ Kononenko, O.D., Chub, N.A., Caldwell Dyson, T.E.
2024 Mar 25	1502:50	PriChal	Soyuz MS-25	Arrived	
2024 Mar 26	0353:57?	Rassvet	Soyuz MS-24	Departed	
2024 Apr 6	0354	ISS	Expedition 71	Expedition Start	
2024 Apr 11	0905	JEM	CURTIS (1998-067WG)	Deployed	
2024 Apr 11	1035	JEM	MicroOrbiter-1 (1998-067WF)	Deployed	from J-SSOD No. 28
2024 Apr 11	1035	JEM	Kashiva (1998-067WH)	Deployed	from J-SSOD No. 28
2024 Apr 18	1126	JEM	BurstCube (1998-067WM)	Deployed	from NRCSD No. 27
2024 Apr 18	1126	JEM	SNcOPI (1998-067WN)	Deployed	from NRCSD No. 27
2024 Apr 18	1136	JEM	HyTI (1998-067WL)	Deployed	from NRCSD No. 27
2024 Apr 18	1755	JEM	Killick-1 (1998-067WJ)	Deployed	from NRCSD No. 27
2024 Apr 18	1755	JEM	QMSAT (1998-067WK)	Deployed	from NRCSD No. 27
2024 Apr 18	1755	JEM	VIOLET (1998-067WP)	Deployed	from NRCSD No. 27
2024 Apr 18	1805	JEM	Big Red Sat 1 (1998-067WQ)	Deployed	from NRCSD No. 27
2024 Apr 25	1941	Poisk	Spacewalk ISS VFD-62	Repress airlock	02 Chub N. in Orlan-MKS No. 4
2024 Apr 26	1941	Poisk	Spacewalk ISS VFD-62	Repress airlock	01 Kononenko O. in Orlan-MKS No. 5
2024 Apr 26	0235	Progress MS-26	ISS TCM-356	Maneuver	dv = 0.6 m/s dt = 403.2 s
2024 Apr 28	1710	PHA-3	Dragon CRS-30	Departed	
2024 May 2	1257	PHA-2	Dragon Endeavour (Crew-8)	Departed	
2024 May 2	1346	PHA-3	Dragon Endeavour (Crew-8)	Arrived	+ Dominick, M.S., Dominick, M.S., Barratt, M.R., Barratt, M.R., Epps, J.J., Epps, J.J., Grebyonkin, A.S., Grebyonkin, A.S.
2024 May 24	1416	Cygnus NG-20	ISS TCM-357	Maneuver	dv = 1.1 m/s dt = 1200.0 s
2024 May 24	2303	Cygnus NG-20	ISS TCM-358	Maneuver	dv = 1.1 m/s dt = 1200.0 s
2024 May 28	0839:22	Poisk	Progress MS-25	Departed	
2024 Jun 1	1143:05	Poisk	Progress MS-27	Arrived	
2024 Jun 6	1734	PHA-2	Calypso	Arrived	
2024 Jun 7	1519	Cygnus NG-20	ISS TCM-359	Maneuver	dv = 1.1 m/s dt = 1080.0 s
2024 Jun 15	0440	Progress MS-26	ISS TCM-360	Maneuver	dv = 2.0 m/s dt = 1405.0 s
2024 Jun 24	1236	Quest	Spacewalk ISS US EVA-90	Depress airlock	EV2 Barratt M. in EMU 3013
2024 Jun 24	1236	Quest	Spacewalk ISS US EVA-90	Depress airlock	EVA Dyson T. C. in EMU 3003
2024 Jun 24	1318	Quest	Spacewalk ISS US EVA-90	Repress airlock	EV2 Barratt M. in EMU 3013
2024 Jun 29	1618	Quest	Spacewalk ISS US EVA-90	Repress airlock	EVA Dyson T. C. in EMU 3003
2024 Jun 29	2239	Progress MS-26	ILLUMA-T (1998-067WR)	Deployed	from Canadarm-2
2024 Jul 12	1101	Unity	ISS TCM-361	Maneuver	
2024 Jul 31	0951	Progress MS-26	ISS TCM-362	Departed	dv = 0.8 m/s dt = 550.0 s
2024 Aug 6	0711	Unity Madir	S. S. Patricia Robertson	Maneuver	
2024 Aug 13	0150:32	Zvezda	Progress MS-26	Arrived	dv = 1.8 m/s dt = 1233.3 s
2024 Aug 17	0553:07?	Zvezda	Progress MS-28	Arrived	
2024 Aug 22	1721	Cygnus NG-21	ISS TCM-363	Maneuver	dv = 1.1 m/s dt = 1140.0 s
2024 Aug 28	0146	Progress MS-28	ISS TCM-364	Maneuver	dv = 2.0 m/s dt = 1075.4 s
2024 Aug 29	0945	JEM	Emma (1998-067WT)	Deployed	from J-SSOD No. 31
2024 Aug 29	0945	JEM	SAKURA (1998-067WU)	Deployed	from J-SSOD No. 31
2024 Aug 29	0945	JEM	Wissed Sat (1998-067WV)	Deployed	from J-SSOD No. 31
2024 Aug 29	0945	JEM	SaganSat0 (1998-067WY)	Deployed	from J-SSOD No. 31
2024 Aug 29	1120	JEM	Binar-4 (1998-067WZ)	Deployed	from J-SSOD No. 31
2024 Aug 29	1120	JEM	Binar-2 (1998-067WA)	Deployed	from J-SSOD No. 31
2024 Aug 29	1120	JEM	Binar-3 (1998-067WB)	Deployed	from J-SSOD No. 31
2024 Sep 5	1945	Progress MS-28	ISS TCM-365	Maneuver	dv = 1.4 m/s dt = 782.0 s
2024 Sep 6	2204	PHA-2	Calypso	Departed	
2024 Sep 11	1932:05?	Rassvet	Soyuz MS-26	Arrived	
2024 Sep 23	0736:30	PriChal	Soyuz MS-25	Departed	- Novitskiy, O.V., Vasilevskaaya, M.V., Caldwell Dyson, T.E.
2024 Sep 23	0736:30	ISS	Expedition 72	Expedition Start	
2024 Sep 29	2130	PHA-2	Dragon Freedom (Crew-9)	Arrived	+ Hague, T.Nk., Gorbunov, A.V., Wilmore, B.E., Williams, S.L.

ISS event log, 2024

Date	Time	Module/VV	Object	Event	Desc
2024 Oct 4	0844	Progress MS-28	ISS TCM-366	Maneuver	dv = 1.7 m/s dt = 1207.6 s
2024 Oct 8	1025:12	JEM	CySat 1 (1998-067WZ)	Deployed	from NRCSD No. 28
2024 Oct 8	1035:12	JEM	DORA (1998-067XA)	Deployed	from NRCSD No. 28
2024 Oct 23	2105	PMA-3	Dragon Endeavour (Crew-8)	Departed	- Dominick, M.S., Dominick, M.S., Barratt, M.R., Epps, J.J., Grebyonkin, A.S., Grebyonkin, A.S., + Hague, T.Nk., Gorbunov, A.V.
2024 Nov 3	1134:46?	PMA-2	Dragon Freedom (Crew-9)	Arrived	-
2024 Nov 3	1225:03?	PMA-3	Dragon Freedom (Crew-9)	Arrived	-
2024 Nov 5	1452:11	PMA-2	Dragon CRS-31	Maneuver	dv = 0.3 m/s dt = 750.0 s
2024 Nov 8	1750	Dragon CRS-31	ISS TCM-367	Maneuver	dv = 2.8 m/s dt = 1894.0 s
2024 Nov 13	1647	Progress MS-28	ISS TCM-368	Maneuver	-
2024 Nov 19	1253	Poisk	Progress MS-27	Departed	-
2024 Nov 19	2009	Progress MS-28	ISS TCM-369	Maneuver	dv = 0.5 m/s dt = 330.9 s
2024 Nov 23	1431:17	Poisk	Progress MS-29	Arrived	-
2024 Nov 23	0815?	JEM	Yodaka (1998-067XB)	Deployed	from J-SSOD No. 30
2024 Dec 9	1115?	JEM	DENDEN-01 (1998-067XC)	Deployed	from J-SSOD No. 30
2024 Dec 9	1115?	JEM	LignoSat (1998-067XD)	Deployed	from J-SSOD No. 30
2024 Dec 9	1115?	JEM	Yomogi (1998-067XE)	Deployed	from J-SSOD No. 30
2024 Dec 9	1417?	JEM	Onglaisat (1998-067XF)	Deployed	from J-SSOD No. 30
2024 Dec 9	1605	PMA-2	Dragon CRS-31	Departed	-
2024 Dec 16	1605	PMA-2	Spacewalk ISS VKD-63	Depress airlock	02 Vagner I. in Orlan-MKS No. 4
2024 Dec 19	1514	Poisk	Spacewalk ISS VKD-63	Depress airlock	02 Vagner I. in Orlan-MKS No. 4
2024 Dec 19	1514	Poisk	Spacewalk ISS VKD-63	Depress airlock	01 Ovchinnik A. in Orlan-MKS No. 5
2024 Dec 19	1514	Poisk	Spacewalk ISS VKD-63	Depress airlock	01 Ovchinnik A. in Orlan-MKS No. 5
2024 Dec 19	1514	Poisk	Spacewalk ISS VKD-63	Depress airlock	01 Ovchinnik A. in Orlan-MKS No. 5
2024 Dec 19	2149	Zvezda	VKD-63 jettison bundle (1998-067KG)	Deployed	from SPIN-XI-MW
2024 Dec 19	2234	Poisk	Cleaning towel (1998-067)	Deployed	from Poisk
2024 Dec 19	2234	Poisk	Cleaning towel (1998-067)	Deployed	from Poisk
2024 Dec 19	2254	Poisk	Spacewalk ISS VKD-63	Repress airlock	02 Vagner I. in Orlan-MKS No. 4
2024 Dec 19	2254	Poisk	Spacewalk ISS VKD-63	Repress airlock	01 Ovchinnik A. in Orlan-MKS No. 5
2024 Dec 19	2254	Poisk	Spacewalk ISS VKD-63	Repress airlock	01 Ovchinnik A. in Orlan-MKS No. 5
2024 Dec 22	0110	Progress MS-28	ISS TCM-370	Maneuver	dv = 1.3 m/s dt = 811.3 s

International Space Station orbital history 2024

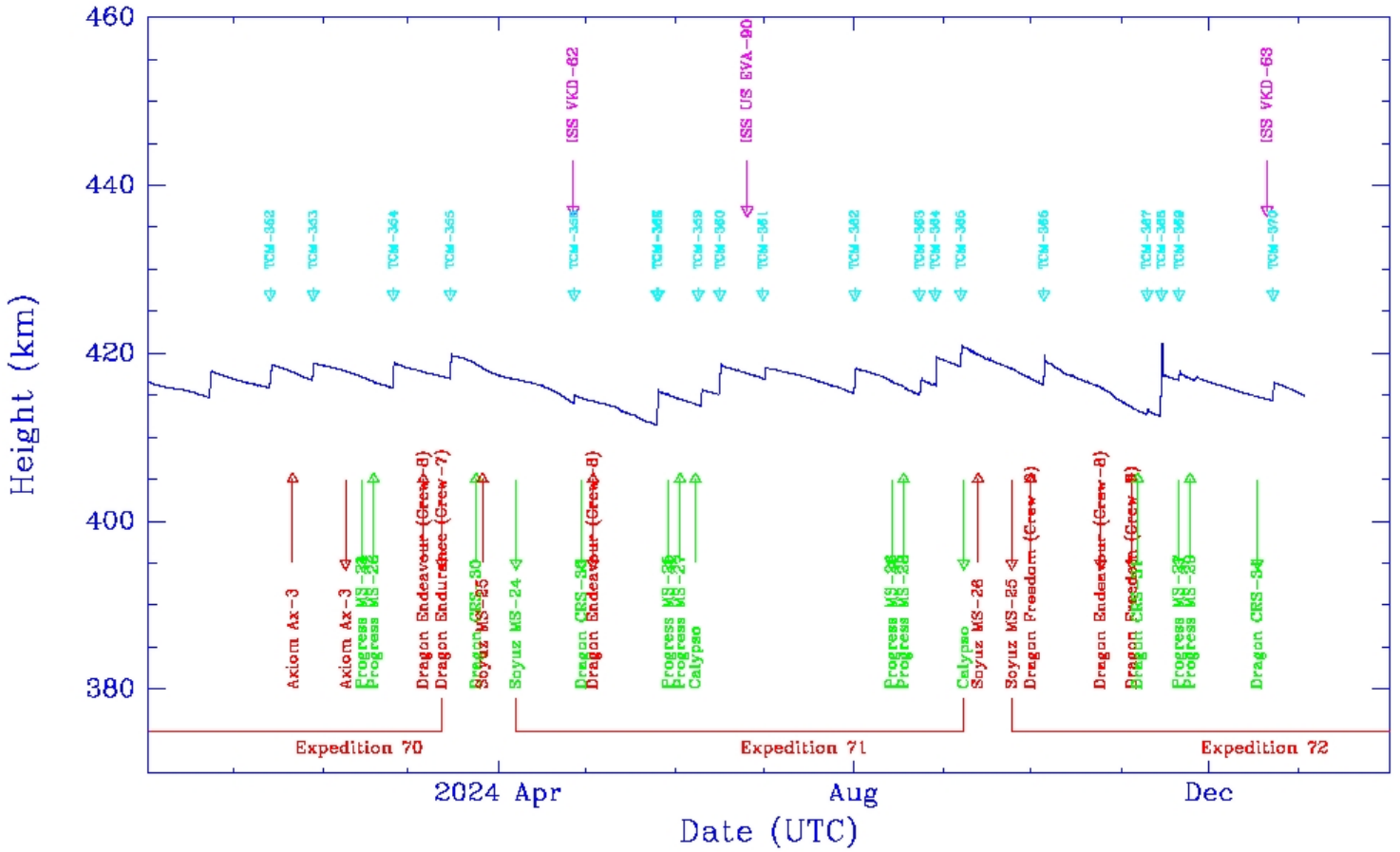


Figure 1: ISS traffic in 2024: Height vs Time plot

5.2 Chinese Space Station

Assembly of the long-awaited Chinese Space Station (CSS) began in 2021 and was completed in 2022 [12],[13],[14],[15].

The overall station is sometimes called the ‘Tiangong station’ (Tiangong Kongjianzhan), which is confusing following the now-completed missions of the simpler Tiangong-1 and Tiangong-2 stations. It is more often just called the ‘Chinese Space Station’ (Zhongguo Kongjianzhan, 中国空间站) and I will refer to it this way (or as CSS).

Expedition 6 (ZaiRen 6) landed in Shenzhou 17 on Apr 30, handing over to the ZaiRen 7 crew of Ye Guangfu, Li Guangsu and Li Cong who arrived on Apr 25 aboard Shenzhou 18. On Oct 30 Shenzhou 19 arrived with Cai Xuzhe, Song Lingdong and Wang Haoze, and the ZaiRen 8 mission began on Oct 29 with Shenzhou 18’s departure.

There were four spacewalks from the Wentian module, on Mar 1, May 28, Jul 3, and Dec 17, for solar array repairs and debris panel installation.

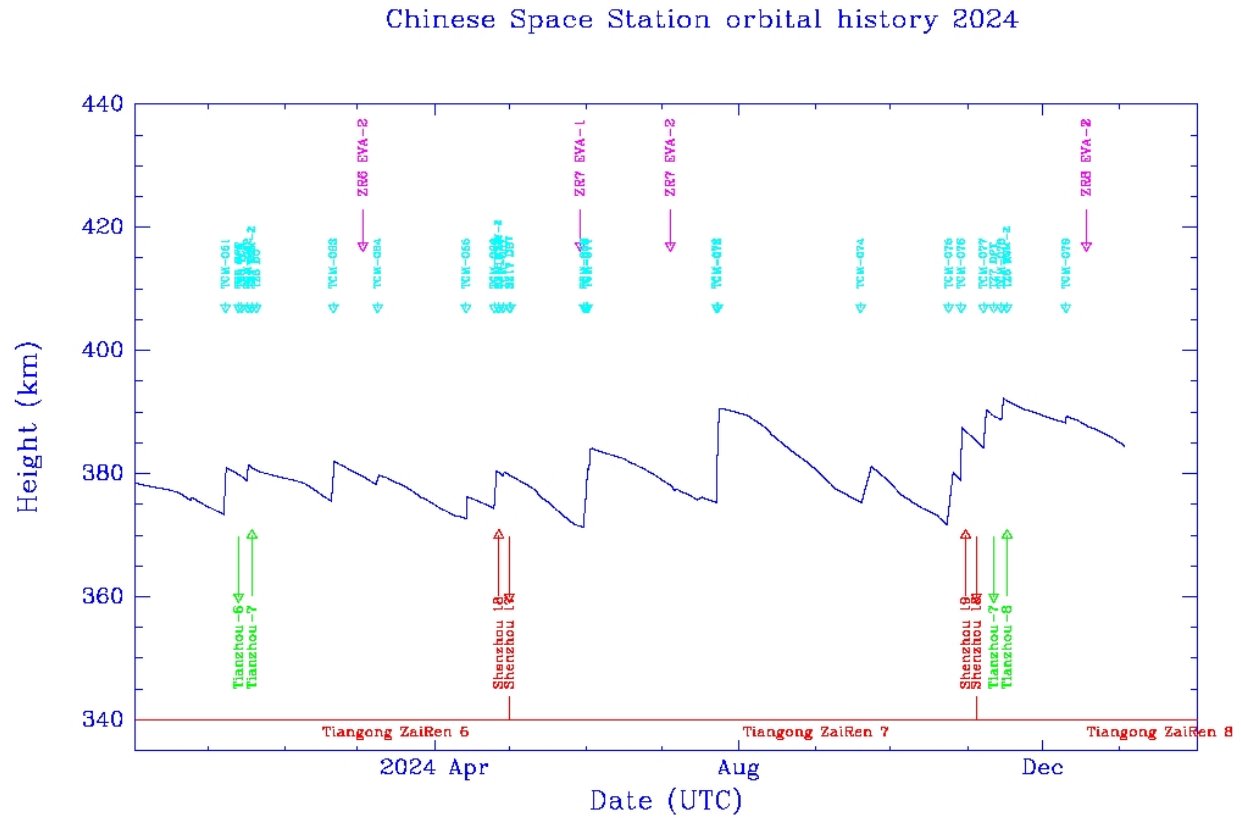


Figure 2: CSS orbital history, showing major events

6 Orbital Traffic, Debris and Decay

At the end of 2024 there were 29541 cataloged objects in orbit or beyond and the total known mass in orbit increased to 13706 tonnes. The breakdown for number of objects is listed in table 11 and for the mass in orbit in table 12. Note that the sum of the individual mass figures falls short of the mass totals by a few tonnes due to complications with spurious catalog entries; but the uncertainties on those totals are probably in any case probably of the order of ten percent due to the uncertainty on masses of individual objects.

I include as active payloads any satellite thought to be still transmitting even occasionally, while other sources may only include those thought to be in full operational service. In either case, distinguishing active from dead payloads is often partly guesswork for those satellites which do not perform regular orbital maintenance maneuvers, and the uncertainty in the total number of active satellites is probably of order 10%.

Many of the active satellites are now members of large LEO constellations, especially Starlink. For details of large constellation activity see the pages at

<https://planet4589.org/space/con/conlist.html>

The category ‘Alt.Pay.’ (alternative payloads) has been added as a bookkeeping convenience to account for objects that are in a marginal category - could arguably be considered payloads but are not counted as such in most lists. They are mostly short lived and so make only a small contribution here.

Figure 3 shows the evolution of the debris population versus time; I mark Starlink satellites as a separate category. In Figure 4 to 7 I show subsets of this data for small and large objects (below/above 100 kg) and for the lower and upper parts of LEO (below/above 600 km), showing the dramatic difference in the population and its evolution for LLEO (Lower LEO, below 600 km) and ULEO (Upper LEO, 600-2000 km).

Prior to the 2023 edition I called out the two biggest debris clouds (the 2007 Chinese antisatellite test and the 2009 Iridium-Strela collision) as separate entries in the tables and plots. I now tabulate ASAT-related debris and collision-related debris from all debris clouds rather than isolating those particular incidents.

Table 11: Debris objects in orbit at end of year, 2014-2024

	Active Payloads	Dead Payloads	Alt Pay.	Rocket Bodies	Op. Debris	ASAT debris	Collision debris	Other debris	Spurious	Total
2014 Dec 31	1294	2528	12	1683	1446	3321	1698	5781	0	17763
2015 Dec 31	1406	2560	13	1721	1453	3248	1580	6393	0	18374
2016 Dec 31	1508	2609	12	1754	1465	3223	1542	6447	0	18560
2017 Dec 31	1817	2695	12	1785	1491	3207	1514	6423	0	18944
2018 Dec 31	2042	2790	16	1846	1543	3192	1490	6597	0	19516
2019 Dec 31	2286	2919	16	1874	1567	3207	1481	6910	1	20261
2020 Dec 31	3259	3099	17	1895	1586	3182	1501	7460	0	21999
2021 Dec 31	4753	3234	20	1925	1660	4916	1482	7541	0	25531
2022 Dec 31	6729	3315	28	1964	1623	3470	1363	8174	0	26666
2023 Dec 31	9007	3255	20	1993	1562	3059	1175	7852	1	27924
2024 Dec 31	10868	3091	20	2000	1480	2868	1008	8205	1	29541

Table 12: Mass of objects in orbit at end of year, 2014-2024(tonnes)

	Active Payloads	Dead Payloads	Alt Pay.	Rocket Bodies	Op. Debris	ASAT debris	Collision debris	Other debris	Spurious	Total
2014 Dec 31	2549	1808	1	2918	152	0	0	1	0	7431
2015 Dec 31	2715	1833	1	3026	159	0	0	1	0	7737
2016 Dec 31	2844	1885	1	3112	164	0	0	1	0	8008
2017 Dec 31	3002	1927	1	3221	168	0	0	1	0	8322
2018 Dec 31	3181	1955	1	3395	168	0	0	1	0	8703
2019 Dec 31	3335	2000	1	3449	173	0	0	1	0	8960
2020 Dec 31	3635	2077	1	3502	179	0	0	1	0	9396
2021 Dec 31	4110	2124	1	3553	186	0	0	1	0	9978
2022 Dec 31	4785	2194	2	3643	183	0	0	1	0	10811
2023 Dec 31	5905	2229	1	3755	179	0	0	1	0	12073
2024 Dec 31	7542	2207	1	3790	162	0	0	1	0	13706

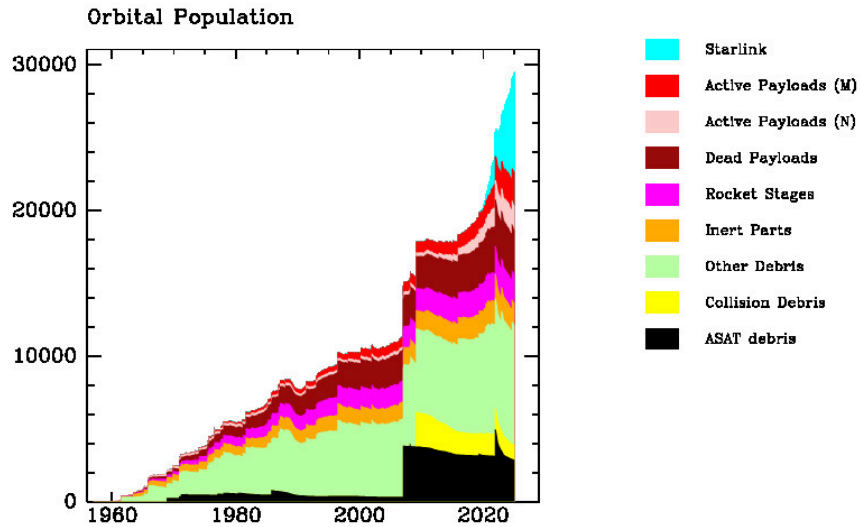


Figure 3: Orbital object population 1957-2024

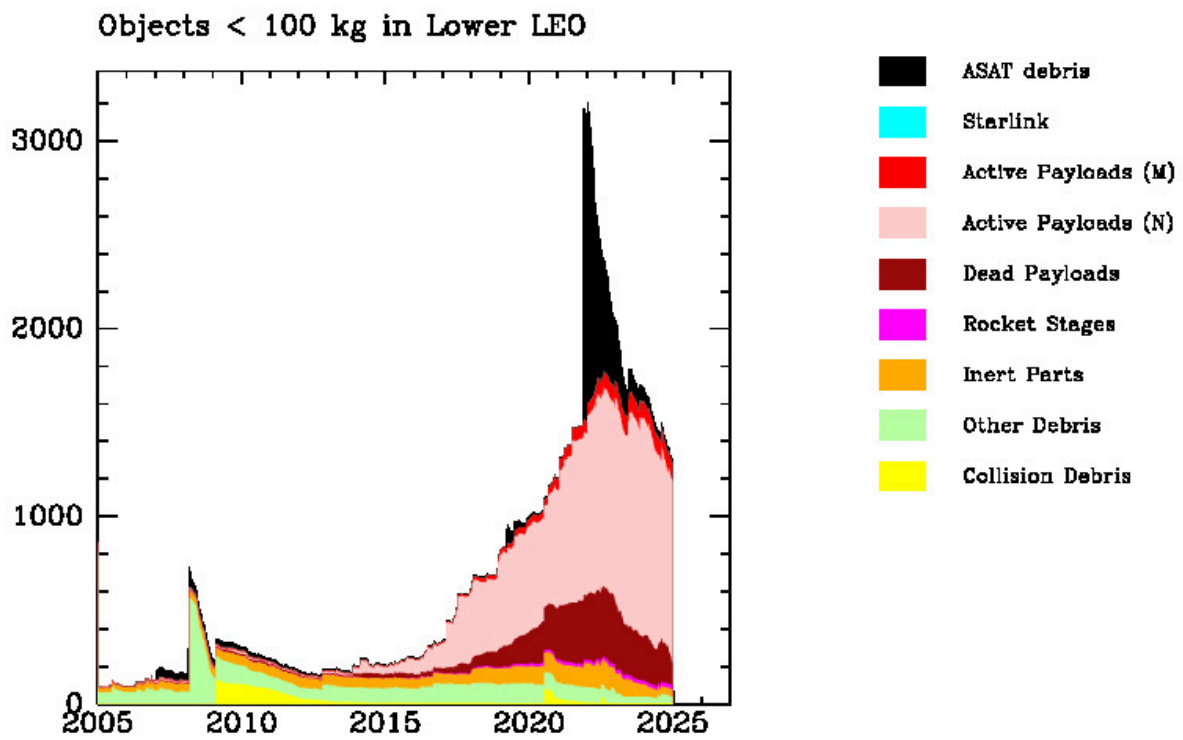


Figure 4: Time evolution of LEO debris and active satellite population (a): Small (<100 kg) objects in lower (< 600 km) LEO

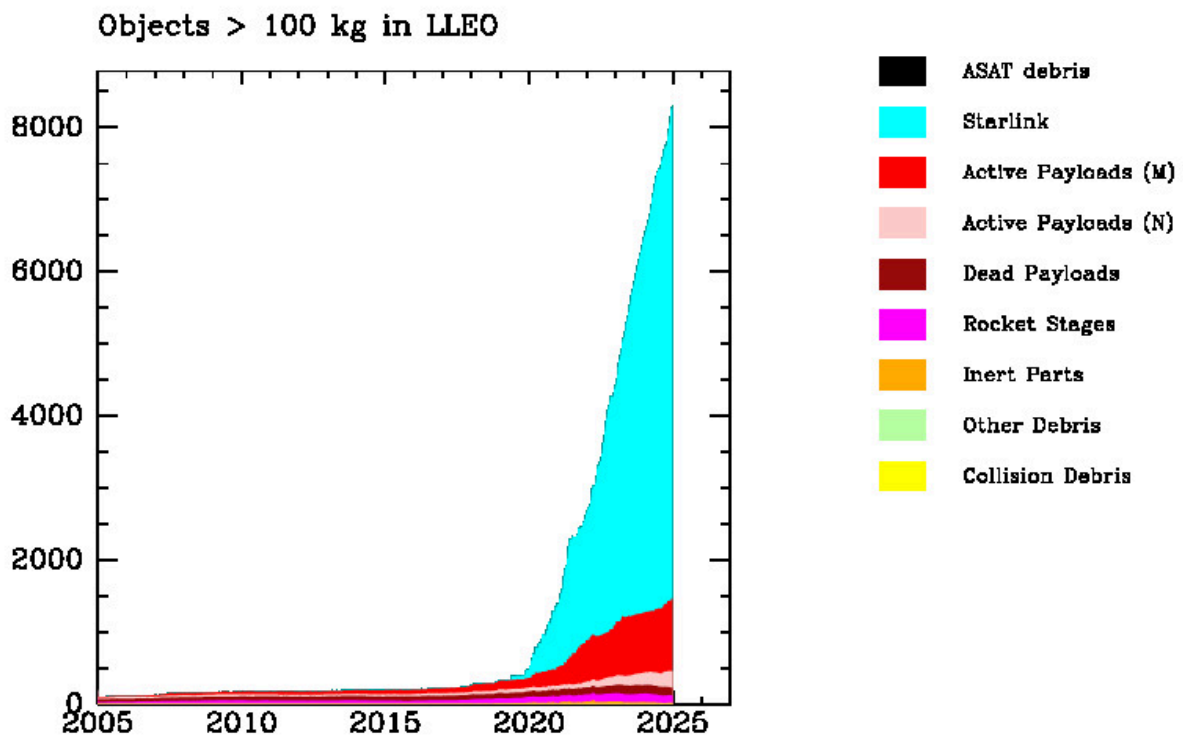


Figure 5: Time evolution of LEO debris and active satellite population (b): Big (>100 kg) objects in lower (< 600 km) LEO

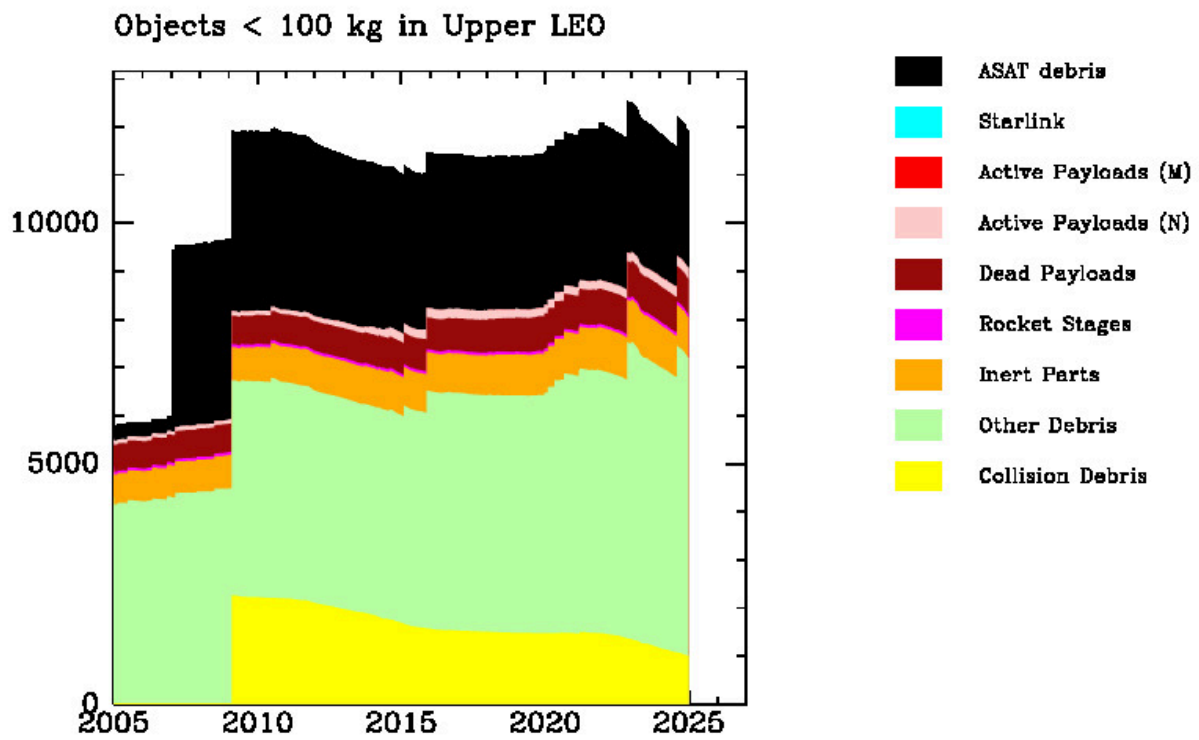


Figure 6: Time evolution of LEO debris and active satellite population (c): Small (<100 kg) objects in upper (> 600 km) LEO

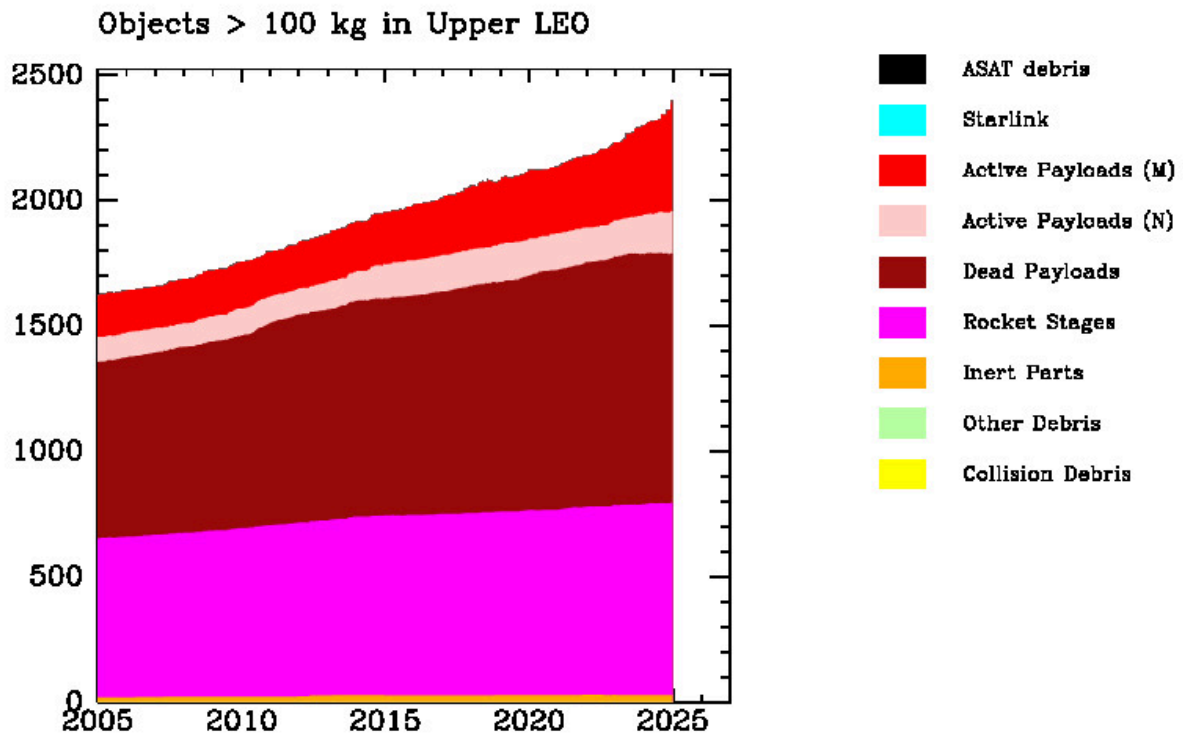


Figure 7: Time evolution of LEO debris and active satellite population (d): Big (>100 kg) objects in upper (> 600 km) LEO

6.1 Disposal of launch vehicle upper stages

For the 258 successful orbital launches I look at which launches went to which type of orbit, and whether rockets disposed of their upper stages in a controlled deorbit or whether they left one or more stages (and possibly associated debris) in orbit to decay naturally. Upper stages that achieve Earth escape are also counted as a controlled disposal.

The main orbit categories are SSO (Sun-synchronous low Earth orbit), ISS (International Space Station launches), LSS (Other low orbit space stations, currently only the Chinese one); Other LEO (Low Earth orbit except for SSO and ISS/LSS); GTO (Geotransfer orbit), Supersync transfer (geotransfer with initial apogee well above GEO); GEO direct (where launch vehicle upper stage deploys payload directly in geostationary orbit), 12-hour circular MEO orbits (as used by GPS), Molniya elliptical orbit, and deep space (beyond about 150,000 km and ‘other high orbit’).

I will note that some SSO/other LEO launches perform a perigee lowering disposal burn to ensure stage reentry within a few weeks. However, the reentry location is still uncontrolled in these cases. Cases where SSO/LEO perigee lowering is to below 180 km are noted with an asterisk in the table.

Table 13: Launches by orbit and launch-associated Earth orbit debris, 2024

Launch vehicle	Total launches	Launches with upper stage disposal	Stages left in Earth orbit	Other LV debris
(a) SSO				
AESP Vega	2	2	0	0
CALT CZ-2C	2	0	2	0
CALT CZ-4	1	0	1	0
CASIC KZ-11	1	1	0	0
CASIC KZ-1A	2	0	2 (2*)	0
CZMJ JL-3	2	0	2	0
KHRO Angara	1	1	0	0
LANDSP Zhuque-2E	1	0	1	0
MHI H-II	2	0	2	0
MORF Soyuz	3	1	2	0
RLABLB Electron	11	0	22	0
ROSK Soyuz	5	3	2	0
SAST CZ-2D	4	2	2	0
SAST CZ-4	3	0	3	0
SAST CZ-6	7	0	7	0
SPX Falcon 9	6	6	0	0
XIDO Gushenxing-1	3	1	2	0
ZKYT ZK-1	3	0	3	0
Total SSO	59	17	53 (2*)	0
(b) ISS				
LM Atlas V	1	1	0	0
ROSK Soyuz	6	0	6	0
SPX Falcon 9	7	7	0	0
Total ISS	14	8	6	0

Table 13 (cont):				
Launch vehicle	Total launches	Launches with up- per stage disposal	Stages left in Earth orbit	Other LV debris
(c) LSS				
CALT CZ-2F	2	0	2	0
CALT CZ-7	2	0	2	0
Total LSS	4	0	4	0
(d) Other LEO				
CALT CZ-2C	4	0	4	0
CALT CZ-5	1	1	0	0
CASIC KZ-1A	2	0	2	0
DFK Yinli-1	1	0	1	0
ESA Ariane 5	1	1	0	0
FFLY Alpha	1	0	1	0
IRGC Qaem-100	2	0	2	0
IRSA Simorgh	2	0	2	0
ISRO PSLV/GSLV	2	0	2	0
ISRO SSLV	1	0	1	0
JAXA H3	3	3	0	0
MORF Soyuz	1	0	1	0
RLABL Electron	3	0	6	0
SAST CZ-2D	5	0	5	0
SAST CZ-4	2	0	2	0
SAST CZ-6	1	0	1	0
SAST Chang Zheng 12	1	0	1	0
SPX Falcon 9	102	102	0	0
SPX Starship	4	0	0	0
XIDO Gushenxing-1	2	2	0	0
Total Other LEO	141	109	31	0
(e) GTO Transfer				
CALT CZ-3	5	0	5	0
CALT CZ-5	1	0	1	0
CALT CZ-7	2	0	2	0
ISRO PSLV/GSLV	1	0	1	0
SPX Falcon 9	3	0	3	0
SPX Falcon Heavy	1	0	1	0
Total GTO Transfer	13	0	13	0
(f) SuperSync Transfer				
ISRO PSLV/GSLV	1	0	1	0
SPX Falcon 9	8	0	8	0
Total SuperSync Transfer	9	0	9	0
(g) GEO Direct				
BOE Delta 4	1	0	1	0
KHRO Angara	1	0	1	0
LM Atlas V	1	0	1	0
Total GEO Direct	3	0	3	0

Table 13 (cont):				
Launch vehicle	Total launches	Launches with up- per stage disposal	Stages left in Earth orbit	Other LV debris
(h) MEO Transfer				
(i) 12-h MEO Direct				
CALT CZ-3	2	0	3	0
SPX Falcon 9	3	0	3	0
Total 12-h MEO Direct	5	0	6	0
(j) Molniya				
CALT CZ-3	1	0	1	0
SPX Falcon 9	1	0	1	0
Total Molniya	2	0	2	0
(k) Deep Space				
CALT CZ-2C	1	0	2	0
CALT CZ-5	1	0	1	0
CALT CZ-8	1	0	1	0
CASC CE-5 SSQ	1	0	0	0
LM Vulcan	2	0	2	0
SPX Falcon 9	2	0	1	0
SPX Falcon Heavy	1	0	0	0
Total Deep Space	9	0	7	0
Total Overall				
	259	134	134 (2*)	0

6.2 Orbituaries

Table 14 gives statistics on reentries in 2024, not including deliberate deorbit and landing.
(Acknowledgements to Collin Krum for the revised section name).

Table 14: Uncontrolled Reentries 2024

	Number	Mass (t)
Active Payloads	835	121.7
Dead Payloads	269	48.5
Rocket Bodies	122	252.8
Operational debris	112	31.7
ASAT debris	190	-
Collision debris	167	-
Other fragment debris	375	-

In this table, ‘active payloads’ represents payloads which were thought to be active at the beginning of the year.

Controlled deorbits and landings

352 Starlink satellites reentered during 2024. The satellites orbits were lowered using thrusters but final reentry was uncontrolled.

There were no 20-tonne-class (CZ-5B) uncontrolled reentries in 2024. However, many of the largest uncontrolled reentries were of Chinese rocket stages.

In addition to uncontrolled reentries, there were 15 controlled landings and 8 controlled deorbitings of spacecraft during 2024.

Two Russian Soyuz ships landed in Kazakhstan, three Crew Dragon splashed down in the Gulf of Mexico and one Cargo Dragon off Florida's Atlantic coast; the Starliner Calypso capsule landed at the White Sands Missile Range; two Shenzhou capsules and the SJ-19 biology capsule landed in the Dongfeng landing area near Jiuquan in Inner Mongolia. The Chang'e-6 lunar sample return flight landed in the Siziwang Banne area. The Varda W-Series microgravity vehicle landed in the Utah Test and Training Range. Finally, a Chinese spaceplane made a runway landing at Lop Nor.

Six ISS cargo ships (two Cygnus, four Progress) and two Tianzhou cargo ships were deorbited destructively, all over the southern Pacific Ocean.

Seven objects reentered and burned up on controlled trajectories associated with landings of spacecraft (Soyuz orbital and Soyuz/Shenzhou propulsion modules and the SJ-19 retro). Five Dragon trunks were discarded in orbit and had made uncontrolled reentries by the end of the year, with debris found in Saskatchewan and North Carolina (the other three reentered over Saudi Arabia, the Atlantic and the Gulf of Mexico). Two Dragon trunks jettisoned in 2023 reentered over the Southern Ocean.

For rocket upper stages deorbited soon after launch, the target impact zones are often many degrees in length along the orbit track, so the locations given below in Table 17 should not be taken too seriously.

Table 15: Most massive uncontrolled reentries, 2024

COSPAR	Spacecraft	Date	Mass/kg	Location	Coords	Life (d)	Type
2024-013B	CZ-7 Y8 Stage 2	2024 Jan 27 2102	6000.0	71E 39S		10.27	Reentry
2022-093B	CZ-2F Y13 Stage 2	2024 Feb 12 0758	5500.0	90W 0N		556.67	Reentry
2023-006D	CZ-2D Y73 Stage 2	2024 Feb 17 0711	4006.0	169E 2N		400.01	Reentry
2023-195B	CZ-2F T5 Stage 2	2024 Mar 10 1430	5500.0	75W 22N		87.01	Reentry
2024-052G	CZ-2D Y87 Stage 2	2024 Mar 23 0434	4006.0	157E 10S		1.96	Reentry
2024-048B	CZ-2C Yxx Stage 2	2024 Mar 30 0232	3800.0	164W 5N		16.57	Reentry
2022-153C	Falcon 9-186 Stage 2	2024 Mar 30 0730?	4000.0	-		503.64	Reentry
2020-009B	H-2A F41 Stage 2	2024 Apr 22 2120	4000.0	163E 17S		1534.82	Reentry
2023-069D	CZ-2C Y60 Stage 2	2024 Apr 23 1810	3800.0	174E 27S		338.42	Reentry
2020-021D	CZ-2C Y42 Stage 2	2024 Apr 25 0925	3800.0	20E 23N		1493.24	Reentry
2018-021B	H-2A F38 Stage 2	2024 Apr 27 0423	4000.0	5E 82S		2250.99	Reentry
2023-106D	CZ-2D Y81 Stage 2	2024 Apr 28 1113	4006.0	27W 28N		276.63	Reentry
2022-082D	CZ-2C Y71 Stage 2	2024 Apr 30 1917	3800.0	165W 47N		654.85	Reentry
2024-078B	CZ-2F Y18 Stage 2	2024 May 6 1256	5500.0	21E 40N		11.00	Reentry
2024-083B	CZ-5 Y8 Stage 2	2024 May 16	5100.0	-		12.61	Reentry
2023-043AN	LVM3 M3 Stage 2	2024 Jun 14 1436	4860.0	36E 38N		446.46	Reentry
2023-130C	CZ-2D Y82 Stage 2	2024 Jun 23 0630?	4006.0	-		296.95	Reentry
2023-145B	CZ-2D Y83 Stage 2	2024 Jun 23 2113	4006.0	90E 32S		280.71	Reentry
2013-059B	CZ-2C Y28 Stage 2	2024 Jun 29 0815	4006.0	174W 34N		3896.23	Reentry
2024-129W	Falcon 9-355 Stage 2	2024 Jul 12 1045?	3000.0	-		0.34	Reentry
2016-065B	CZ-5 Y1 Stage 2	2024 Jul 12 1101	5100.0	100E 18N		2807.93	Reentry
2010-045B	H-2A F18 Stage 2	2024 Jul 26 0423	4000.0	113W 32N		5066.71	Reentry
2023-152B	CZ-2D Y84 Stage 2	2024 Aug 4 1519	4006.0	52W 30S		304.62	Reentry
2024-116C	CZ-2C Y50 Stage 2	2024 Aug 4 2359	3800.0	19E 27S		43.71	Reentry
2019-007C	Ariane 5 L5106 ESC-A	2024 Aug 15 0234	5000.0	175W 1S		2017.23	Reentry
2023-194E	CZ-2D Y86 Stage 2	2024 Sep 24	4006.0	-		288.92	Reentry
2023-012B	H-2A F46 Stage 2	2024 Oct 7 1330?	4000.0	-		620.49	Reentry
2023-163B	CZ-2D Y85 Stage 2	2024 Oct 8 2135?	4006.0	-		351.06	Reentry
2024-194D	CZ-2F Y19 Stage 2	2024 Nov 7 2340?	5500.0	-		9.13	Reentry
2024-177B	CZ-2D Y44 Stage 2	2024 Nov 10 1640	4006.0	47W 15N		44.26	Reentry
2013-030A	Resurs-P No. 1	2024 Nov 18 0020	5600.0	131E 23S		4163.29	Reentry
2024-190D	CZ-2C Y82 Stage 2	2024 Nov 21 0730?	3800.0	-		29.26	Reentry
2024-211B	CZ-7 Y9 Stage 2	2024 Nov 24 1342	6000.0	64W 21N		8.94	Reentry
2009-066B	H-2A F16 Stage 2	2024 Nov 28 1938	4000.0	33W 8S		5479.76	Reentry
2024-010B	H-2A F48 Stage 2	2024 Dec 3 1730	4000.0	126E 9N		326.53	Reentry
2023-017B	Falcon 9-203 Stage 2	2024 Dec 10 2305	4000.0	66W 22N		672.90	Reentry
2024-221C	Zhuque-2E Y1 Stage 2	2024 Dec 24 1050	5000.0	148E 43N		27.37	Reentry
2023-116C	CZ-2C Y46? Stage 2	2024 Dec 24 2059	3800.0	141E 16N		503.92	Reentry
2008-034C	Ariane 5 L541 ESC-A	2024 Dec 30 2130?	5000.0	-		6019.99	Reentry

Table 16: Landings and deorbits, 2024

COSPAR	Spacecraft	Date	Mass/kg	Location	Coords	Life (d)	Type
2024-014A	Axiom Ax-3	2024 Feb 9 1330	9500.0	80.7W 29.8N		21.65	Landing
2023-084A	W-Series 1 Reentry Vehicle	2024 Feb 21 2140	120.0	113W 40N?		254.00	Landing
2023-128A	Dragon Endurance (Crew-7)	2024 Mar 12 0947:44	9500.0	87.5W 29.8N		199.10	Landing
2023-143A	Soyuz MS-24	2024 Apr 6 0717:47	2900.0	69 38E 47 24N		203.65	Landing
2024-054A	Dragon CRS-30	2024 Apr 30 0538	10950.0	83.9W 28.1N?		39.36	Landing
2023-164A	Shenzhou 17	2024 Apr 30 0946:08	3258.0	100 04E 41 36N		187.27	Landing
2024-083	Chang'e-6 Fanhui Qi	2024 Jun 25 0607	335.0	111 25E 42 20N		52.86	Landing
2023-195A	Chonfu Shiyong Shiyuan HQ 3	2024 Sep 6 0110	8000.0	Lop Nor		266.46	Landing
2024-109A	Calypso	2024 Sep 7 0401:35	8300.0	106.4W 32.9N		93.55	Landing
2024-161A	Polaris Dawn	2024 Sep 15 0736:54	9820.0	83.0W 25.1N		4.93	Landing
2024-055A	Soyuz MS-25	2024 Sep 23 1159:22	2900.0	69 38E 47 21N		183.97	Landing
2024-177A	Shi Jian 19 RV	2024 Oct 11 0239	1200.0	100E 41.5N		13.67	Landing
2024-042A	Dragon Endeavour (Crew-8)	2024 Oct 25 0729:02	9500.0	87.50W 29.80N		235.15	Landing
2024-078A	Shenzhou 18	2024 Nov 3 1724:27?	3258.0	Dongfeng		192.18	Landing
2024-200A	Dragon CRS-31	2024 Dec 17 1839	10950.0	86.2W 29.7N		42.67	Landing
2023-110A	S.S. Laurel Clark	2024 Jan 9 1922	7592.0	140W 46S?		160.79	Deorbit
2023-063A	Tianzhou-6	2024 Jan 19 1237?	6000.0	175E 22S?		253.97	Deorbit
2023-125A	Progress MS-24	2024 Feb 13 0552?	4325.0	171W 28S?		174.20	Deorbit
2023-184A	Progress MS-25	2024 May 28 1229?	4325.0	S Pacific		179.13	Deorbit
2024-021A	S.S. Patricia Robertson	2024 Jul 13 1606:52	7671.0	167W 3S?		164.96	Deorbit
2024-029A	Progress MS-26	2024 Aug 13 0549	4325.0	S Pacific		180.10	Deorbit
2024-013A	Tianzhou-7	2024 Nov 17 1325	6000.0	170E 17S?		304.96	Deorbit
2024-103A	Progress MS-27	2024 Nov 19 1651?	4325.0	S Pacific		173.30	Deorbit

Table 17: Vehicles deorbited soon after launch, 2024

COSPAR	Spacecraft	Date	Mass/kg	Location	Coords	Life (d)	Type
2024-002	Falcon 9-287 Stage 2	2024 Jan 3 0537?	3000.0	103W 19S?		0.08	Deorbit
2024-005	Falcon 9-289 Stage 2	2024 Jan 8 0053?	3000.0	56E 34S?		0.10	Deorbit
2024-011	Falcon 9-290 Stage 2	2024 Jan 14 1051?	3000.0	104W 18S		0.08	Deorbit
2024-012	Falcon 9-291 Stage 2	2024 Jan 15 0409?	3000.0	57E 34S?		0.10	Deorbit
2024-014	Falcon 9-292 Stage 2	2024 Jan 18 2302?	3000.0	159W 38S?		0.05	Deorbit
2024-017	Falcon 9-293 Stage 2	2024 Jan 24 0227?	3000.0	103W 20S?		0.08	Deorbit
2024-019	Falcon 9-294 Stage 2	2024 Jan 29 0321?	3000.0	57E 32S?		0.09	Deorbit
2024-020	Falcon 9-295 Stage 2	2024 Jan 29 0748?	3000.0	104W 18S?		0.08	Deorbit
2024-021B	Falcon 9-296 Stage 2	2024 Jan 30 1821?	3000.0	158W 37S		0.05	Deorbit
2024-025	Falcon 9-297 Stage 2	2024 Feb 8 0828?	3000.0	112W 3S?		0.08	Deorbit
2024-027	Falcon 9-298 Stage 2	2024 Feb 10 0226?	3000.0	103W 20S?		0.08	Deorbit
2024-028	Falcon 9-299 Stage 2	2024 Feb 15 0110?	3000.0	66E 31S?		0.11	Deorbit
2024-031	Falcon 9-301 Stage 2	2024 Feb 15 2326?	3000.0	104W 18S?		0.08	Deorbit
2024-032	H3 TF2 Stage 2	2024 Feb 17 0231?	5400.0	92E 45S?		0.09	Deorbit
2024-036	Falcon 9-303 Stage 2	2024 Feb 23 0603?	3000.0	104W 18S?		0.08	Deorbit
2024-038	Falcon 9-304 Stage 2	2024 Feb 26 0023?	3000.0	56E 34S?		0.10	Deorbit
2024-041	Falcon 9-305 Stage 2	2024 Feb 29 1747?	3000.0	55E 34S?		0.10	Deorbit
2024-042	Falcon 9-306 Stage 2	2024 Mar 4 0507?	3000.0	158W 36S?		0.05	Deorbit
2024-043	Falcon 9-307 Stage 2	2024 Mar 5 0125?	3500.0	173W 10N?		0.14	Deorbit
2024-044	Falcon 9-308 Stage 2	2024 Mar 5 0213?	3000.0	56E 34S?		0.10	Deorbit
2024-045	Falcon 9-309 Stage 2	2024 Mar 11 0122?	3000.0	55E 34S?		0.10	Deorbit
2024-046	Falcon 9-310 Stage 2	2024 Mar 11 0600?	3000.0	104W 17S?		0.08	Deorbit
2024-049	Falcon 9-311 Stage 2	2024 Mar 16 0238?	3000.0	54E 35S		0.10	Deorbit
2024-050	Falcon 9-312 Stage 2	2024 Mar 19 0420?	3000.0	102W 18S?		0.08	Deorbit
2024-052J	Yuanzheng-3 Y3	2024 Mar 21 0915?	2000.0	179W 51S?		0.16	Deorbit
2024-054	Falcon 9-313 Stage 2	2024 Mar 21 2209?	3000.0	154W 33S?		0.05	Deorbit
2024-056	Falcon 9-314 Stage 2	2024 Mar 24 0526?	3000.0	55E 34S		0.10	Deorbit
2024-057	Falcon 9-315 Stage 2	2024 Mar 26 0200?	3000.0	55E 34S?		0.10	Deorbit
2024-060	Falcon 9-317 Stage 2	2024 Mar 31 0347?	3000.0	55E 34S?		0.10	Deorbit
2024-062	Falcon 9-318 Stage 2	2024 Apr 2 0422?	3000.0	102W 21S?		0.08	Deorbit
2024-064	Falcon 9-319 Stage 2	2024 Apr 5 1129?	3000.0	55E 34S?		0.10	Deorbit
2024-065	Falcon 9-320 Stage 2	2024 Apr 7 0418?	3000.0	102W 21S?		0.08	Deorbit
2024-066	Falcon 9-321 Stage 2	2024 Apr 8 0156?	3500.0	95E 43S		0.11	Deorbit
2024-068	Falcon 9-322 Stage 2	2024 Apr 10 0757?	3000.0	55E 34S?		0.10	Deorbit
2024-070	Falcon 9-323 Stage 2	2024 Apr 11 1615?	3000.0	151W 13N		0.08	Deorbit
2024-071	Falcon 9-324 Stage 2	2024 Apr 13 0357?	3000.0	55E 34S?		0.10	Deorbit
2024-072	CZ-2D Y97 Stage 2	2024 Apr 15 0504?	4006.0	92W 40S?		0.04	Deorbit
2024-073	Falcon 9-325 Stage 2	2024 Apr 17 2343?	3000.0	55E 34S?		0.10	Deorbit
2024-074	Falcon 9-326 Stage 2	2024 Apr 19 0057?	3000.0	55E 34S?		0.10	Deorbit
2024-076	Falcon 9-327 Stage 2	2024 Apr 24 0034?	3000.0	55E 34S?		0.10	Deorbit
2024-080	Falcon 9-329 Stage 2	2024 Apr 29 0025?	3000.0	55E 34S?		0.10	Deorbit
2024-081	Falcon 9-330 Stage 2	2024 May 2 2016?	3000.0	143W 43N?		0.07	Deorbit
2024-082	Falcon 9-331 Stage 2	2024 May 3 0454?	3000.0	55E 34S?		0.10	Deorbit
2024-084	Falcon 9-332 Stage 2	2024 May 6 2031?	3000.0	55E 34S?		0.10	Deorbit
2024-086	Falcon 9-333 Stage 2	2024 May 8 2100?	3000.0	55E 34S?		0.10	Deorbit
2024-088	Falcon 9-334 Stage 2	2024 May 10 0621?	3000.0	105W 17S?		0.08	Deorbit
2024-090	Falcon 9-335 Stage 2	2024 May 13 0406?	3000.0	55E 34S?		0.13	Deorbit
2024-091	Falcon 9-336 Stage 2	2024 May 14 2031?	3000.0	103W 20S?		0.08	Deorbit
2024-092	Fregat No. xxx-xx	2024 May 17 0732?	1000.0	77E 28S?		0.42	Deorbit

Table 17: Vehicles deorbited soon after launch, 2024 (cont)

COSPAR	Spacecraft	Date	Mass/kg	Location	Coords	Life (d)	Type
2024-093	Falcon 9-337 Stage 2	2024 May 18 0249?	3000.0	55E 34S?		0.10	Deorbit
2024-094E	CZ-2D Y98 Stage 2	2024 May 20 0400?	4006.0	81W 35S?		0.04	Deorbit
2024-095E	KZ-11 Y4 Stage 3	2024 May 21 0445?	1000.0	73E 61S?		0.02	Deorbit
2024-096	Falcon 9-338 Stage 2	2024 May 22 0958?	3000.0	113W 43S?		0.08	Deorbit
2024-097	Falcon 9-339 Stage 2	2024 May 23 0452?	3000.0	55E 34S?		0.10	Deorbit
2024-098	Falcon 9-340 Stage 2	2024 May 24 0502?	3000.0	55E 34S?		0.10	Deorbit
2024-100	Falcon 9-341 Stage 2	2024 May 28 1641?	3000.0	55E 34S?		0.10	Deorbit
2024-101	Falcon 9-342 Stage 2	2024 May 28 2358?	3000.0	142W 37N?		0.07	Deorbit
2024-102E	Gushenxing-1S Y2 Stage 4	2024 May 29 0905?	150.0	80W 38S?		0.04	Deorbit
2024-105C	Gushenxing-1 Y12 Stage 4	2024 May 31 0026?	150.0	93W 28S?		0.03	Deorbit
2024-106	Falcon 9-343 Stage 2	2024 Jun 1 0453?	3000.0	55E 34S?		0.09	Deorbit
2024-107	Falcon 9-344 Stage 2	2024 Jun 5 0448?	3000.0	118E 52?		0.11	Deorbit
2024-109B	Centaur AV-085	2024 Jun 5 1548?	2130.0	109E 44S?		0.04	Deorbit
2024-U03	Starship FT-4	2024 Jun 6 1356	120000.0	105E 19S?		0.05	Deorbit
2024-111	Falcon 9-345 Stage 2	2024 Jun 8 0428?	3000.0	117E 53S?		0.11	Deorbit
2024-112	Falcon 9-346 Stage 2	2024 Jun 8 1450?	3000.0	105W 20S?		0.08	Deorbit
2024-113	Falcon 9-347 Stage 2	2024 Jun 19 0533?	3000.0	101W 21S?		0.08	Deorbit
2024-117	Falcon 9-349 Stage 2	2024 Jun 23 1944?	3000.0	103E 50S?		0.10	Deorbit
2024-118	Falcon 9-350 Stage 2	2024 Jun 24 0537?	3000.0	107W 14S?		0.08	Deorbit
2024-120	Falcon 9-351 Stage 2	2024 Jun 27 1345?	3000.0	120E 53S?		0.10	Deorbit
2024-121	Falcon 9-352 Stage 2	2024 Jun 29 0513?	3000.0	111W 47S?		0.08	Deorbit
2024-123B	H3 F3 Stage 2	2024 Jul 1 0513?	2500.0	94E 44S?		0.09	Deorbit
2024-124	Falcon 9-353 Stage 2	2024 Jul 3 1127?	3000.0	116E 53S?		0.11	Deorbit
2024-131	Falcon 9-356 Stage 2	2024 Jul 27 0814?	3000.0	103E 50S		0.10	Deorbit
2024-132	Falcon 9-357 Stage 2	2024 Jul 28 0740?	3000.0	114E 43S		0.10	Deorbit
2024-133	Falcon 9-358 Stage 2	2024 Jul 28 1113?	3000.0	105W 17S		0.08	Deorbit
2024-136	Falcon 9-359 Stage 2	2024 Aug 2 0733?	3000.0	125E 53S		0.11	Deorbit
2024-138	Falcon 9-360 Stage 2	2024 Aug 4 0915?	3000.0	104W 18S		0.08	Deorbit
2024-139B	Falcon 9-361 Stage 2	2024 Aug 4 1617?	3000.0	157W 36S?		0.05	Deorbit
2024-141	Falcon 9-362 Stage 2	2024 Aug 10 1522?	3000.0	120E 53S		0.11	Deorbit
2024-144	Falcon 9-364 Stage 2	2024 Aug 12 1306?	3000.0	103E 50S?		0.10	Deorbit
2024-146	Falcon 9-365 Stage 2	2024 Aug 15 1534?	3000.0	90E 42S?		0.11	Deorbit
2024-149	Falcon 9-366 Stage 2	2024 Aug 16 2215?	3501.0	173W 12N?		0.14	Deorbit
2024-150	Falcon 9-367 Stage 2	2024 Aug 20 1551?	3000.0	113E 52S?		0.10	Deorbit
2024-152	Falcon 9-368 Stage 2	2024 Aug 28 1019?	3000.0	115E 53S?		0.10	Deorbit
2024-155	Falcon 9-370 Stage 2	2024 Aug 31 1013?	3000.0	110E 52S?		0.06	Deorbit
2024-154	Falcon 9-369 Stage 2	2024 Aug 31 1040?	3000.0	102W 20S?		0.12	Deorbit
2024-157B	Vega AVUM VV24	2024 Sep 5 0426?	660.0	89.4E 15.0S?		0.11	Deorbit
2024-158	Falcon 9-371 Stage 2	2024 Sep 5 1804?	3020.0	115E 53S?		0.10	Deorbit
2024-159L	CZ-6 Y11 Stage 3	2024 Sep 5 1914?	1000.0	130W 50S?		0.03	Deorbit
2024-160	Falcon 9-372 Stage 2	2024 Sep 6 0519?	3000.0	111W 47S?		0.08	Deorbit
2024-161	Falcon 9-373 Stage 2	2024 Sep 10 1102?	3000.0	123W 8N?		0.07	Deorbit
2024-163F	Falcon 9-374 Stage 2	2024 Sep 12 1118?	3000.0	66E 30S?		0.10	Deorbit
2024-164	Falcon 9-375 Stage 2	2024 Sep 13 0334?	3000.0	109W 12S?		0.08	Deorbit
2024-166	Angara AM No. 4L?	2024 Sep 17 1028?	400.0	172W 35N?		0.14	Deorbit
2024-169E	CZ-2D Yxx Stage 2	2024 Sep 20 0506?	4006.0	82W 30S?		0.04	Deorbit
2024-171	Falcon 9-377 Stage 2	2024 Sep 20 1539?	3180.0	110W 10S?		0.08	Deorbit
2024-175	Falcon 9-378 Stage 2	2024 Sep 25 0550?	3000.0	110W 10S?		0.08	Deorbit
2024-178	Falcon 9-379 Stage 2	2024 Sep 28 1810?	3000.0	95E 32S?		0.04	Deorbit
2024-U04	Starship FT-5	2024 Oct 13 1330:42	120000.0	105E 19S?		0.05	Deorbit

Table 17: Vehicles deorbited soon after launch, 2024 (cont)

COSPAR	Spacecraft	Date	Mass/kg	Location	Coords	Life (d)	Type
2024-183	Falcon 9-381 Stage 2	2024 Oct 15 0841?	3000.0	110E 52S?		0.10	Deorbit
2024-184	Falcon 9-382 Stage 2	2024 Oct 15 1013?	3000.0	105W 17S?		0.08	Deorbit
2024-187	Falcon 9-383 Stage 2	2024 Oct 19 0202?	3290.0	115E 53S?		0.10	Deorbit
2024-188	Falcon 9-384 Stage 2	2024 Oct 20 0738?	3460.0	22E 47S?		0.10	Deorbit
2024-189	CZ-6 Y13 Stage 3	2024 Oct 22 0106?	1000.0	81W 35S?		0.04	Deorbit
2024-191	Falcon 9-385 Stage 2	2024 Oct 24 0001?	3340.0	46E 39S?		0.09	Deorbit
2024-192	Falcon 9-386 Stage 2	2024 Oct 24 1906?	3000.0	111W 45S?		0.08	Deorbit
2024-193	Falcon 9-387 Stage 2	2024 Oct 27 0018?	3360.0	114E 53S?		0.10	Deorbit
2024-195	Falcon 9-388 Stage 2	2024 Oct 30 1358?	3000.0	106W 17S?		0.08	Deorbit
2024-196	Falcon 9-389 Stage 2	2024 Oct 30 2341?	3000.0	114E 53S?		0.10	Deorbit
2024-200	Falcon 9-390 Stage 2	2024 Nov 5 0342?	3000.0	158E 36S?		0.05	Deorbit
2024-199BH	Fregat No. 142-601	2024 Nov 5 0617?	1000.0	145W 3N?		0.29	Deorbit
2024-202	Falcon 9-391 Stage 2	2024 Nov 7 2234?	3000.0	45E 37S?		0.09	Deorbit
2024-204	Falcon 9-392 Stage 2	2024 Nov 9 0805?	3000.0	105W 18S?		0.08	Deorbit
2024-207	Falcon 9-394 Stage 2	2024 Nov 11 2346?	3000.0	46E 36S?		0.10	Deorbit
2024-209	Falcon 9-395 Stage 2	2024 Nov 14 0714?	3000.0	105W 16S?		0.08	Deorbit
2024-210	Falcon 9-396 Stage 2	2024 Nov 14 1537?	3000.0	51E 37S?		0.09	Deorbit
2024-213	Falcon 9-398 Stage 2	2024 Nov 18 0744?	3000.0	105W 17S?		0.08	Deorbit
2024-U06	Starship FT-6	2024 Nov 19 2306	120000.0	105E 19S?		0.05	Deorbit
2024-216	Falcon 9-400 Stage 2	2024 Nov 21 1823?	3000.0	48E 37S?		0.09	Deorbit
2024-217	Falcon 9-401 Stage 2	2024 Nov 24 0716?	3000.0	105W 16S?		0.08	Deorbit
2024-220	Falcon 9-402 Stage 2	2024 Nov 25 1219?	3000.0	50E 37S?		0.09	Deorbit
2024-222	Falcon 9-403 Stage 2	2024 Nov 27 0657?	3000.0	50E 37S?		0.09	Deorbit
2024-223B	Fregat No. 142-0x	2024 Nov 30 0013?	1000.0	83W 44S		0.10	Deorbit
2024-224	Falcon 9-404 Stage 2	2024 Nov 30 0715?	3000.0	48E 37S?		0.09	Deorbit
2024-225	Falcon 9-405 Stage 2	2024 Nov 30 1006?	3000.0	114W 42S?		0.08	Deorbit
2024-229	Falcon 9-406 Stage 2	2024 Dec 4 1228?	3000.0	48E 37S?		0.09	Deorbit
2024-231	Falcon 9-407 Stage 2	2024 Dec 5 0456?	3000.0	105W 17S?		0.08	Deorbit
2024-235B	Vega AVUM VV25	2024 Dec 5 2349?	660.0	90E 21S?		0.10	Deorbit
2024-237	Falcon 9-409 Stage 2	2024 Dec 8 0728?	3000.0	50E 37S?		0.09	Deorbit
2024-238	Yuanzheng-3 Y5	2024 Dec 12 1130?	2000.0	172E 59S?		0.18	Deorbit
2024-239	Falcon 9-410 Stage 2	2024 Dec 13 2346?	3000.0	106W 16?		0.08	Deorbit
2024-240L	Yuanzheng-2 Y2	2024 Dec 16 1212?	2000.0	84E 50S?		0.09	Deorbit
2024-241	CZ-2D Y99 Stage 2	2024 Dec 16 1946?	4006.0	82W 30S?		0.04	Deorbit
2024-242	Falcon 9-411 Stage 2	2024 Dec 17 0745?	3000.0	30E 50S?		0.29	Deorbit
2024-243	Falcon 9-412 Stage 2	2024 Dec 17 1514?	3000.0	118W 43S?		0.08	Deorbit
2024-245E	Gushenxing-1S Y3 Stage 4	2024 Dec 19 1103?	150.0	120W 45S?		0.03	Deorbit
2024-247	Falcon 9-414 Stage 2	2024 Dec 21 1417?	3500.0	63E 7N?		0.11	Deorbit
2024-249	Falcon 9-415 Stage 2	2024 Dec 23 0753?	3000.0	56E 34S?		0.10	Deorbit
2024-251	Falcon 9-416 Stage 2	2024 Dec 29 0350?	3000.0	105W 17S?		0.08	Deorbit
2024-254	Falcon 9-418 Stage 2	2024 Dec 31 0753?	3000.0	44E 39S?		0.09	Deorbit

Table 18: Vehicles deorbited soon after separation, 2024

COSPAR	Spacecraft	Date	Mass/kg	Location	Coords	Sep Life (d)	Type
2023-143	Soyuz MS-24 BO	2024 Apr 6 0655?	1300.0	35E 25N?		0.00	Deorbit
2023-143	Soyuz MS-24 PAO	2024 Apr 6 0655?	2125.0	35E 25N?		0.00	Deorbit
2023-164	Shenzhou 17 Tuijin Cang	2024 Apr 30 0928?	2000.0	92E 41N?		0.01	Deorbit
2024-109	Starliner SM	2024 Sep 7 0347?	4000.0	125W 11N?		0.02	Deorbit
2024-055	Soyuz MS-25 BO	2024 Sep 23 1137?	1300.0	44E 34N?		0.00	Deorbit
2024-055	Soyuz MS-25 PAO	2024 Sep 23 1137?	2125.0	44E 34N?		0.00	Deorbit
2024-177	SJ-19 deorbit motor	2024 Oct 11 0229?	240.0	100E 41N?		0.00	Deorbit
2024-078	Shenzhou 18 Tuijin Cang	2024 Nov 3 1705?	2000.0	85E 40N?		0.00	Deorbit

6.3 New sun-synchronous satellites in 2024

Table 19 lists satellites launched to sun-synchronous orbit in 2024, ordered by the local time of their orbit's descending node (LTDN, format hhmm or hhmm:ss).

Table 19: SSO satellites launched in 2024, ordered by local time of descending node

No	Piece	Name	Operator	Mission	Orbit	LTDN
1	2024-250A	Resurs-P No. 5	TsSKB-Progress?	IMG	414 x 470 x 97.3	00:39:50
2	2024-025A	PACE	GSFC	EOSCI	674 x 676 x 98.1	00:59:43
3	2024-241A	PIESAT-2 09	PIESAT	IMG-R	519 x 534 x 97.5	01:59:51
4	2024-241B	PIESAT-2 10	PIESAT	IMG-R	519 x 533 x 97.5	01:59:53
5	2024-241C	PIESAT-2 11	PIESAT	IMG-R	514 x 528 x 97.5	01:59:55
6	2024-241D	PIESAT-2 12	PIESAT	IMG-R	513 x 526 x 97.5	01:59:56
7	2024-061A	Resurs-P No. 4	TsSKB-Progress?	IMG	468 x 472 x 97.2	02:17:08
8	2024-248A	StriX-2	Synspective	IMG-R	554 x 579 x 97.6	02:37:50
9	2024-039A	Meteor-M No. 2-4	Rosgidromet/VNIIEM	MET	813 x 821 x 98.6	02:53:36
10	2024-039Q	Pars-1	IRSA	IMG	462 x 477 x 97.4	03:08:12
11	2024-039P	Zorkiy-2M No. 2	Sputniks	IMG	436 x 450 x 97.4	03:13:34
12	2024-039C	SITRO-AIS-30	Sitronics	COM	411 x 423 x 97.4	03:17:19
13	2024-039B	SITRO-AIS-29	Sitronics	COM	409 x 421 x 97.4	03:17:39
14	2024-039D	SITRO-AIS-31	Sitronics	COM	410 x 421 x 97.4	03:17:42
15	2024-039G	SITRO-AIS-32	Sitronics	COM	411 x 422 x 97.4	03:17:43
16	2024-047A	StriX-3	Synspective	IMG-R	530 x 556 x 97.6	03:17:55
17	2024-039E	SITRO-AIS-33	Sitronics	COM	410 x 421 x 97.4	03:17:58
18	2024-039K	SITRO-AIS-49	Sitronics	COM	410 x 422 x 97.4	03:17:58
19	2024-039H	SITRO-AIS-34	Sitronics	COM	410 x 421 x 97.4	03:17:59
20	2024-039F	SITRO-AIS-35	Sitronics	COM	409 x 420 x 97.4	03:18:01
21	2024-039J	SITRO-AIS-36	Sitronics	COM	410 x 420 x 97.4	03:18:10
22	2024-039L	SITRO-AIS-50	Sitronics	COM	408 x 419 x 97.4	03:18:30
23	2024-039M	SITRO-AIS-51	Sitronics	COM	408 x 418 x 97.4	03:18:31
24	2024-039N	SITRO-AIS-52	Sitronics	COM	408 x 418 x 97.4	03:18:43
25	2024-008A	Tianxing-1 02	CAS IOM	SCI	342 x 364 x 95.1	04:26:19
26	2024-034A	ADRAS-J	Astroscale	TECH	545 x 604 x 98.2	04:35:39
27	2024-089A	Shiyao 23 Weixin	CNSA	TECH	597 x 606 x 97.8	05:58:21
28	2024-174C	Jilin-1 SAR-01A	Chang Guang	IMG-R	501 x 520 x 97.4	05:58:53
29	2024-174B	AIRSAT-02	Zhongke Weixing/Jiga	IMG-R	502 x 520 x 97.5	05:59:05
30	2024-174D	Yunyao-1 21	Yunyao yuhang	MET	499 x 518 x 97.4	05:59:12
31	2024-174E	Yunyao-1 22	Yunyao yuhang	MET	500 x 519 x 97.5	05:59:22
32	2024-174A	AIRSAT-01	Zhongke Weixing/Jiga	IMG-R	501 x 519 x 97.5	05:59:22
33	2024-235A	Sentinel-1C	Copernicus/ESA	IMG-R	695 x 697 x 98.2	06:00:02
34	2024-218C	Siwei Gaojing 2-	Siwei	IMG-R	505 x 507 x 97.4	06:00:13
35	2024-208A	Hai Yang 4-01	Yaogan zhongxin/Chin	EOSCI	649 x 651 x 98.0	06:00:14
36	2024-218B	Siwei Gaojing 2-	Siwei	IMG-R	505 x 507 x 97.4	06:00:15
37	2024-070A	WSF-M SV1	USSF SSC	MET	819 x 827 x 98.7	06:00:59
38	2024-058A	Yunhai-3 02	SAST	MET	847 x 848 x 98.8	06:01:03
39	2024-126B	Tianhui-5 2-02	G. Cehui dili	IMG-R	602 x 604 x 97.8	06:01:04
40	2024-126A	Tianhui-5 2-01	G. Cehui dili	IMG-R	602 x 604 x 97.8	06:01:04
41	2024-186A	Gao Fen 12-05	PLA SSF	IMG-R	626 x 629 x 97.9	06:01:24
42	2024-105B	Jiguang Xingzuo	Jiguang Xingtong	TECH	521 x 537 x 97.6	06:04:15
43	2024-105A	Jiguang Xingzuo	Jiguang Xingtong	TECH	520 x 538 x 97.6	06:04:18
44	2024-105E	Yunyao-1 26	Yunyao yuhang	MET	517 x 534 x 97.6	06:04:51
45	2024-105C	Hebei Linxi 1	Yunyao yuhang	MET	517 x 534 x 97.6	06:04:56
46	2024-105D	Zhangjiang Gaoke	Yunyao yuhang	MET	515 x 531 x 97.6	06:05:59
47	2024-114D	Kineis-1D	Kineis	COM	643 x 647 x 98.0	06:41:41
48	2024-114C	Kineis-1C	Kineis	COM	632 x 636 x 98.0	06:44:16
49	2024-114E	Kineis-1E	Kineis	COM	632 x 635 x 98.0	06:44:24
50	2024-114F	Kineis-1A	Kineis	COM	631 x 636 x 98.0	06:44:38
51	2024-114A	Kineis-1B	Kineis	COM	630 x 635 x 98.0	06:44:47
52	2024-189B	Tianping-3B(01)	ZJUNI-SAT	CAL	559 x 569 x 97.6	07:18:39
53	2024-189C	Tianping-3B(02)	ZJUNI-SAT	CAL	559 x 567 x 97.6	07:18:43
54	2024-189A	Tianping-3A(01)	ZJUNI-SAT	CAL	559 x 566 x 97.6	07:18:45
55	2024-077B	ACS3	ARC	TECH	940 x 1025 x 97.5	07:18:57

Table 19: SSO satellites launched in 2024, ordered by local time of descending node

No	Piece	Name	Operator	Mission	Orbit	LTDN
56	2024-032A	CE-SAT-IE	Canon STL	IMG	667 x 670 x 98.1	09:18:10
57	2024-032C	TIRSAT	J-spacesystems	IMG	656 x 664 x 98.1	09:21:24
58	2024-203B	Hebi-4	PIESAT	IMG-R	508 x 531 x 97.5	10:00:09
59	2024-203A	Zhongyuan-2	PIESAT	IMG-R	508 x 531 x 97.5	10:00:12
60	2024-203C	Hebi-5	PIESAT	IMG-R	507 x 531 x 97.5	10:00:24
61	2024-203D	Hebi-6	PIESAT	IMG-R	506 x 531 x 97.5	10:00:28
62	2024-094D	Beijing-3C 04	21AT	IMG	493 x 498 x 97.4	10:22:37
63	2024-094A	Beijing-3C 01	21AT	IMG	495 x 498 x 97.4	10:22:55
64	2024-094B	Beijing-3C 02	21AT	IMG	495 x 498 x 97.5	10:23:14
65	2024-094C	Beijing-3C 03	21AT	IMG	495 x 498 x 97.5	10:23:15
66	2024-024B	DRO-L	SECM	IMG	492 x 511 x 97.4	10:25:42
67	2024-024E	Rongpaio	Guoxing	IMG	486 x 499 x 97.4	10:26:38
68	2024-081A	WorldView Legion	Maxar Intel	IMG	513 x 520 x 97.6	10:27:16
69	2024-081B	WorldView Legion	Maxar Intel	IMG	514 x 516 x 97.6	10:27:40
70	2024-024F	Xingyi Lianxin S	Guoxing	IMG	519 x 544 x 97.4	10:28:03
71	2024-173E	Xingshidai-15	Xianggang Zhongda	IMG	507 x 509 x 97.4	10:29:00
72	2024-085D	Gaofen Shipin We	Harbin	IMG	476 x 492 x 97.4	10:29:11
73	2024-205C	Shiyan 26C	China Aerospace	TECH	514 x 531 x 97.5	10:29:33
74	2024-205D	Jilin-1 GaoFen 0	Chang Guang	IMG	511 x 533 x 97.5	10:29:33
75	2024-205B	Shiyan 26B	China Aerospace	TECH	507 x 528 x 97.5	10:29:36
76	2024-205H	Yun Yao-1 33	Yun Yao yuhang	MET	507 x 527 x 97.5	10:29:38
77	2024-205A	Shiyan 26A	China Aerospace	TECH	512 x 528 x 97.5	10:29:39
78	2024-205K	Yun Yao-1 35	Yun Yao yuhang	MET	506 x 531 x 97.5	10:29:39
79	2024-205E	Tianzhi-2C	Chang Guang/Inst. So	IMG	510 x 527 x 97.5	10:29:40
80	2024-205F	Yun Yao-1 31	Yun Yao yuhang	MET	505 x 524 x 97.5	10:29:43
81	2024-205M	Xiguang 1-04	Zhongke Weixing/Xiop	IMG	507 x 529 x 97.5	10:29:43
82	2024-205G	Yun Yao-1 32	Yun Yao yuhang	MET	508 x 526 x 97.5	10:29:45
83	2024-205J	Yun Yao-1 34	Yun Yao yuhang	MET	509 x 526 x 97.5	10:29:46
84	2024-205P	Juntian-1 03	Tianlian Cekong/Junt	IMG	506 x 528 x 97.5	10:29:47
85	2024-205Q	Aman Zhineng Yao	Sultan Qaboos U/Star	IMG	507 x 530 x 97.5	10:29:50
86	2024-205L	Yun Yao-1 36	Yun Yao yuhang	MET	505 x 525 x 97.5	10:29:50
87	2024-205N	Xiguang 1-05	Xiopm Space	IMG	504 x 525 x 97.5	10:29:52
88	2024-157A	Sentinel-2C	Copernicus/ESA	IMG	788 x 789 x 98.6	10:30:32
89	2024-085C	Kuanfu Guangxue	Harbin	IMG	471 x 490 x 97.4	10:30:50
90	2024-173C	Luojia-4 01	Wuhan daxue	IMG	482 x 496 x 97.4	10:32:11
91	2024-085B	Zhixing 1C	SMART	IMG-R	466 x 481 x 97.4	10:32:39
92	2024-024C	Weihai-1 01	Weihai JTXJ	COM	475 x 476 x 97.4	10:32:45
93	2024-016C	Taijing-4 03	MinoSpace	IMG	494 x 511 x 97.5	10:32:49
94	2024-173A	Jitianxing A-01	Jitian Xingzhou	IMG	469 x 479 x 97.4	10:32:49
95	2024-024J	Jinan Kechuang	Jinan Zhixing	IMG-R	466 x 478 x 97.4	10:32:58
96	2024-173D	Shenqi	Zhangye Xingzuo	IMG-R	462 x 475 x 97.4	10:33:10
97	2024-173F	Xingshidai-21	Guoxing	TECH	462 x 475 x 97.4	10:33:12
98	2024-173B	Fudan-1	Fudan Univ	IMG	459 x 472 x 97.4	10:33:20
99	2024-016D	Taijing-2 04	MinoSpace	IMG	488 x 505 x 97.5	10:33:21
100	2024-173G	Xingshidai-22	Guoxing	TECH	451 x 463 x 97.4	10:34:13
101	2024-173H	Tianyan-15	Tianlian Cekong/Zuiz	IMG	445 x 457 x 97.4	10:34:46
102	2024-024G	Huakai Tianxia	Guoxing	IMG	459 x 471 x 97.4	10:35:09
103	2024-016B	Taijing-3 02	MinoSpace	IMG	482 x 498 x 97.5	10:35:53
104	2024-149CD	AWS	ESA	EOSCI	596 x 601 x 97.7	10:35:53
105	2024-130A	Gao Fen 11-05	Yaogan Zongti	IMG	493 x 495 x 97.5	10:36:00
106	2024-149BX	Sateliot-4	Sateliot	COM	585 x 589 x 97.7	10:36:31
107	2024-149BQ	TORO	TASA	IMG	587 x 589 x 97.7	10:36:41
108	2024-149DM	Hawk 10C	HawkEye 360	SIG	583 x 589 x 97.7	10:36:50
109	2024-149DK	ION SCV Magnific	D-ORBIT	TECH	585 x 591 x 97.7	10:36:57
110	2024-149BU	Sateliot-2	Sateliot	COM	586 x 589 x 97.7	10:37:00
111	2024-149BR	HYP SO-2	NTNU	IMG	585 x 586 x 97.7	10:37:00
112	2024-149BS	Lemu Nge	Lemu	IMG	586 x 589 x 97.7	10:37:04

Table 19: SSO satellites launched in 2024, ordered by local time of descending node

No	Piece	Name	Operator	Mission	Orbit	LTDN
113	2024-149CF	Hawk 10B	HawkEye 360	SIG	581 x 591 x 97.7	10:37:26
114	2024-149BV	Nightjar	TASA	COM	584 x 587 x 97.7	10:37:28
115	2024-149BZ	ICEYE-X43	ICEYE/ICEYE US?	IMG-R	580 x 586 x 97.7	10:37:29
116	2024-149H	Connecta T4.3	Plan-S	COM	501 x 506 x 97.4	10:37:34
117	2024-149E	Connecta T4.1	Plan-S	COM	504 x 506 x 97.4	10:37:42
118	2024-149CL	Sateliot-1	Sateliot	COM	577 x 588 x 97.7	10:37:43
119	2024-149CG	ICEYE-X39	ICEYE/ICEYE US?	IMG-R	578 x 587 x 97.7	10:37:49
120	2024-149DP	Lemur-2 Lloyd	Spire/Myriota	COM/MET-RO	577 x 582 x 97.7	10:37:52
121	2024-149A	Flock 4be-21	Planet	IMG	499 x 503 x 97.4	10:37:53
122	2024-149DL	GNOMES-5	PlanetIQ	COM	579 x 585 x 97.7	10:37:58
123	2024-149B	Waratah Seed WS-	U Sydney	TECH	500 x 502 x 97.4	10:37:59
124	2024-149CA	Hawk 10A	HawkEye 360	SIG	583 x 590 x 97.7	10:38:00
125	2024-149C	PhiSat-2	ESA	TECH	502 x 504 x 97.4	10:38:00
126	2024-149BY	CAKRA-1	Kominfo	COM	579 x 583 x 97.7	10:38:02
127	2024-149CK	ICEYE-X40	ICEYE/ICEYE US?	IMG-R	577 x 586 x 97.7	10:38:03
128	2024-149BW	Lemur-2 Marhisya	Spire	COM/MET-RO	575 x 577 x 97.7	10:38:03
129	2024-149CP	BRO-15	Unseen Labs	SIG	577 x 590 x 97.7	10:38:04
130	2024-149AE	Tyche	UK Space Command	IMG	499 x 507 x 97.4	10:38:12
131	2024-149CS	Kanyini	SmartSat CRC	COM	497 x 501 x 97.4	10:38:14
132	2024-149CE	Capella 15	Capella Space	IMG-R	585 x 594 x 97.7	10:38:16
133	2024-149M	Tomorrow-S1	Tomorrow.io	MET	496 x 500 x 97.4	10:38:17
134	2024-149CM	BRO-14	Unseen Labs	SIG	579 x 591 x 97.7	10:38:17
135	2024-149BT	Lemur-2 Stella	Spire	COM/MET-RO	575 x 577 x 97.7	10:38:17
136	2024-149CC	Amateru 4	QPS Labs	IMG-R	576 x 582 x 97.7	10:38:18
137	2024-149DR	Lemur-2 Sierrini	Spire/Myriota	COM/MET-RO	575 x 580 x 97.7	10:38:21
138	2024-149CQ	UM5Sat-Ribat	UM5R	TECH	573 x 586 x 97.7	10:38:24
139	2024-149CN	Sateliot-3	Sateliot	COM	575 x 588 x 97.7	10:38:25
140	2024-149AQ	LUR-1	AVS	IMG	498 x 506 x 97.4	10:38:28
141	2024-149CJ	ICEYE-X33	Yahsat	IMG-R	575 x 583 x 97.7	10:38:28
142	2024-149X	Flock 4be-20	Planet	IMG	495 x 501 x 97.4	10:38:29
143	2024-149D	Lemur-2 TomatoKe	Spire/Glasgow/Hubble	COM	498 x 500 x 97.4	10:38:35
144	2024-149S	Flock 4be-26	Planet	IMG	494 x 500 x 97.4	10:38:35
145	2024-149Z	Flock 4be-15	Planet	IMG	493 x 500 x 97.4	10:38:37
146	2024-149N	Flock 4be-18	Planet	IMG	493 x 500 x 97.4	10:38:37
147	2024-149DQ	Lemur-2 Squirrel	Spire/Myriota	COM/MET-RO	572 x 579 x 97.7	10:38:41
148	2024-149G	Rock	Array Labs	TECH	497 x 499 x 97.4	10:38:44
149	2024-149F	Lopen	Array Labs	TECH	496 x 499 x 97.4	10:38:44
150	2024-149AN	YAM-7	Loft Orbital	TECH	497 x 503 x 97.4	10:38:47
151	2024-149AC	Flock 4be-22	Planet	IMG	493 x 500 x 97.4	10:38:47
152	2024-149U	Flock 4be-36	Planet	IMG	492 x 500 x 97.4	10:38:47
153	2024-149AL	Flock 4be-33	Planet	IMG	493 x 501 x 97.4	10:38:48
154	2024-149AG	H. Leavitt	URUGUS S.A.	IMG	493 x 501 x 97.4	10:38:49
155	2024-149P	Flock 4be-7	Planet	IMG	495 x 501 x 97.4	10:38:49
156	2024-149AK	Flock 4be-11	Planet	IMG	492 x 500 x 97.4	10:38:49
157	2024-149DS	Sedna-1	AAC ClydeSpace	COM	571 x 581 x 97.7	10:38:50
158	2024-149Y	Flock 4be-23	Planet	IMG	496 x 502 x 97.4	10:38:51
159	2024-149R	Flock 4be-16	Planet	IMG	495 x 499 x 97.4	10:38:51
160	2024-149AF	Flock 4be-32	Planet	IMG	492 x 499 x 97.4	10:38:53
161	2024-149AD	Flock 4be-34	Planet	IMG	495 x 502 x 97.4	10:38:54
162	2024-149AB	Nancy Roman	URUGUS S.A.	IMG	494 x 500 x 97.4	10:39:00
163	2024-149T	Tomorrow-S2	Tomorrow.io	MET	496 x 501 x 97.4	10:39:00
164	2024-149CR	UM5Sat-EOSAT	UM5R	IMG	572 x 585 x 97.7	10:39:01
165	2024-149V	Flock 4be-25	Planet	IMG	495 x 500 x 97.4	10:39:03
166	2024-149AA	Flock 4be-17	Planet	IMG	495 x 500 x 97.4	10:39:03
167	2024-149AJ	K. Von Neumann	URUGUS S.A.	IMG	494 x 500 x 97.4	10:39:03
168	2024-149CY	Hyperfield-1A	Kuva Space	IMG	495 x 505 x 97.4	10:39:05
169	2024-149AP	Flock 4be-24	Planet	IMG	491 x 499 x 97.4	10:39:06

Table 19: SSO satellites launched in 2024, ordered by local time of descending node

No	Piece	Name	Operator	Mission	Orbit	LTDN
170	2024-149BJ	Connecta T4.4	Plan-S	COM	492 x 504 x 97.4	10:39:07
171	2024-149AZ	Flock 4be-8	Planet	IMG	492 x 500 x 97.4	10:39:08
172	2024-149AU	PICO-1B1+	Apogeo Space	COM	491 x 499 x 97.4	10:39:09
173	2024-149AW	Flock 4be-13	Planet	IMG	490 x 498 x 97.4	10:39:10
174	2024-149CX	Flock 4be-3	Planet	IMG	490 x 499 x 97.4	10:39:10
175	2024-149J	QUBE	ZfT	COM	493 x 496 x 97.4	10:39:13
176	2024-149AM	Flock 4be-10	Planet	IMG	494 x 500 x 97.4	10:39:15
177	2024-149L	WREN	C3S	TECH	489 x 498 x 97.4	10:39:17
178	2024-149W	Flock 4be-31	Planet	IMG	493 x 498 x 97.4	10:39:17
179	2024-149DN	Lemur-2 Ahmed-As	Spire/Myriota	COM/MET-RO	568 x 577 x 97.7	10:39:19
180	2024-149AX	Flock 4be-27	Planet	IMG	494 x 502 x 97.4	10:39:21
181	2024-149CW	Flock 4be-12	Planet	IMG	490 x 498 x 97.4	10:39:22
182	2024-149BM	CUAVA-2	U Sydney/U. NSW	TECH	491 x 503 x 97.4	10:39:23
183	2024-149AH	Flock 4be-30	Planet	IMG	493 x 498 x 97.4	10:39:24
184	2024-016A	Taijing-1 03	MinoSpace	IMG	476 x 492 x 97.5	10:39:24
185	2024-149CT	TROOP-F2	NearSpaceLaunch	TECH	485 x 491 x 97.4	10:39:29
186	2024-149BB	Flock 4be-14	Planet	IMG	490 x 499 x 97.4	10:39:29
187	2024-149CU	Flock 4be-35	Planet	IMG	493 x 499 x 97.4	10:39:29
188	2024-149BG	Connecta T4.2	Plan-S	COM	492 x 503 x 97.4	10:39:30
189	2024-149BN	Ernst	Fraunhofer EMI	TECH	490 x 503 x 97.4	10:39:32
190	2024-149BA	Flock 4be-6	Planet	IMG	493 x 500 x 97.4	10:39:33
191	2024-149CB	Umbra-09	Umbra Labs	IMG-R	566 x 571 x 97.7	10:39:36
192	2024-149CZ	Flock 4be-19	Planet	IMG	489 x 497 x 97.4	10:39:37
193	2024-149AY	Flock 4be-9	Planet	IMG	492 x 498 x 97.4	10:39:38
194	2024-149CV	Flock 4be-5	Planet	IMG	493 x 499 x 97.4	10:39:39
195	2024-149BD	Flock 4be-28	Planet	IMG	488 x 498 x 97.4	10:39:40
196	2024-149CH	Umbra-10	Umbra Labs	IMG-R	567 x 573 x 97.7	10:39:41
197	2024-149DB	PTD-4	ARC/Terran Orbital	TECH	568 x 571 x 97.7	10:39:43
198	2024-149AT	Flock 4be-29	Planet	IMG	491 x 497 x 97.4	10:39:48
199	2024-149BK	ORESAT0.5	Portland State	TECH	485 x 497 x 97.4	10:39:50
200	2024-149BC	Flock 4be-1	Planet	IMG	489 x 497 x 97.4	10:39:54
201	2024-149K	Satoro-T2	Satoro	TECH	486 x 489 x 97.4	10:39:57
202	2024-016F	Taijing-2 02	MinoSpace	IMG	466 x 480 x 97.5	10:39:58
203	2024-149AV	Flock 4be-2	Planet	IMG	490 x 496 x 97.4	10:40:03
204	2024-149AS	EagleEye	CreoTech	IMG	484 x 491 x 97.4	10:40:03
205	2024-149BL	Aethero	Aethero Space	IMG	486 x 498 x 97.4	10:40:14
206	2024-072A	Siwei Gaojing 3-	Siwei	IMG	489 x 492 x 97.5	10:40:23
207	2024-149BE	Iperdrone.0	ASI	TECH	482 x 491 x 97.4	10:40:36
208	2024-149DA	PICO-1B1+	Apogeo Space	COM	555 x 558 x 97.7	10:41:01
209	2024-149BF	GNA-3	FOI	TECH	480 x 489 x 97.4	10:41:02
210	2024-149DG	PICO-1B1+	Apogeo Space	COM	555 x 558 x 97.7	10:41:06
211	2024-149DE	PICO-1B1+	Apogeo Space	COM	555 x 557 x 97.7	10:41:07
212	2024-149DC	PICO-1B1+	Apogeo Space	COM	555 x 557 x 97.7	10:41:08
213	2024-095A	Wuhan-1	Yuncheng Weixing/Nan	IMG	529 x 532 x 97.6	10:41:13
214	2024-149DF	PICO-1B1+	Apogeo Space	COM	555 x 557 x 97.7	10:41:15
215	2024-149DD	PICO-1B1+	Apogeo Space	COM	555 x 556 x 97.7	10:41:16
216	2024-149BH	PTD-R	ARC/Terran Orbital	TECH	476 x 485 x 97.4	10:41:16
217	2024-085A	Haiwangxing-01	Zhihuo Kongjian	IMG-R	414 x 420 x 97.4	10:41:22
218	2024-024A	NEXSAT-1	EgSA	IMG	425 x 432 x 97.4	10:41:26
219	2024-149DJ	PICO-1B1+	Apogeo Space	COM	552 x 556 x 97.7	10:41:40
220	2024-024H	Yantai-2	Luhai Xinxi/Dongfang	IMG	428 x 438 x 97.4	10:41:45
221	2024-149DH	PICO-1B1+	Apogeo Space	COM	549 x 554 x 97.7	10:41:48
222	2024-149BP	GaindeSat	SENSAT/Montpellier	TECH	472 x 483 x 97.4	10:42:16
223	2024-024D	Weihai-1 02	Weihai JTXJ	COM	436 x 445 x 97.4	10:42:54
224	2024-149Q	Flock 4be-4	Planet	IMG	448 x 450 x 97.4	10:44:19
225	2024-149AR	Tanager 1	Planet	EOSCI	437 x 451 x 97.4	10:44:38
226	2024-095C	Xinghuan-Nanxind	Xinghuan Keji/Tianli	IMG	492 x 503 x 97.6	10:46:23

Table 19: SSO satellites launched in 2024, ordered by local time of descending node

No	Piece	Name	Operator	Mission	Orbit	LTDN
227	2024-095D	Qincheng-1	Ling Zhong	TECH	486 x 496 x 97.6	10:47:38
228	2024-077A	Neonsat-1	KAIST	IMG	483 x 502 x 97.4	10:48:51
229	2024-095B	Chutian xingzuo	CASIC	IMG	370 x 380 x 97.6	11:05:57
230	2024-110C	Naxing 3B	Tsinghua	IMG	571 x 589 x 97.6	11:08:51
231	2024-169B	Jilin-1 Kuanfu-0	Chang Guang	IMG	529 x 537 x 97.6	11:21:47
232	2024-169D	Jilin-1 Kuanfu-0	Chang Guang	IMG	529 x 536 x 97.6	11:22:01
233	2024-169A	Jilin-1 Kuanfu-0	Chang Guang	IMG	527 x 538 x 97.6	11:22:13
234	2024-169C	Jilin-1 Kuanfu-0	Chang Guang	IMG	530 x 536 x 97.6	11:22:17
235	2024-169F	Jilin-1 Kuanfu-0	Chang Guang	IMG	525 x 540 x 97.6	11:22:38
236	2024-169E	Jilin-1 Kuanfu-0	Chang Guang	IMG	528 x 536 x 97.6	11:22:42
237	2024-110B	Naxing 3A	Tsinghua	IMG	521 x 536 x 97.6	11:22:56
238	2024-110A	TEE-01B	Mumei Xingkong	IMG	519 x 532 x 97.6	11:23:13
239	2024-172A	Kineis-3C	Kineis	COM	652 x 655 x 98.0	11:26:25
240	2024-172B	Kineis-3D	Kineis	COM	651 x 655 x 98.0	11:26:30
241	2024-172C	Kineis-3E	Kineis	COM	652 x 654 x 98.0	11:26:39
242	2024-172D	Kineis-3A	Kineis	COM	651 x 654 x 98.0	11:26:49
243	2024-172E	Kineis-3B	Kineis	COM	652 x 654 x 98.0	11:26:58
244	2024-123A	Daichi-4	JAXA	IMG	629 x 631 x 97.9	11:59:38
245	2024-092A	Kosmos-2576	TS VS RF	IMG	460 x 473 x 97.3	13:02:04
246	2024-092H	Rassvet-2 No. 2	Byuro 1440	COM	778 x 795 x 98.6	13:05:34
247	2024-092J	Rassvet-2 No. 3	Byuro 1440	COM	778 x 795 x 98.6	13:05:34
248	2024-092G	Rassvet-2 No. 1	Byuro 1440	COM	778 x 795 x 98.6	13:05:34
249	2024-092B	Zorkiy-2M No. 4	Sputniks	IMG	512 x 527 x 97.6	13:07:33
250	2024-092K	SITRO-AIS-56	Sitronics	COM	510 x 525 x 97.6	13:07:50
251	2024-092D	SITRO-AIS-53	Sitronics	COM	510 x 525 x 97.6	13:07:57
252	2024-092E	SITRO-AIS-54	Sitronics	COM	510 x 525 x 97.6	13:07:58
253	2024-092F	SITRO-AIS-55	Sitronics	COM	509 x 525 x 97.6	13:08:02
254	2024-092C	Zorkiy-2M No. 6	Sputniks	IMG	511 x 526 x 97.6	13:09:26
255	2024-153A	Yun Yao-1 15	Yun Yao yuhang	MET	512 x 532 x 97.6	13:33:27
256	2024-153B	Yun Yao-1 16	Yun Yao yuhang	MET	509 x 529 x 97.6	13:33:52
257	2024-153C	Yun Yao-1 17	Yun Yao yuhang	MET	507 x 527 x 97.6	13:34:03
258	2024-153F	Tianfu Gaofen 2	Xiamen Tianwei	IMG	504 x 525 x 97.6	13:34:12
259	2024-153E	Suxing-1 01	Taizhou Xingkong	IMG	505 x 524 x 97.6	13:34:24
260	2024-153D	Jitianxing A-03	Jitian Xingzhou	IMG	505 x 525 x 97.6	13:34:31
261	2024-010A	JSE kougaku 8 go	CSICE	IMG	479 x 485 x 97.3	13:38:42
262	2024-043A	HORACIO	Satlantis	IMG	576 x 592 x 97.8	13:48:52
263	2024-043D	MethaneSat	MethaneSAT	EOSCI	575 x 588 x 97.8	13:49:11
264	2024-043J	RROCI-2	USSF SSC/Orion Space	MET	575 x 586 x 97.8	13:50:00
265	2024-043K	BRO-13	Unseen Labs	SIG	579 x 591 x 97.8	13:50:08
266	2024-043L	BRO-12	Unseen Labs	SIG	578 x 589 x 97.8	13:50:21
267	2024-043G	Pony Express-2 S	Terran Orbital	TECH	571 x 581 x 97.8	13:50:38
268	2024-043H	Pony Express-2 S	Terran Orbital	TECH	571 x 582 x 97.8	13:50:41
269	2024-043B	MuSat-2	Muon Space	IMG	566 x 578 x 97.8	13:51:05
270	2024-043AB	Lynk Tower 6	Lynk	COM	493 x 509 x 97.5	13:52:24
271	2024-043AL	LizzieSat-1	Sidus Space	TECH	494 x 509 x 97.5	13:53:01
272	2024-043AC	VSP Rose	Aerospacelab	IMG	492 x 507 x 97.5	13:53:02
273	2024-043Z	Lynk Tower 5	Lynk	COM	491 x 507 x 97.5	13:53:09
274	2024-043E	ICEYE-X37	ICEYE US	IMG-R	562 x 574 x 97.8	13:53:49
275	2024-043AQ	Riri	Aerospacelab	SIG	491 x 506 x 97.5	13:53:57
276	2024-043AR	Loulou	Aerospacelab	SIG	491 x 506 x 97.5	13:53:59
277	2024-043AK	MESON-1	Atomos	TECH	490 x 505 x 97.5	13:54:09
278	2024-043AP	Fifi	Aerospacelab	SIG	491 x 507 x 97.5	13:54:10
279	2024-043AG	OrbAstro-TR2	OrbAstro	TECH	489 x 504 x 97.5	13:54:18
280	2024-043F	ICEYE-X36	ICEYE US	IMG-R	561 x 566 x 97.8	13:54:37
281	2024-043AE	YAM-6	Loft Orbital	TECH	485 x 499 x 97.5	13:54:46
282	2024-043V	OREUM	CONTEC	IMG	486 x 504 x 97.5	13:54:48
283	2024-043AD	Optimus-2	Space Machines	TECH	486 x 501 x 97.5	13:55:39

Table 19: SSO satellites launched in 2024, ordered by local time of descending node

No	Piece	Name	Operator	Mission	Orbit	LTDN
284	2024-043AF	Jackal X-1L-001	True Anomaly	TECH	480 x 493 x 97.5	13:56:16
285	2024-043AJ	GHOST-5	Orbital Sidekick	IMG	480 x 494 x 97.5	13:56:28
286	2024-043AM	GHOST-4	Orbital Sidekick	IMG	479 x 494 x 97.5	13:56:58
287	2024-043AN	Jackal X-1L-002	True Anomaly	TECH	478 x 492 x 97.5	13:56:59
288	2024-043Q	SONATE-2	U Wurzburg	TECH	474 x 490 x 97.5	13:57:04
289	2024-043AA	Maria Mitchell	URUGUS S.A.	IMG	474 x 489 x 97.5	13:57:52
290	2024-043AH	Aries 1	Apex Space	TECH	473 x 486 x 97.5	13:57:54
291	2024-043N	IRIS-F1	Satoro/NCKU	TECH	461 x 473 x 97.5	13:58:28
292	2024-101A	EarthCARE	ESA/JAXA	EOSCI	394 x 396 x 97.0	13:59:03
293	2024-043BA	Lemur-2 JohnnyTr	Spire/Glasgow/Hubble	COM	471 x 481 x 97.5	13:59:14
294	2024-043C	ICEYE-X38	ICEYE	IMG-R	552 x 557 x 97.8	13:59:27
295	2024-043BB	Lemur-2 Rocinant	Spire/Glasgow/Hubble	COM	471 x 482 x 97.5	13:59:34
296	2024-043P	Lace B	NIWC Pacific	TECH	459 x 474 x 97.5	14:00:01
297	2024-043Y	TIGER-8	OQ Tech	COM	463 x 475 x 97.5	14:00:18
298	2024-043R	PYXIS	AXELSPACE	IMG	458 x 472 x 97.5	14:00:31
299	2024-043BC	Hammer	Open Cosmos	IMG	472 x 484 x 97.5	14:00:36
300	2024-043AU	Sentry	Quantum Space	TECH	463 x 474 x 97.5	14:00:49
301	2024-043AW	ONDOSAT-OWL-2	ONDO Space	COM	466 x 478 x 97.5	14:00:53
302	2024-043S	Veery-0E	Care Weather	MET	452 x 467 x 97.5	14:02:02
303	2024-043AV	TIGER-7	OQ Tech	COM	458 x 468 x 97.5	14:02:17
304	2024-043X	PY4 SV4	ARC	TECH	436 x 447 x 97.5	14:04:49
305	2024-043W	Lace A	NIWC Pacific	TECH	429 x 440 x 97.5	14:06:58
306	2024-043AZ	AEROS/MH-1	CEIIA/Edisoft	IMG	414 x 424 x 97.5	14:11:47
307	2024-043AX	PY4 SV2	ARC	TECH	409 x 418 x 97.5	14:12:51
308	2024-108A	PREFIRE 1	JPL	EOSCI	509 x 526 x 97.5	15:31:28
309	2024-219A	Kineis-5C	Kineis	COM	637 x 638 x 97.9	16:18:04
310	2024-219B	Kineis-5D	Kineis	COM	637 x 638 x 97.9	16:18:06
311	2024-219C	Kineis-5E	Kineis	COM	637 x 637 x 97.9	16:18:06
312	2024-219D	Kineis-5A	Kineis	COM	635 x 637 x 97.9	16:18:11
313	2024-219E	Kineis-5B	Kineis	COM	634 x 637 x 97.9	16:18:13
314	2024-004B	Tianmu 1-16	Hangtian Tianmu	MET	501 x 515 x 97.5	17:35:25
315	2024-004C	Tianmu 1-17	Hangtian Tianmu	MET	503 x 513 x 97.5	17:36:22
316	2024-004A	Tianmu 1-15	Hangtian Tianmu	MET	502 x 514 x 97.5	17:36:38
317	2024-004D	Tianmu 1-18	Hangtian Tianmu	MET	503 x 513 x 97.5	17:36:50
318	2024-022A	Lemur-2 Nimbus20	Spire/NorthStar	EW	492 x 509 x 97.5	18:55:42
319	2024-022B	Lemur-2 Valhalla	Spire/NorthStar	EW	491 x 509 x 97.5	18:55:56
320	2024-022E	Lemur-2 Cael	Spire/NorthStar	EW	490 x 506 x 97.5	18:57:02
321	2024-022D	Lemur-2 Oba-Ni-J	Spire/NorthStar	EW	478 x 491 x 97.5	18:59:46
322	2024-223A	Kondor-FKA No. 2	NPO Mash	IMG-R	506 x 509 x 97.4	19:05:25
323	2024-125F	TechEdSat-11	ARC/SJSU	TECH	469 x 502 x 97.3	19:36:28
324	2024-125D	R5-S4	NASA JSC	TECH	471 x 503 x 97.3	19:36:31
325	2024-125E	R5-S2-2.0	NASA JSC	TECH	469 x 502 x 97.3	19:36:37
326	2024-125G	MESAT-1	U Maine	SCI	466 x 498 x 97.3	19:36:49
327	2024-125A	SOC-i	UWash	TECH	465 x 497 x 97.3	19:37:05
328	2024-125C	Serenity	Teachers in Space	COM	459 x 485 x 97.3	19:39:05
329	2024-125J	CATSAT	U. Arizona	TECH	458 x 521 x 97.3	19:39:21
330	2024-125B	KUbesat-1	U. Kansas	SCI	437 x 458 x 97.3	19:42:47
331	2024-099A	PREFIRE 2	JPL	EOSCI	511 x 528 x 97.5	19:59:53
332	2024-199E	SITRO-AIS-21	Sitronics	COM	582 x 603 x 97.4	20:28:52
333	2024-199F	SITRO-AIS-22	Sitronics	COM	581 x 603 x 97.4	20:28:53
334	2024-199G	SITRO-AIS-24	Sitronics	COM	581 x 602 x 97.4	20:28:54
335	2024-199H	SITRO-AIS-23	Sitronics	COM	581 x 602 x 97.4	20:28:54
336	2024-199D	SITRO-AIS-15	Sitronics	COM	581 x 593 x 97.4	20:29:23
337	2024-199C	SITRO-AIS-16	Sitronics	COM	581 x 594 x 97.4	20:29:25
338	2024-199T	SITRO-AIS-14	Sitronics	COM	581 x 593 x 97.4	20:29:28
339	2024-199J	SITRO-AIS-13	Sitronics	COM	581 x 593 x 97.4	20:29:29
340	2024-199Z	SITRO-AIS-20	Sitronics	COM	581 x 592 x 97.4	20:29:30

Table 19: SSO satellites launched in 2024, ordered by local time of descending node

No	Piece	Name	Operator	Mission	Orbit	LTDN
341	2024-199AA	SITRO-AIS-19	Sitronics	COM	581 x 592 x 97.4	20:29:31
342	2024-199BH	SITRO-AIS-18	Sitronics	COM	581 x 592 x 97.4	20:29:31
343	2024-199BG	SITRO-AIS-17	Sitronics	COM	581 x 592 x 97.4	20:29:31
344	2024-199BE	YUZGU-60	SWSU	TECH	479 x 505 x 97.4	20:39:59
345	2024-199AY	Nokhcho	Chechen State U	COM	479 x 505 x 97.4	20:39:59
346	2024-199AW	Al'tair	MGU	SCI	478 x 504 x 97.4	20:40:03
347	2024-199AU	Hodhod	Omid-e-Faza/ISRC	COM	478 x 503 x 97.4	20:40:05
348	2024-199AS	MTUSI-1	MTUSI	TECH	478 x 503 x 97.4	20:40:05
349	2024-199BD	SITRO-AIS-38	Sitronics	COM	476 x 500 x 97.4	20:40:06
350	2024-199AV	SITRO-AIS-39	Sitronics	COM	476 x 500 x 97.4	20:40:07
351	2024-199BF	SITRO-AIS-45	Sitronics	COM	476 x 500 x 97.4	20:40:08
352	2024-199AX	SITRO-AIS-37	Sitronics	COM	476 x 500 x 97.4	20:40:08
353	2024-199BB	SamSat-Ion 2	SNIU	TECH	475 x 502 x 97.4	20:40:09
354	2024-199BC	RTU MIREA1	MIREA-RTU	TECH	475 x 502 x 97.4	20:40:09
355	2024-199AT	SITRO-AIS-40	Sitronics	COM	476 x 499 x 97.4	20:40:10
356	2024-199AR	SITRO-AIS-46	Sitronics	COM	476 x 499 x 97.4	20:40:10
357	2024-199AQ	SITRO-AIS-47	Sitronics	COM	476 x 499 x 97.4	20:40:10
358	2024-199AN	SITRO-AIS-48	Sitronics	COM	476 x 499 x 97.4	20:40:10
359	2024-199AZ	TUSUR GO	TUSUR	TECH	474 x 501 x 97.4	20:40:11
360	2024-199S	CSTP-2.1	STTs	TECH	480 x 499 x 97.4	20:40:18
361	2024-199BA	ZIMSAT-2	ZINGSA/SWSU	IMG	471 x 499 x 97.4	20:40:18
362	2024-199AP	Hyperview-1G	SNIU	IMG	474 x 499 x 97.4	20:40:18
363	2024-199R	Druzhba-ATURK	AmGU/Harbin	COM	476 x 498 x 97.4	20:40:23
364	2024-199U	Khors No. 3	MGU Bauman	MET-RO	476 x 496 x 97.4	20:40:29
365	2024-199V	Khors No. 4	MGU Bauman	MET-RO	475 x 495 x 97.4	20:40:32
366	2024-199M	Kolibri-S	SNIU	IMG	476 x 497 x 97.4	20:40:35
367	2024-199L	CSTP-2.11	STTs	TECH	475 x 494 x 97.4	20:40:37
368	2024-199AC	CSTP-2.2	STTs	TECH	476 x 493 x 97.4	20:40:39
369	2024-199K	Polytech Univers	Polytech	SCI	475 x 496 x 97.4	20:40:39
370	2024-199P	SITRO-AIS-44	Sitronics	COM	475 x 493 x 97.4	20:40:39
371	2024-199AB	SITRO-AIS-41	Sitronics	COM	475 x 493 x 97.4	20:40:40
372	2024-199W	SITRO-AIS-43	Sitronics	COM	475 x 493 x 97.4	20:40:40
373	2024-199X	SITRO-AIS-42	Sitronics	COM	474 x 493 x 97.4	20:40:41
374	2024-199Q	Norbi-3	Novosibirsk SU	SCI	475 x 495 x 97.4	20:40:41
375	2024-199AE	SIT-HSE	SPbGUT	TECH	475 x 492 x 97.4	20:40:42
376	2024-199AF	SIT-2086	GBOU Shkola 2086/Sit	TECH	475 x 492 x 97.4	20:40:44
377	2024-199Y	Gorizont	BGTU	TECH	473 x 494 x 97.4	20:40:45
378	2024-199AK	Polytech Univers	Polytech	SCI	477 x 491 x 97.4	20:40:47
379	2024-199AD	ArcticSat-1	NArFU	SCI/COM	472 x 493 x 97.4	20:40:50
380	2024-199AL	Kowsar	Omid-e-Faza/ISRC	IMG	476 x 491 x 97.4	20:40:50
381	2024-199AH	Ruzaevka-390		TECH	470 x 491 x 97.4	20:40:58
382	2024-199AG	Mordovia-IOT		TECH	470 x 490 x 97.4	20:41:00
383	2024-199AJ	Vladivostok-1	STTs	TECH	468 x 489 x 97.4	20:41:05
384	2024-039S	SITRO-AIS-26	Sitronics	COM	494 x 722 x 95.4	20:41:20
385	2024-039R	SITRO-AIS-25	Sitronics	COM	494 x 721 x 95.4	20:41:25
386	2024-039T	SITRO-AIS-27	Sitronics	COM	494 x 720 x 95.4	20:41:34
387	2024-039U	SITRO-AIS-28	Sitronics	COM	494 x 720 x 95.4	20:41:49
388	2024-199AM	Vizard-ion	MGU-Standart	TECH	437 x 464 x 97.4	20:41:58
389	2024-199B	Ionosfera-M No.	VNIIEM	SCI	815 x 818 x 98.8	20:46:23
390	2024-199A	Ionosfera-M No.	VNIIEM	SCI	816 x 816 x 98.8	20:46:43
391	2024-026A	Kosmos-2575	MO RF	IMG	302 x 306 x 96.7	22:37:54
392	2024-166B	Kosmos-2578	MO RF	IMG	288 x 300 x 96.8	22:41:52
393	2024-166A	Kosmos-2577	MO RF	IMG	274 x 286 x 96.8	22:42:11
394	2024-201B	Protosat-1	E-Space Rwanda	COM	617 x 631 x 97.9	23:17:33
395	2024-197A	Kosmos-2579	VVKO VKS	IMG	492 x 505 x 97.6	23:39:05

6.4 New geosynchronous satellites in 2024

Table 20 lists geosynchronous satellites launched or reaching GEO for the first time during 2024 (some from the immediately preceding December are also included, so there is a little overlap with last year’s report). The locations given are their positions at the end of the year.

Table 20: Geostationary satellites launched in 2024, ordered by longitude

Piece	Name	Operator	Location	Mission
2024-119A	GOES 19	NOAA	89.43W	-
2024-181A	HG-03	CNSA	77.13W	-
2023-093B	Syracuse 4B	DGA	6.51W	Communications
2024-059A	EUTELSAT 36D	EutelsatSA	35.83E	Communications
2024-104A	Paksat MM1	SUPARCO	38.18E	Communications
2024-127A	Turksat 6A	Turksat	42.08E	Communications
2024-003A	Ovzon 3	Ovzon	59.69E	Communications
2024-067A	USA 353	NRO	100.04E	Sigint
2024-122A	Zhongxing 3A	PLA SSF	101.60E	-
2024-035A	Merah Putih 2	Telkom	112.95E	Communications
2024-151A	Zhongxing 4A	PLA SSF	118.19E	-
2024-037A	Tongxin Jishu Shiyuan 11	PLA GAD/CAST	120.06E	Sigint
2023-197A	Yaogan 41	PLA GAD/CAST	123.18E	Imaging
2023-005A	Apstar 6E	APT Shenzhen	133.99E	Communications
2024-135A	HG-02	CNSA	153.06E	-
2024-069A	GMM KA	Khrunichev	Drift orbit	Technology
2024-115A	Astra 1P	SES	Drift orbit	-

6.5 Retirements in the GEO belt

The GEO graveyard is taken to be 300 km or more above GEO (GEO is at 35786 km height.) Counts of objects in various regimes are shown below. The category ‘Below GPZ’ is defined to be objects 300 km or more below GEO. That is to say, ‘Graveyard’ is 36086 km or above, ‘Below GPZ’ is 35486 km or below. Note: in last year’s report the labels for ‘Graveyard’ and ‘Below GPZ’ were inadvertently switched.

Table 21: GEO Population

	Active payloads	Dead payloads	Debris
Below GPZ	2	19	92
GPZ+-100	587	377	279
Graveyard	17	363	109
Total	606	759	480

The recommended GEO graveyard orbit begins at an altitude of 36086 km, 300 km above GEO. The table gives perigee and apogee altitude minus the GEO height of 35786 km, and is ordered by perigee.

During 2024, 13 satellites were retired from GEO; however 3 failed to reach the recommended 300 km ‘graveyard’ clearance above GEO.

GEO and the GEO Graveyard

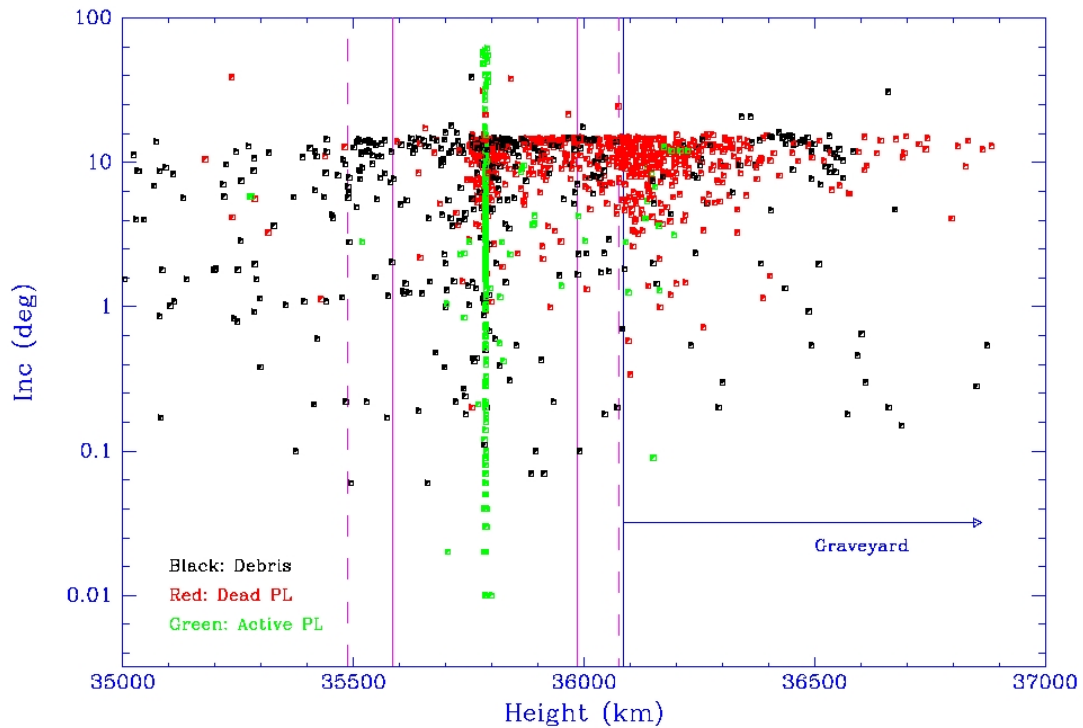


Figure 8: The figure shows log of orbital inclination vs orbital height for objects in the GEO region as of Jan 2021. Eccentricities are neglected. Active satellites (green), dead payloads (red) and debris (black) are indicated. The solid magenta lines are the GEO Protected Zone (GPZ = GEO+200 km). Dashed magenta lines are GPZ +/- 100 km (GEO +/- 300 km) used in the results table. Blue line (GEO+300 km) indicates start of the GEO graveyard.

Table 22: GEO retirements

ID	Satellite	Retired	Height above GEO in Jan 2025	Notes Notes
2016-053B	Intelsat IS-33e	2024 Oct 19 0430	-128 x 71	
2010-065A	Hylas	2024 Nov 4	-2 x 3	
2024-069A	GMM KA	2024 Apr 11 1600?	260 x 686	
2007-036A	Spaceway 3	2024 Jan 25	310 x 330	
2012-002A	Feng Yun 2F	2024 Aug 28	311 x 330	
2000-076A	Anik F1	2024 Nov 25	322 x 424	
2002-019A	NSS 7	2024 Jan 31?	322 x 352	
2008-066A	Feng Yun 2E	2024 Mar 14	324 x 327	
2008-063A	Ciel 2	2024 Feb 1	330 x 376	
2005-046B	Spaceway 2	2024 Nov 24	335 x 352	
2001-025A	Astra 2C	2024 Jun 3	335 x 366	
2006-020A	EUTELSAT 113 WEST A	2024 Mar 31	360 x 396	
2008-034B	Badr 6	2024 Nov 22	411 x 455	
Newly cataloged near-GEO debris				
2024-067B	Delta 389	2024 Apr 9	314 x 414	
2024-134D	Centaur AV-101	2024 Jul 30	14 x 314	
2016-053E	deb IS-33e	2024 Oct 19	-124 x 367	
2016-053F	deb IS-33e	2024 Oct 19	243 x 1056	
2016-053G	deb IS-33e	2024 Oct 19	-965 x 360	
2016-053H	deb IS-33e	2024 Oct 19	-997 x 21	
2016-053J	deb IS-33e	2024 Oct 19	-363 x 73	
2016-053K	deb IS-33e	2024 Oct 19	-624 x 108	
2016-053L	deb IS-33e	2024 Oct 19	-169 x 42	
2016-053M	deb IS-33e	2024 Oct 19	-436 x 8	
2016-053N	deb IS-33e	2024 Oct 19	-288 x 110	
2016-053P	deb IS-33e	2024 Oct 19	-787 x 44	
2016-053Q	deb IS-33e	2024 Oct 19	-179 x 93	
2016-053R	deb IS-33e	2024 Oct 19	-194 x 766	
2016-053S	deb IS-33e	2024 Oct 19	-88 x 151	
2016-053T	deb IS-33e	2024 Oct 19	-228 x 181	
2016-053U	deb IS-33e	2024 Oct 19	-108 x 105	
2016-053V	deb IS-33e	2024 Oct 19	-144 x 50	
2016-053W	deb IS-33e	2024 Oct 19	-1487 x 191	
2016-053X	deb IS-33e	2024 Oct 19	-2406 x 79	

6.6 Debris events

There were 5 new breakups during 2024: These included the Russian Resurs-P1 remote sensing satellite, a Centaur upper stage in geotransfer orbit, a Chang Zheng 6 upper stage and the DMSP F-14 satellite in LEO and the Intelsat 33e satellite in GEO.

The table indicates the number of objects cataloged so far from each, but note that often more objects are cataloged in later years following an event.

Table 23: Breakups and debris events 2024

2024 Jun 26 1632	S39186	Resurs-P1	18	350 x 363 x 98.08	Unknown
2024 Aug 6 1715	S60397	CZ-6A Y21	664	800 x 800 x 89.00	Residual prop
2024 Sep 6 0521	S43227	Centaur AV-077	0	7634 x 34953 x 9.40	Unknown
2024 Oct 19 0430	S41748	Intelsat IS-33e	18	35774 x 35798 x 0.02	Unknown
2024 Dec 19 0210	S24753	DMSP F-14	0	831 x 843 x 98.84	Battery explosion?

In addition, more fragments were cataloged from the earlier breakups. See the debris catalog [16] at

<https://planet4589.org/space/debris/debriscat/debris.html>

7 Acknowledgements

The bulk of the data presented here are extracted from my satellite and launch database, generated from open source media reports combined with analysis of US Space-Track orbital elements. The analysis has benefited from the opinions of many colleagues.

The author is an employee of the Smithsonian Institution, but the work reported here was performed independently and does not represent the views of the Smithsonian.

References

- [1] J. McDowell. *Space Activities in 2014*, 2015. URL <https://planet4589.org/space/papers/space14.pdf>.
- [2] J. McDowell. *General Catalog of Artificial Space Objects (GCAT)*, 2022. URL <https://planet4589.org/space/gcat>.
- [3] 18th Space Defence Squadron and SAIC. *Space-Track.Org*, 2022. URL <https://space-track.org>.
- [4] Kelso, T.S. *Celestrak*, 2022. URL <http://celestrak.org>.
- [5] McCants, M. *Mike McCants' Satellite Tracking TLE ZIP Files*, 2022. URL <https://www.mmccants.org/tles/index.html>.
- [6] Office of Outer Space Affairs. *United Nations Register of Objects Launched into Outer Space*, 2022. URL <https://www.unoosa.org/oosa/en/spaceobjectregister/index.html>.
- [7] Office of Outer Space Affairs. ST/SG/SER.E/1070, *Information furnished in conformity with the Convention on Registration of Objects Launched into Outer Space*. Technical report, United Nations, Sep 2022. URL <https://www.unoosa.org/oosa/en/osoindex/data/documents/nz/st/stsgser.e1070.html>.
- [8] J. McDowell. *Launch Designations and Piece Designations*, 2022. URL <https://planet4589.org/space/gcat/web/intro/desig.html>.
- [9] J. McDowell. *Uncataloged ('U') Launches*, 2022. URL <https://planet4589.org/space/gcat/web/intro/u.html>.
- [10] J. B. Parham, B. Walsh, and J. L. Semeter. ANDESITE: Measuring Small Scale Aurora with a CubeSat Swarm. In *AGU Fall Meeting Abstracts*, volume 2017, pages A34E–05, December 2017.
- [11] Keeter, W. *ISS On-Orbit status Report*, 2023. URL <https://blogs.nasa.gov/stationreport/>.
- [12] NASASpaceflight.com Forum. *Tiangong - Chinese Space Station*, 2022. URL <https://forum.nasaspaceflight.com/index.php?topic=26876>.
- [13] Jones, A. *China launches final module to complete Tiangong space station*, 2022. URL <https://www.space.com/china-launches-mengtian-module-tiangong-space-station>.
- [14] NASASpaceflight.com Forum. *Mengtian Module - CZ-5B - Wenchang*, 2022. URL <https://forum.nasaspaceflight.com/index.php?topic=56208>.
- [15] NASASpaceflight.com Forum. *Wentian Module - CZ-5B - WSLC*, 2022. URL <https://forum.nasaspaceflight.com/index.php?topic=54817>.
- [16] J. McDowell. *Catalog of Space Debris Clouds*, 2022. URL <https://planet4589.org/space/debris/debriscat/debris.h>

Appendix 1: 2024 Orbital Launch Attempts

LAUNCH ID	Launch date UTC	Launch vehicle	LV Flight ID	Site	Agency
2024-001	2024 Jan 1 0340:00	PSLV-DL	PSLV-C58	SHAR FLP	ISRO
2024-002	2024 Jan 3 0344:20	Falcon 9	287/B1082.1	VSFBS SLC4E	SPX
2024-003	2024 Jan 3 2304	Falcon 9	288/B1076.10	CC LC40	SPX
2024-004	2024 Jan 5 1120	Kuaizhou-1A	Y28	JQ LC43/95A	EXPACE
2024-005	2024 Jan 7 2235:40	Falcon 9	289/B1067.16	CC LC40	SPX
2024-006	2024 Jan 8 0718	Vulcan Centaur VC2S	V-001	CC SLC41	ULAD
2024-007	2024 Jan 9 0703	Chang Zheng 2C	Y30	XSC LC3	CALT
2024-008	2024 Jan 11 0352	Kuaizhou-1A	Y24	JQ LC43/95A	EXPACE
2024-009	2024 Jan 11 0530	Yinli-1	Y1	DFHT YJ LP1	DFK
2024-010	2024 Jan 12 0444:26	H-IIA 202	H-IIA-48	TNSC Y	MHI
2024-011	2024 Jan 14 0859:30	Falcon 9	290/B1061.18	VSFBS SLC4E	SPX
2024-012	2024 Jan 15 0152:00	Falcon 9	291/B1073.12	CC LC40	SPX
2024-013	2024 Jan 17 1427:30	Chang Zheng 7	Y8	WEN LC201	CALT
2024-014	2024 Jan 18 2149:11	Falcon 9	292/B1080.5	KSC LC39A	SPX
2024-015	2024 Jan 20 0628:34	Qaem-100	FTM-B2	SHAHR	IRGC
2024-016	2024 Jan 23 0403	Lijian-1	Y3	JQ LC130	ZKYT
2024-017	2024 Jan 24 0035:00	Falcon 9	293/B1063.16	VSFBS SLC4E	SPX
2024-018	2024 Jan 28 0004?	Simorgh	7 DRS.C001	SEM IKSC	IRSA
2024-019	2024 Jan 29 0110:00	Falcon 9	294/B1062.18	KSC LC39A	SPX
2024-020	2024 Jan 29 0557:20	Falcon 9	295/B1075.9	VSFBS SLC4E	SPX
2024-021	2024 Jan 30 1707:21	Falcon 9	296/B1077.10	CC LC40	SPX
2024-022	2024 Jan 31 0634	Electron	43	MAHIA LC1B	RLABN
2024-023	2024 Feb 2 2337	Chang Zheng 2C	Y85	XSC	CALT
2024-024	2024 Feb 3 0306	Jielong-3	Y3	BRJZ YJ LP2	CZJH
2024-025	2024 Feb 8 0633:32	Falcon 9	297/B1081.4	CC LC40	SPX
2024-026	2024 Feb 9 0703	Soyuz-2-1V	-	GIK-1 LC43/4	VVKO
2024-027	2024 Feb 10 0034:00	Falcon 9	298/B1071.14	VSFBS SLC4E	SPX
2024-028	2024 Feb 14 2230:00	Falcon 9	299/B1078.7	CC LC40	SPX
2024-029	2024 Feb 15 0325:06	Soyuz-2-1A	M 15000-068	GIK-5 LC31	FKA
2024-030	2024 Feb 15 0605:37	Falcon 9	300/B1060.18	KSC LC39A	SPX
2024-031	2024 Feb 15 2134:30	Falcon 9	301/B1082.2	VSFBS SLC4E	SPX
2024-032	2024 Feb 17 0022:55	H3-22S	H3-TF2	TNSC Y2	JAXA
2024-033	2024 Feb 17 1205	GSLV Mk II	GSLV-F14	SHAR SLP	ISRO
2024-034	2024 Feb 18 1452	Electron	44	MAHIA LC1B	RLABN
2024-035	2024 Feb 20 2011	Falcon 9	302/B1067.17	CC LC40	SPX
2024-036	2024 Feb 23 0411:50	Falcon 9	303/B1061.19	VSFBS SLC4E	SPX
2024-037	2024 Feb 23 1130	Chang Zheng 5	Y7	WEN LC101	CALT
2024-038	2024 Feb 25 2206:00	Falcon 9	304/B1069.13	CC LC40	SPX
2024-039	2024 Feb 29 0543:26	Soyuz-2-1B	S 15000-012/ 142-04	VOST PU1S	FKA
2024-040	2024 Feb 29 1303	Chang Zheng 3B	Y95	XSC	CALT
2024-041	2024 Feb 29 1530:00	Falcon 9	305/B1076.11	CC LC40	SPX
2024-042	2024 Mar 4 0353:38	Falcon 9	306/B1083.1	KSC LC39A	SPX
2024-043	2024 Mar 4 2205:00	Falcon 9	307/B1081.5	VSFBS SLC4E	SPX
2024-044	2024 Mar 4 2356:00	Falcon 9	308/B1073.13	CC LC40	SPX
2024-045	2024 Mar 10 2305:00	Falcon 9	309/B1077.11	CC LC40	SPX
2024-046	2024 Mar 11 0409:00	Falcon 9	310/B1063.17	VSFBS SLC4E	SPX
2024-047	2024 Mar 12 1503	Electron	45	MAHIA LC1B	RLABN
2024-F01	2024 Mar 13 0201:12	Kairos	1	KII LC1	SPONE
2024-048	2024 Mar 13 1251	Chang Zheng 2C/YZ-1S	-	XSC	CALT
2024-U01	2024 Mar 14 1325:00	Starship V1.0	B10/S28	STB OLP1	SPX
2024-049	2024 Mar 16 0021:00	Falcon 9	311/B1062.19	KSC LC39A	SPX
2024-050	2024 Mar 19 0228:00	Falcon 9	312/B1075.10	VSFBS SLC4E	SPX
2024-051	2024 Mar 20 0031:28	Chang Zheng 8	Y3	WEN LC201	CALT
2024-052	2024 Mar 21 0527	Chang Zheng 2D/YZ-3	Y87/Y3	JQ LC43/94	SAST
2024-053	2024 Mar 21 0725	Electron	46	MARS Pad 0C	RLABU
2024-054	2024 Mar 21 2055:09	Falcon 9	313/B1080.6	CC LC40	SPX

2024-055	2024 Mar 23 1236:10	Soyuz-2-1A	M 15000-066	GIK-5 LC31	FKA
2024-056	2024 Mar 24 0309:00	Falcon 9	314/B1060.19	KSC LC39A	SPX
2024-057	2024 Mar 25 2342:00	Falcon 9	315/B1078.8	CC LC40	SPX
2024-058	2024 Mar 26 2251	Chang Zheng 6A	Y3	TYSC LC9A	SAST
2024-059	2024 Mar 30 2152:00	Falcon 9	316/B1076.12	KSC LC39A	SPX
2024-060	2024 Mar 31 0130:00	Falcon 9	317/B1067.18	CC LC40	SPX
2024-061	2024 Mar 31 0936:45	Soyuz-2-1B	Kh15000-067	GIK-5 LC31	FKA
2024-062	2024 Apr 2 0230:00	Falcon 9	318/B1071.15	VSFBS SLC4E	SPX
2024-063	2024 Apr 2 2256	Chang Zheng 2D	Y102	XSC	SAST
2024-064	2024 Apr 5 0912:00	Falcon 9	319/B1069.14	CC LC40	SPX
2024-065	2024 Apr 7 0225:00	Falcon 9	320/B1081.6	VSFBS SLC4E	SPX
2024-066	2024 Apr 7 2316	Falcon 9	321/B1073.14	KSC LC39A	SPX
2024-067	2024 Apr 9 1653	Delta 4H	D4-45/D389	CC SLC37B	ULAB
2024-068	2024 Apr 10 0540:00	Falcon 9	322/B1083.2	CC LC40	SPX
2024-069	2024 Apr 11 0900	Angara A5/Orion	72901/1TLI	VOST PL1A	KHRU
2024-070	2024 Apr 11 1425	Falcon 9	323/B1082.3	VSFBS SLC4E	SPX
2024-071	2024 Apr 13 0140:00	Falcon 9	324/B1062.20	CC LC40	SPX
2024-072	2024 Apr 15 0412	Chang Zheng 2D	Y97	JQ LC43/94	SAST
2024-073	2024 Apr 17 2126:00	Falcon 9	325/B1077.12	KSC LC39A	SPX
2024-074	2024 Apr 18 2240:00	Falcon 9	326/B1080.7	CC LC40	SPX
2024-075	2024 Apr 20 2345	Chang Zheng 2D	Y103	XSC	SAST
2024-076	2024 Apr 23 2217:00	Falcon 9	327/B1078.9	CC LC40	SPX
2024-077	2024 Apr 23 2232	Electron	47	MAHIA LC1B	RLABN
2024-078	2024 Apr 25 1259:00	Chang Zheng 2F	Y18	JQ LC43/91	CALT
2024-079	2024 Apr 28 0034	Falcon 9	328/B1060.20	KSC LC39A	SPX
2024-080	2024 Apr 28 2208:00	Falcon 9	329/B1076.13	CC LC40	SPX
2024-081	2024 May 2 1836	Falcon 9	330/B1061.20	VSFBS SLC4E	SPX
2024-082	2024 May 3 0237:00	Falcon 9	331/B1067.19	CC LC40	SPX
2024-083	2024 May 3 0927:29	Chang Zheng 5	Y8	WEN LC101	CALT
2024-084	2024 May 6 1814:00	Falcon 9	332/B1069.15	CC LC40	SPX
2024-085	2024 May 7 0321	Chang Zheng 6C	Y1	TYSC	SAST
2024-086	2024 May 8 1842:00	Falcon 9	333/B1083.3	KSC LC39A	SPX
2024-087	2024 May 9 0143	Chang Zheng 3B	Y96?	XSC	CALT
2024-088	2024 May 10 0430:00	Falcon 9	334/B1082.4	VSFBS SLC4E	SPX
2024-089	2024 May 11 2343	Chang Zheng 4C	Y50	JQ LC43/94	CALT
2024-090	2024 May 13 0053:00	Falcon 9	335/B1073.15	CC LC40	SPX
2024-091	2024 May 14 1839:00	Falcon 9	336/B1063.18	VSFBS SLC4E	SPX
2024-092	2024 May 16 2121	Soyuz-2-1B	770-53-735 xxx-xx	GIK-1 LC43/4	VVKO
2024-093	2024 May 18 0032:00	Falcon 9	337/B1062.21	CC LC40	SPX
2024-094	2024 May 20 0306	Chang Zheng 2D	Y98	TYSC	SAST
2024-095	2024 May 21 0415	Kuaizhou-11	Y4	JQ LC43/95?	EXPACE
2024-096	2024 May 22 0800	Falcon 9	338/B1071.16	VSFBS SLC4E	SPX
2024-097	2024 May 23 0235	Falcon 9	339/B1080.8	CC LC40	SPX
2024-098	2024 May 24 0245	Falcon 9	340/B1077.13	KSC LC39A	SPX
2024-099	2024 May 25 0741	Electron	48	MAHIA LC1B	RLABN
2024-F02	2024 May 27 1344?	NK Kerolox LV	-	SOHAE LC2	KCST
2024-100	2024 May 28 1424	Falcon 9	341/B1078.10	CC LC40	SPX
2024-101	2024 May 28 2220	Falcon 9	342/B1081.7	VSFBS SLC4E	SPX
2024-102	2024 May 29 0812:27	Gushenxing 1	Y2	DFHT HHAI LP6	XIDO
2024-103	2024 May 30 0942:59	Soyuz-2-1A	-	GIK-5 LC31	FKA
2024-104	2024 May 30 1212	Chang Zheng 3B	Y98	XSC LC2	CALT
2024-105	2024 May 30 2339	Gushenxing 1	Y12	JQ LC43/95A	XIDO
2024-106	2024 Jun 1 0237:00	Falcon 9	343/B1076.14	CC LC40	SPX
2024-107	2024 Jun 5 0216:00	Falcon 9	344/B1067.20	CC LC40	SPX
2024-108	2024 Jun 5 0315	Electron	49	MAHIA LC1B	RLABN
2024-109	2024 Jun 5 1452:15	Atlas V N22	AV-085	CC SLC41	ULAL
2024-110	2024 Jun 6 0500	Gushenxing 1	Y13	JQ LC43/95A	XIDO
2024-U03	2024 Jun 6 1250:00	Starship V1.0	B11/S29	STB OLP1	SPX
2024-111	2024 Jun 8 0156:00	Falcon 9	345/B1069.16	CC LC40	SPX
2024-112	2024 Jun 8 1258	Falcon 9	346/B1061.21	VSFBS SLC4E	SPX

2024-113	2024 Jun 19 0340:00	Falcon 9	347/B1082.5	VSFBS SLC4E	SPX
2024-114	2024 Jun 20 1813	Electron	50	MAHIA LC1B	RLABN
2024-115	2024 Jun 20 2135	Falcon 9	348/B1080.9	CC LC40	SPX
2024-116	2024 Jun 22 0700	Chang Zheng 2C	Y50	XSC LC3	CALT
2024-117	2024 Jun 23 1715:00	Falcon 9	349/B1078.11	CC LC40	SPX
2024-118	2024 Jun 24 0347:00	Falcon 9	350/B1075.11	VSFBS SLC4E	SPX
2024-119	2024 Jun 25 2126	Falcon Heavy	010/B1087.1	KSC LC39A	SPX
2024-120	2024 Jun 27 1114	Falcon 9	351/B1062.22	CC LC40	SPX
2024-121	2024 Jun 29 0314	Falcon 9	352/B1081.8	VSFBS SLC4E	SPX
2024-122	2024 Jun 29 1157	Chang Zheng 7A	Y8	WEN LC201	CALT
2024-123	2024 Jul 1 0306:00	H3-22S	H3-F3	TNSC Y2	JAXA
2024-124	2024 Jul 3 0855:00	Falcon 9	353/B1073.16	CC LC40	SPX
2024-125	2024 Jul 4 0404	Firefly Alpha	FLTA005	VSFB SLC2W	FFLY
2024-126	2024 Jul 4 2249	Chang Zheng 6A	Y7	TYSC LC9A	SAST
2024-127	2024 Jul 8 2330	Falcon 9	354/B1076.15	CC LC40	SPX
2024-128	2024 Jul 9 1900:00	Ariane 62	VA262 (L6001)	CSG ELA4	ESA
2024-F03	2024 Jul 10 2340	Shuang Quxian 1	Y8	JQ LC43/95A	XJRY
2024-129	2024 Jul 12 0235:00	Falcon 9	355/B1063.19	VSFBS SLC4E	SPX
2024-130	2024 Jul 19 0303	Chang Zheng 4B	Y58	TYSC	SAST
2024-131	2024 Jul 27 0545:00	Falcon 9	356/B1069.17	KSC LC39A	SPX
2024-132	2024 Jul 28 0509:00	Falcon 9	357/B1077.14	CC LC40	SPX
2024-133	2024 Jul 28 0922:10	Falcon 9	358/B1071.17	VSFBS SLC4E	SPX
2024-134	2024 Jul 30 1045	Atlas V 551	AV-101	CC SLC41	ULAL
2024-135	2024 Aug 1 1314	Chang Zheng 3B	Y97	XSC LC2	CALT
2024-136	2024 Aug 2 0501:00	Falcon 9	359/B1078.12	KSC LC39A	SPX
2024-137	2024 Aug 2 1639	Electron	51	MAHIA LC1B	RLABN
2024-138	2024 Aug 4 0724:00	Falcon 9	360/B1082.6	VSFBS SLC4E	SPX
2024-139	2024 Aug 4 1502:53	Falcon 9	361/B1080.10	CC LC40	SPX
2024-140	2024 Aug 6 0642	Chang Zheng 6A	Y21	TYSC	SAST
2024-141	2024 Aug 10 1250:00	Falcon 9	362/B1067.21	CC LC40	SPX
2024-142	2024 Aug 11 1318	Electron	52	MAHIA LC1B	RLABN
2024-143	2024 Aug 12 0202:00	Falcon 9	363/B1061.22	VSFBS SLC4E	SPX
2024-144	2024 Aug 12 1037:00	Falcon 9	364/B1073.17	KSC LC39A	SPX
2024-145	2024 Aug 15 0320:18	Soyuz-2-1A	A 15000-072	GIK-5 LC31	FKA
2024-146	2024 Aug 15 1300:00	Falcon 9	365/B1076.16	CC LC40	SPX
2024-147	2024 Aug 16 0347	SSLV	SSLV-D3	SHAR FLP	ISRO
2024-148	2024 Aug 16 0735	Chang Zheng 4B	Y72	XSC	SAST
2024-149	2024 Aug 16 1856:00	Falcon 9	366/B1075.12	VSFBS SLC4E	SPX
2024-150	2024 Aug 20 1320:00	Falcon 9	367/B1085.1	CC LC40	SPX
2024-151	2024 Aug 22 1225	Chang Zheng 7A	Y9	WEN LC201	CALT
2024-152	2024 Aug 28 0748:00	Falcon 9	368/B1062.23	CC LC40	SPX
2024-153	2024 Aug 29 0522	Gushenxing 1	Y3	DFHT HHAI LP6	XIDO
2024-154	2024 Aug 31 0743:00	Falcon 9	369/B1069.18	CC LC40	SPX
2024-155	2024 Aug 31 0848:00	Falcon 9	370/B1081.9	VSFBS SLC4E	SPX
2024-156	2024 Sep 3 0122	Chang Zheng 4B	Y73	XSC	SAST
2024-157	2024 Sep 5 0150:15	Vega	VV24	CSG ZLV	AE
2024-158	2024 Sep 5 1533:00	Falcon 9	371/B1077.15	CC LC40	SPX
2024-159	2024 Sep 5 1830	Chang Zheng 6	Y11	TYSC	SAST
2024-160	2024 Sep 6 0320	Falcon 9	372/B1063.20	VSFBS SLC4E	SPX
2024-161	2024 Sep 10 0923:49	Falcon 9	373/B1083.4	KSC LC39A	SPX
2024-162	2024 Sep 11 1623:12	Soyuz-2-1A	M 15000-070	GIK-5 LC31	FKA
2024-163	2024 Sep 12 0852	Falcon 9	374/B1078.13	CC LC40	SPX
2024-164	2024 Sep 13 0145:00	Falcon 9	375/B1071.18	VSFBS SLC4E	SPX
2024-165	2024 Sep 14 0600?	Qaem-100	OM-B2	SHAHR	IRGC
2024-166	2024 Sep 17 0701:00	Angara-1.2	71604/3L?	GIK-1 LC35/1	KHRU
2024-167	2024 Sep 17 2250	Falcon 9	376/B1067.22	CC LC40	SPX
2024-168	2024 Sep 19 0114	Chang Zheng 3B/YZ-1	-	XSC	CALT
2024-169	2024 Sep 20 0411	Chang Zheng 2D	-	TYSC	SAST
2024-170	2024 Sep 20 0943	Kuaizhou-1A	Y31	XSC LC4	EXPACE
2024-171	2024 Sep 20 1350:00	Falcon 9	377/B1075.13	VSFBS SLC4E	SPX

2024-172	2024 Sep 20 2301	Electron	53	MAHIA LC1A	RLABN
2024-173	2024 Sep 24 0231:41	Jielong-3	Y4	DFHT HHAI LP4	CZHZ
2024-174	2024 Sep 24 2333	Lijian-1	Y4	JQ LC130	ZKYT
2024-175	2024 Sep 25 0401:00	Falcon 9	378/B1081.10	VSFBS SLC4E	SPX
2024-176	2024 Sep 26 0524	H-IIA 202	H-IIA-49	TNSC Y	MHI
2024-177	2024 Sep 27 1030	Chang Zheng 2D	Y44	JQ	SAST
2024-178	2024 Sep 28 1717:20	Falcon 9	379/B1085.2	CC LC40	SPX
2024-179	2024 Oct 4 1125:00	Vulcan Centaur VC2S	V-002	CC SLC41	ULAD
2024-180	2024 Oct 7 1452	Falcon 9	380/B1061.23	CC LC40	SPX
2024-181	2024 Oct 10 1350	Chang Zheng 3B	-	XSC LC2	CALT
2024-U04	2024 Oct 13 1225:00	Starship V1.0	B12/S30	STB OLP1	SPX
2024-182	2024 Oct 14 1606:00	Falcon Heavy	011/B1089.1	KSC LC39A	SPX
2024-183	2024 Oct 15 0610	Falcon 9	381/B1080.11	CC LC40	SPX
2024-184	2024 Oct 15 0821	Falcon 9	382/B1071.19	VSFBS SLC4E	SPX
2024-185	2024 Oct 15 1106	Chang Zheng 6A	Y20	TYSC	SAST
2024-186	2024 Oct 15 2345	Chang Zheng 4C	Y59	JQ LC43/94	SAST
2024-187	2024 Oct 18 2331	Falcon 9	383/B1076.17	CC LC40	SPX
2024-188	2024 Oct 20 0513	Falcon 9	384/B1082.7	VSFBS SLC4E	SPX
2024-189	2024 Oct 22 0010	Chang Zheng 6	Y13	TYSC	SAST
2024-190	2024 Oct 23 0109	Chang Zheng 2C	Y82	XSC	CALT
2024-191	2024 Oct 23 2147:00	Falcon 9	385/B1073.18	CC LC40	SPX
2024-192	2024 Oct 24 1714	Falcon 9	386/B1063.21	VSFBS SLC4E	SPX
2024-193	2024 Oct 26 2147:00	Falcon 9	387/B1069.19	CC LC40	SPX
2024-194	2024 Oct 29 2027:34	Chang Zheng 2F	Y19	JQ LC43/91	CALT
2024-195	2024 Oct 30 1207:00	Falcon 9	388/B1075.14	VSFBS SLC4E	SPX
2024-196	2024 Oct 30 2110	Falcon 9	389/B1078.14	CC LC40	SPX
2024-197	2024 Oct 31 0751:31	Soyuz-2-1A	760-72-531	GIK-1 LC43/4	VVKO
2024-198	2024 Nov 4 0648	H3-22S	H3-F4	TNSC Y2	JAXA
2024-199	2024 Nov 4 2318:40	Soyuz-2-1B	S 15000-013 142-601	VOST PU1S	FKA
2024-200	2024 Nov 5 0229:30	Falcon 9	390/B1083.5	KSC LC39A	SPX
2024-201	2024 Nov 5 1054	Electron	54	MAHIA LC1B	RLABN
2024-202	2024 Nov 7 2019:00	Falcon 9	391/B1085.3	CC LC40	SPX
2024-203	2024 Nov 9 0339	Chang Zheng 2C	-	JQ	CALT
2024-204	2024 Nov 9 0614:00	Falcon 9	392/B1081.11	VSFBS SLC4E	SPX
2024-205	2024 Nov 11 0403	Lijian-1	Y5	JQ LC130	ZKYT
2024-206	2024 Nov 11 1722	Falcon 9	393/B1067.23	KSC LC39A	SPX
2024-207	2024 Nov 11 2128:00	Falcon 9	394/B1080.12	CC LC40	SPX
2024-208	2024 Nov 13 2242	Chang Zheng 4B	Y53	TYSC	SAST
2024-209	2024 Nov 14 0523:00	Falcon 9	395/B1082.8	VSFBS SLC4E	SPX
2024-210	2024 Nov 14 1321:00	Falcon 9	396/B1076.18	CC LC40	SPX
2024-211	2024 Nov 15 1513:18	Chang Zheng 7	Y9	WEN LC201	CALT
2024-212	2024 Nov 17 2228	Falcon 9	397/B1077.16	KSC LC39A	SPX
2024-213	2024 Nov 18 0553:00	Falcon 9	398/B1071.20	VSFBS SLC4E	SPX
2024-214	2024 Nov 18 1831	Falcon 9	399/B1073.19	CC LC40	SPX
2024-U06	2024 Nov 19 2200:00	Starship V1.0	B13/S31	STB OLP1	SPX
2024-215	2024 Nov 21 1222:24	Soyuz-2-1A	K 15000-074	GIK-5 LC31	FKA
2024-216	2024 Nov 21 1607:50	Falcon 9	400/B1069.20	CC LC40	SPX
2024-217	2024 Nov 24 0525:30	Falcon 9	401/B1075.15	VSFBS SLC4E	SPX
2024-218	2024 Nov 24 2339	Chang Zheng 2C	-	TYSC	CALT
2024-219	2024 Nov 25 0335	Electron	56	MAHIA LC1B	RLABN
2024-220	2024 Nov 25 1002:20	Falcon 9	402/B1080.13	CC LC40	SPX
2024-221	2024 Nov 27 0200	Zhuque-2E	Y1	JQ LC43/96A	LANDSP
2024-222	2024 Nov 27 0441:30	Falcon 9	403/B1078.15	KSC LC39A	SPX
2024-223	2024 Nov 29 2150:25	Soyuz-2-1A	S 15000-005 142-0x	VOST PU1S	FKA
2024-224	2024 Nov 30 0500:00	Falcon 9	404/B1083.6	CC LC40	SPX
2024-225	2024 Nov 30 0810:00	Falcon 9	405/B1088.1	VSFBS SLC4E	SPX
2024-226	2024 Nov 30 1425	Chang Zheng 12	Y1	HCSLS LC1	SAST
2024-227	2024 Dec 3 0556	Chang Zheng 3B	Y103	XSC LC3	CALT
2024-228	2024 Dec 4 0446	Kuaizhou-1A	Y32	XSC LC4	EXPACE
2024-229	2024 Dec 4 1013:10	Falcon 9	406/B1067.24	CC LC40	SPX

2024-230	2024 Dec 4 1803:13	Soyuz-2-1B	-	GIK-1 LC43/4	VVKO
2024-231	2024 Dec 5 0305:00	Falcon 9	407/B1081.12	VSFBS SLC4E	SPX
2024-232	2024 Dec 5 0441	Chang Zheng 6A	Y22	TYSC	SAST
2024-233	2024 Dec 5 1034	PSLV-XL	PSLV-C59	SHAR FLP	ISRO
2024-234	2024 Dec 5 1610	Falcon 9	408/B1076.19	KSC LC39A	SPX
2024-235	2024 Dec 5 2120:33	Vega C	VV25	CSG ZLV	AE
2024-236	2024 Dec 6 0314?	Simorgh	8 TQS.C001	SEM IKSC	IRSA
2024-237	2024 Dec 8 0512:30	Falcon 9	409/B1086.2	CC LC40	SPX
2024-238	2024 Dec 12 0717	Chang Zheng 2D/YZ-3	Y60/Y5	JQ LC43/94	SAST
2024-239	2024 Dec 13 2155:40	Falcon 9	410/B1082.9	VSFBS SLC4E	SPX
2024-240	2024 Dec 16 1000	Chang Zheng 5B/YZ-2	Y6/Y2	WEN LC101	CALT
2024-241	2024 Dec 16 1850	Chang Zheng 2D	Y99	JQ LC43/94	SAST
2024-242	2024 Dec 17 0052	Falcon 9	411/B1085.4	CC LC40	SPX
2024-243	2024 Dec 17 1319	Falcon 9	412/B1063.22	VSFBS SLC4E	SPX
2024-244	2024 Dec 17 2226	Falcon 9	413/B1090.1	KSC LC39A	SPX
2024-F04	2024 Dec 18 0200	Kairos	2	KII LC1	SPONE
2024-245	2024 Dec 19 1018	Gushenxing 1	Y3	DFHT HHAI LP6	XIDO
2024-246	2024 Dec 20 1512	Chang Zheng 3B	-	XSC	CALT
2024-247	2024 Dec 21 1134:24	Falcon 9	414/B1071.21	VSFBS SLC4E	SPX
2024-248	2024 Dec 21 1417	Electron	58	MAHIA LC1B	RLABN
2024-249	2024 Dec 23 0535:30	Falcon 9	415/B1080.14	KSC LC39A	SPX
2024-250	2024 Dec 25 0745:42	Soyuz-2-1B	S 15000-068	GIK-5 LC31	FKA
2024-F05	2024 Dec 27 0103:31	Lijian-1	Y6	JQ LC130	ZKYT
2024-251	2024 Dec 29 0158:30	Falcon 9	416/B1075.16	VSFBS SLC4E	SPX
2024-252	2024 Dec 29 0500:00	Falcon 9	417/B1083.7	CC LC40	SPX
2024-253	2024 Dec 30 1630:15	PSLV	PSLV-C60	SHAR FLP	ISRO
2024-254	2024 Dec 31 0539:10	Falcon 9	418/B1078.16	KSC LC39A	SPX

Note: Owner, Agency and Country codes in the tables are defined in <http://planet4589.org/space/lvdb/sdb/Orgs>. Launch Sites are defined in <http://planet4589.org/space/lvdb/sdb/Sites>.

Appendix 2: Satellite payloads launched or deployed in 2024

LaunchNo	DeployNo	CATID	LAUNCH ID	Name	Launch Date UTC	Deploy date UTC	Owner	Country	Perigee	Apogee	Inc	Status	Appendix 2(a): Payloads included in annual statistics	
													Launch Date UTC	Deploy date UTC
-	1	S60741	2022-144K	USA 399	2022 Nov 1 13:41	2024 Aug.7	AFRL	US	35900	35900	4.00	In Earth orbit		
-	2	S58816	2023-063C	Dailian 1 Lianli	2023 May 10 13:22:51	2024 Jan 18 06:43	DALIAN	CN	371	383	41.47	Reentered		
-	3	A11050	2023-137	LEV-1	2023 Sep 6 23:42:11	2024 Jan 19 15:19:50	ISASI	J	334	98657	30.32	Luna		
-	4	A11051	2023-137	LEV-2	2023 Sep 6 23:42:11	2024 Jan 19 15:19:50	ISASI	J	334	98657	30.32	Luna		
-	5	S58997	2023-174DJ	Ymir-1	2023 Nov 11 18:49:00	2024 Feb 10.7	CLAAC/AACCS	UK	556	572	97.45	In Earth orbit		
-	6	S59175	2023-174DK	EXO-0	2023 Nov 11 18:49:00	2024 Feb 28	EXOTR	F	497	529	97.46	In Earth orbit		
-	7	S59478	2023-174DL	Crypto3	2023 Nov 11 18:49:00	2024 Jan 9.7	CRYPTO	D	552	574	97.65	In Earth orbit		
-	8	S58726	2023-185Q	Unicom-2M	2023 Dec 1 18:19	2024 Jan 5 08:30	ALBAD	US	552	575	97.66	In Earth orbit		
-	9	S58727	2023-185R	Unicom-2L	2023 Dec 1 18:19	2024 Jan 5 08:30	ALBAD	D	549	572	97.64	In Earth orbit		
-	10	S58755	2023-185S	NanoFF B	2023 Dec 1 18:19	2024 Jan 10 05:15:30	TUB	D	552	570	97.64	In Earth orbit		
-	11	S58810	2023-185T	NanoFF A	2023 Dec 1 18:19	2024 Jan 15 16:46	TUB	CN	602	608	49.99	In Earth orbit		
-	12	S59884	2023-195G	CSHQ subsatellite	2023 Dec 14 14:12	2024 May 24 18:30	ZLZB	CN	638	652	5.99	In Earth orbit		
1	1	S58694	2024-001A	XPOSAT	2024 Jan 1 03:40:00	2024 Jan 1 04:01	ISRO	IN	342	353	9.66	Reentered Att to PSLV-C58 PSA		
2	14	S58695	2024-001B	POEM-3	2024 Jan 1 03:40:00	-	ISRO	IN	342	353	9.66	Reentered Att to PSLV-C58 PSA		
3	15	S58705	2024-002A	Starlink 11072	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	344	344	53.17	In Earth orbit		
4	16	S58706	2024-002B	Starlink 11075	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
5	17	S58707	2024-002C	Starlink 11077	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
6	18	S58708	2024-002D	Starlink 11079	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
7	19	S58709	2024-002E	Starlink 11076	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
8	20	S58710	2024-002F	Starlink 11078	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
9	21	S58711	2024-002G	Starlink 11078	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
10	22	S58712	2024-002H	Starlink 11031	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
11	23	S58713	2024-002I	Starlink 11029	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
12	24	S58714	2024-002K	Starlink 30973	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
13	25	S58715	2024-002L	Starlink 31100	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
14	26	S58716	2024-002M	Starlink 31102	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
15	27	S58717	2024-002N	Starlink 31098	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
16	28	S58718	2024-002P	Starlink 31093	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
17	29	S58719	2024-002Q	Starlink 31097	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	336	344	53.17	In Earth orbit		
18	30	S58720	2024-002R	Starlink 31051	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	335	344	53.17	In Earth orbit		
19	31	S58721	2024-002S	Starlink 31027	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	335	344	53.17	In Earth orbit		
20	32	S58722	2024-002T	Starlink 30972	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	335	344	53.17	In Earth orbit		
21	33	S58723	2024-002U	Starlink 31040	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	335	344	53.17	In Earth orbit		
22	34	S58724	2024-002V	Starlink 31033	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	335	344	53.17	In Earth orbit		
23	35	S58725	2024-002W	Starlink 30893	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	335	344	53.17	In Earth orbit		
24	36	S58698	2024-003A	Starlink 30856	2024 Jan 3 03:44:20	2024 Jan 3 04:46:59	SPXS	US	335	344	53.17	In Earth orbit		
25	37	S58700	2024-004A	Ovzon 3	2024 Jan 5 11:20	2024 Jan 3 23:42	OVZON	S	20786	53666	4.52	In Earth orbit		
26	38	S58701	2024-004B	Tianmu 1-15	2024 Jan 5 11:20	2024 Jan 5 11:35	TIANMU	CN	517	531	97.46	In Earth orbit		
27	39	S58702	2024-004C	Tianmu 1-16	2024 Jan 5 11:20	2024 Jan 5 11:35	TIANMU	CN	516	530	97.45	In Earth orbit		
28	40	S58703	2024-004D	Tianmu 1-17	2024 Jan 5 11:20	2024 Jan 5 11:35	TIANMU	CN	516	529	97.45	In Earth orbit		
29	41	S58728	2024-005A	Tianmu 1-18	2024 Jan 5 11:20	2024 Jan 5 11:35	TIANMU	CN	514	529	97.45	In Earth orbit		
30	42	S58729	2024-005B	Starlink 31155	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	287	289	43.01	In Earth orbit		
31	43	S58730	2024-005C	Starlink 31115	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	287	289	43.01	In Earth orbit		
32	44	S58731	2024-005D	Starlink 31150	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	287	289	43.01	In Earth orbit		
33	45	S58732	2024-005E	Starlink 31204	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	287	289	43.01	In Earth orbit		
34	46	S58733	2024-005F	Starlink 31180	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	286	288	43.01	In Earth orbit		
35	47	S58734	2024-005G	Starlink 31164	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	286	288	43.01	In Earth orbit		
36	48	S58735	2024-005H	Starlink 31152	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	286	288	43.01	In Earth orbit		
37	49	S58736	2024-005I	Starlink 31157	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	295	298	43.01	In Earth orbit		
38	50	S58737	2024-005J	Starlink 31076	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	286	288	43.01	In Earth orbit		
39	51	S58738	2024-005K	Starlink 31101	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	285	288	43.01	In Earth orbit		
40	52	S58739	2024-005M	Starlink 31108	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	295	297	43.01	In Earth orbit		
41	53	S58740	2024-005N	Starlink 31042	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	285	288	43.01	In Earth orbit		
42	54	S58741	2024-005P	Starlink 31159	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	285	288	43.01	In Earth orbit		
43	55	S58742	2024-005Q	Starlink 31148	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	285	287	43.01	In Earth orbit		
44	56	S58743	2024-005R	Starlink 31151	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	293	296	43.01	In Earth orbit		
45	57	S58744	2024-005S	Starlink 31156	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	284	287	43.01	In Earth orbit		
46	58	S58745	2024-005T	Starlink 31166	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	284	287	43.01	In Earth orbit		
47	59	S58746	2024-005U	Starlink 31176	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	284	287	43.01	In Earth orbit		
48	60	S58747	2024-005V	Starlink 31181	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	284	287	43.01	In Earth orbit		
				Starlink 31183	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	284	287	43.01	In Earth orbit		

49	S58748	2024-005W	Starlink 31165	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	292	294	43.01	In Earth orbit
50	S58749	2024-005X	Starlink 31160	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	283	287	43.01	In Earth orbit
51	S58750	2024-005Y	Starlink 31179	2024 Jan 7 22:35:40	2024 Jan 7 23:41:05	SPXS	US	283	287	43.01	In Earth orbit
52	S58751	2024-006A	Peregrine Mission One	2024 Jan 8 07:18	2024 Jan 8 08:08:26	ASTBT	US	498	381617	30.11	Reentered
53	A11125	2024-006	Colmena 1	2024 Jan 8 07:18	-	AEMX/UNAM	MX	476	39433	30.06	Reentered Att to Peregrine Mission One
54	A11126	2024-006	Colmena 2	2024 Jan 8 07:18	-	AEMX/UNAM	MX	476	39433	30.06	Reentered Att to Peregrine Mission One
55	A11127	2024-006	Colmena 3	2024 Jan 8 07:18	-	AEMX/UNAM	MX	476	39433	30.06	Reentered Att to Peregrine Mission One
56	A11128	2024-006	Colmena 4	2024 Jan 8 07:18	-	AEMX/UNAM	MX	476	39433	30.06	Reentered Att to Peregrine Mission One
57	A11129	2024-006	Colmena 5	2024 Jan 8 07:18	-	AEMX/UNAM	MX	476	39433	30.06	Reentered Att to Peregrine Mission One
58	S58753	2024-007A	Einslein Tianshen	2024 Jan 9 07:15	2024 Jan 9 07:15	ASTBT	CN	476	39433	30.06	Reentered Att to Peregrine Mission One
59	S58756	2024-008A	Tianxing-1.02	2024 Jan 11 03:52	2024 Jan 11 04:05	CASIOIM	CN	290	349	95.12	In Earth orbit
60	S58758	2024-009A	Yunyao-1.18	2024 Jan 11 03:50	2024 Jan 11 04:05	YAAO	CN	478	498	49.99	In Earth orbit
61	S58759	2024-009B	Yunyao-1.19	2024 Jan 11 03:50	2024 Jan 11 04:05	YAAO	CN	479	497	49.98	In Earth orbit
62	S58760	2024-009C	Yunyao-1.20	2024 Jan 11 03:50	2024 Jan 11 04:05	YAAO	CN	478	497	49.99	In Earth orbit
63	S58762	2024-010A	JSE Kougaku 8 gouki	2024 Jan 12 04:44:26	2024 Jan 12 05:02	CSICE	J	475	489	97.33	In Earth orbit
64	S58765	2024-011A	Starlink 31127	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
65	S58766	2024-011B	Starlink 31114	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	294	53.17	In Earth orbit
66	S58767	2024-011C	Starlink 31140	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
67	S58768	2024-011D	Starlink 31145	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
68	S58769	2024-011E	Starlink 31146	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
69	S58770	2024-011F	Starlink 31143	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	294	53.17	In Earth orbit
70	S58771	2024-011G	Starlink 31135	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	294	53.17	In Earth orbit
71	S58772	2024-011H	Starlink 31136	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
72	S58773	2024-011I	Starlink 31073	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
73	S58774	2024-011K	Starlink 31122	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
74	S58775	2024-011L	Starlink 31123	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
75	S58776	2024-011M	Starlink 31117	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
76	S58777	2024-011N	Starlink 31132	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
77	S58778	2024-011P	Starlink 31120	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
78	S58779	2024-011Q	Starlink 31142	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
79	S58780	2024-011R	Starlink 31103	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
80	S58781	2024-011S	Starlink 31099	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	294	53.17	In Earth orbit
81	S58782	2024-011T	Starlink 31060	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	285	293	53.17	In Earth orbit
82	S58783	2024-011U	Starlink 31167	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	284	293	53.17	In Earth orbit
83	S58784	2024-011V	Starlink 31039	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	284	293	53.17	In Earth orbit
84	S58785	2024-011W	Starlink 31034	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	284	293	53.17	In Earth orbit
85	S58786	2024-011X	Starlink 31024	2024 Jan 14 08:59:30	2024 Jan 14 10:02:06	SPXS	US	284	293	53.17	In Earth orbit
86	S58787	2024-012A	Starlink 31189	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	284	291	43.01	In Earth orbit
87	S58788	2024-012B	Starlink 31185	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	284	291	43.01	In Earth orbit
88	S58789	2024-012C	Starlink 31166	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	284	291	43.01	In Earth orbit
89	S58790	2024-012D	Starlink 31187	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	284	291	43.01	In Earth orbit
90	S58791	2024-012E	Starlink 31162	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	284	291	43.01	In Earth orbit
91	S58792	2024-012F	Starlink 31194	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	In Earth orbit
92	S58793	2024-012G	Starlink 31184	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	Reentered
93	S58794	2024-012H	Starlink 31192	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	284	290	43.01	In Earth orbit
94	S58795	2024-012I	Starlink 31161	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	In Earth orbit
95	S58796	2024-012J	Starlink 31195	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	In Earth orbit
96	S58797	2024-012K	Starlink 31193	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	In Earth orbit
97	S58798	2024-012L	Starlink 31168	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	In Earth orbit
98	S58799	2024-012M	Starlink 31188	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	In Earth orbit
99	S58800	2024-012N	Starlink 31154	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	291	43.01	Reentered
100	S58801	2024-012P	Starlink 31191	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
101	S58802	2024-012Q	Starlink 31170	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
102	S58803	2024-012R	Starlink 31173	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
103	S58804	2024-012S	Starlink 31141	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
104	S58805	2024-012T	Starlink 31188	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
105	S58806	2024-012U	Starlink 31105	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
106	S58807	2024-012V	Starlink 31138	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	Reentered
107	S58808	2024-012W	Starlink 31163	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
108	S58809	2024-012X	Starlink 31174	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
109	S58810	2024-012Y	Starlink 31169	2024 Jan 15 01:52:00	2024 Jan 15 02:56:40	SPXS	US	283	290	43.01	In Earth orbit
110	S58811	2024-013A	Tianzhou-7	2024 Jan 17 14:27:30	2024 Jan 17 14:37:40	CMSSEO	CN	386	385	41.47	Deorbited
111	S62056	2024-013E	Nanjing	2024 Jan 18 21:47:11	2024 Nov 16	CASITIX	CN	371	384	41.47	Landed
112	S58815	2024-014A	Xiong Ax-3	2024 Jan 18 22:01:16	2024 Jan 20 06:43:7	SPX	US	210	296	51.64	Landed
113	S58817	2024-015A	Suraya	2024 Jan 20 06:28:34	2024 Jan 20 06:43:7	IRSA	IR	743	760	64.52	In Earth orbit
114	S58820	2024-016A	Taijing-1.03	2024 Jan 23 04:03	2024 Jan 23 04:15	WEINA	CN	524	542	97.52	In Earth orbit

115	S58821	2024-016B	Taijink-3 02	2024 Jan 23 0403	WEINA	CN	523	542	97.52	In Earth orbit
116	S58822	2024-016C	Taijink-4 03	2024 Jan 23 0403	WEINA	CN	523	542	97.52	In Earth orbit
117	S58823	2024-016D	Taijink-2 04	2024 Jan 23 0403	WEINA	CN	522	541	97.52	In Earth orbit
118	S58824	2024-016F	Taijink-2 02	2024 Jan 23 0403	WEINA	CN	522	541	97.52	In Earth orbit
119	S58826	2024-017A	Startink 31233	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
120	S58827	2024-017B	Startink 31271	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
121	S58828	2024-017C	Startink 31222	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
122	S58829	2024-017D	Startink 31258	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
123	S58830	2024-017E	Startink 31258	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
124	S58831	2024-017F	Startink 31232	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
125	S58832	2024-017G	Startink 31263	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
126	S58833	2024-017H	Startink 31175	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
127	S58834	2024-017I	Startink 31171	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
128	S58835	2024-017K	Startink 31246	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
129	S58836	2024-017L	Startink 31251	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
130	S58837	2024-017M	Startink 31172	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
131	S58838	2024-017N	Startink 31249	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
132	S58839	2024-017P	Startink 31250	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
133	S58840	2024-017Q	Startink 31248	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
134	S58841	2024-017R	Startink 31236	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
135	S58842	2024-017S	Startink 31238	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
136	S58843	2024-017T	Startink 31280	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
137	S58844	2024-017U	Startink 31269	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
138	S58845	2024-017V	Startink 31264	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
139	S58846	2024-017W	Startink 31273	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
140	S58847	2024-017X	Startink 31262	2024 Jan 24 0035:00	SPXS	US	285	296	53.17	In Earth orbit
141	S58849	2024-018A	Mehda	2024 Jan 28 0004?7	IRSA	IR	453	1111	58.69	In Earth orbit
142	S58850	2024-018B	Kaithan 2	2024 Jan 28 0004?7	IRSA	IR	453	1106	58.70	In Earth orbit
143	S58852	2024-018D	Hatef 1	2024 Jan 28 0004?7	IRSA	IR	453	1103	58.69	In Earth orbit
144	S58853	2024-019A	Startink 31238	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
145	S58854	2024-019B	Startink 31158	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
146	S58855	2024-019C	Startink 31237	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
147	S58856	2024-019D	Startink 31244	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
148	S58857	2024-019E	Startink 31216	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
149	S58858	2024-019F	Startink 31226	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
150	S58859	2024-019G	Startink 31197	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
151	S58860	2024-019H	Startink 31213	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
152	S58861	2024-019I	Startink 31199	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
153	S58862	2024-019K	Startink 31200	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
154	S58863	2024-019L	Startink 31149	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
155	S58864	2024-019M	Startink 31242	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
156	S58865	2024-019N	Startink 31223	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
157	S58866	2024-019P	Startink 31219	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
158	S58867	2024-019Q	Startink 31198	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
159	S58868	2024-019R	Startink 31196	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
160	S58869	2024-019S	Startink 31203	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
161	S58870	2024-019T	Startink 31201	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
162	S58871	2024-019U	Startink 31214	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
163	S58872	2024-019V	Startink 31215	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
164	S58873	2024-019W	Startink 31177	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
165	S58874	2024-019X	Startink 30945	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
166	S58875	2024-019Y	Startink 31212	2024 Jan 29 0215:27	SPXS	US	283	291	43.01	In Earth orbit
167	S58876	2024-020A	Startink 31306	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
168	S58877	2024-020B	Startink 31326	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
169	S58878	2024-020C	Startink 31300	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
170	S58879	2024-020D	Startink 31296	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
171	S58880	2024-020E	Startink 31328	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
172	S58881	2024-020F	Startink 31260	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
173	S58882	2024-020G	Startink 31323	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
174	S58883	2024-020H	Startink 31209	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
175	S58884	2024-020I	Startink 31315	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
176	S58885	2024-020K	Startink 31318	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
177	S58886	2024-020L	Startink 31320	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
178	S58887	2024-020M	Startink 31321	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit
179	S58888	2024-020N	Startink 30970	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	Reentered
180	S58889	2024-020P	Startink 31007	2024 Jan 29 0557:20	SPXS	US	285	294	53.17	In Earth orbit

181	S58890	2024-020Q	Starlink 31230	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	285	294	53.17	In Earth orbit
182	S58891	2024-020R	Starlink 31245	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	285	294	53.17	In Earth orbit
183	S58892	2024-020S	Starlink 31254	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	285	294	53.17	In Earth orbit
184	S58893	2024-020T	Starlink 31255	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	285	294	53.17	In Earth orbit
185	S58894	2024-020U	Starlink 31243	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	284	294	53.17	In Earth orbit
186	S58895	2024-020V	Starlink 31218	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	284	294	53.17	In Earth orbit
187	S58896	2024-020W	Starlink 31221	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	284	294	53.17	In Earth orbit
188	S58897	2024-020X	Starlink 31190	2024 Jan 29 0557:20	2024 Jan 29 0659:59	SPXS	US	284	294	53.17	In Earth orbit
189	S58898	2024-021A	S.S. Patricia Robertson	2024 Jan 30 1707:21	2024 Jan 30 1722:01	NGIS	US	242	251	51.70	Deorbited
190	S58899	2024-022A	Lemur-2 Nimbus2000	2024 Jan 31 0634	2024 Jan 31 0751:00?	SPIRE/NSTAR	US	521	539	97.49	In Earth orbit
191	S58900	2024-022B	Lemur-2 Vallhalla	2024 Jan 31 0634	2024 Jan 31 0751:00?	SPIRE/NSTAR	US	519	540	97.47	In Earth orbit
192	S58902	2024-022D	Lemur-2 Ohae-Ni-Jesu	2024 Jan 31 0634	2024 Jan 31 0751:00?	SPIRE/NSTAR	US	521	537	97.48	In Earth orbit
193	S58903	2024-022E	Lemur-2 Cael	2024 Jan 31 0634	2024 Jan 31 0751:00?	SPIRE/NSTAR	US	523	540	97.49	In Earth orbit
194	S58905	2024-023A	Geely Xingou02 zu 01 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	595	605	49.99	In Earth orbit
195	S58906	2024-023B	Geely Xingou02 zu 02 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	594	607	50.00	In Earth orbit
196	S58907	2024-023C	Geely Xingou02 zu 03 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	593	606	50.00	In Earth orbit
197	S58908	2024-023D	Geely Xingou02 zu 04 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	594	605	49.99	In Earth orbit
198	S58909	2024-023E	Geely Xingou02 zu 05 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	593	605	50.01	In Earth orbit
199	S58910	2024-023F	Geely Xingou02 zu 06 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	592	606	49.99	In Earth orbit
200	S58911	2024-023G	Geely Xingou02 zu 07 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	592	605	50.00	In Earth orbit
201	S58912	2024-023H	Geely Xingou02 zu 08 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	590	606	49.99	In Earth orbit
202	S58913	2024-023J	Geely Xingou02 zu 09 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	590	605	50.01	In Earth orbit
203	S58914	2024-023K	Geely Xingou02 zu 10 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	590	605	50.00	In Earth orbit
204	S58915	2024-023L	Geely Xingou02 zu 11 xing	2024 Feb 2 2337	2024 Feb 2 2349?	GEESP	CN	589	605	50.00	In Earth orbit
205	S58917	2024-024A	NEXSAT-1	2024 Feb 3 0306	2024 Feb 3 0316	EGYSA	EG	506	520	97.41	In Earth orbit
206	S58918	2024-024B	DRO-L	2024 Feb 3 0306	2024 Feb 3 0316	SECM	CN	507	520	97.41	In Earth orbit
207	S58919	2024-024C	Weihai-1 01	2024 Feb 3 0306	2024 Feb 3 0316	WEJIT	CN	505	520	97.41	In Earth orbit
208	S58920	2024-024D	Weihai-1 02	2024 Feb 3 0306	2024 Feb 3 0316	WEJIT	CN	505	520	97.41	In Earth orbit
209	S58921	2024-024E	Rongrao	2024 Feb 3 0306	2024 Feb 3 0316	GUOX	CN	507	520	97.40	In Earth orbit
210	S58922	2024-024F	Xingyi Lianxin Shou xing	2024 Feb 3 0306	2024 Feb 3 0316	GUOX	CN	504	520	97.40	In Earth orbit
211	S58923	2024-024G	Huakai Tianxia	2024 Feb 3 0306	2024 Feb 3 0316	LUHA/DFHG	CN	507	519	97.40	In Earth orbit
212	S58924	2024-024H	Yantai-2	2024 Feb 3 0306	2024 Feb 3 0316	LUHA/DFHG	CN	506	520	97.41	In Earth orbit
213	S58925	2024-024J	Jinan Kechuang	2024 Feb 3 0306	2024 Feb 3 0316	ZHIXJ	CN	505	520	97.41	In Earth orbit
214	S58928	2024-025A	PACE	2024 Feb 8 0653:32	2024 Feb 8 0645:55	GFSC	CN	673	677	98.07	In Earth orbit
215	S58929	2024-026A	Kosmos-2575	2024 Feb 9 0703	2024 Feb 9 0713?	MORF	RU	349	361	96.76	In Earth orbit
216	S58931	2024-027A	Starlink 31317	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
217	S58932	2024-027B	Starlink 31378	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
218	S58933	2024-027C	Starlink 31350	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
219	S58934	2024-027D	Starlink 31337	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
220	S58935	2024-027E	Starlink 31362	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
221	S58936	2024-027F	Starlink 31383	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
222	S58937	2024-027G	Starlink 31390	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
223	S58938	2024-027H	Starlink 31377	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
224	S58939	2024-027I	Starlink 31372	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
225	S58940	2024-027K	Starlink 31371	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
226	S58941	2024-027L	Starlink 31345	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
227	S58942	2024-027M	Starlink 31354	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
228	S58943	2024-027N	Starlink 31346	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
229	S58944	2024-027P	Starlink 31336	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
230	S58945	2024-027Q	Starlink 31359	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
231	S58946	2024-027R	Starlink 31331	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
232	S58947	2024-027S	Starlink 31116	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
233	S58948	2024-027T	Starlink 31311	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
234	S58949	2024-027U	Starlink 31294	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	295	53.17	In Earth orbit
235	S58950	2024-027V	Starlink 31287	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	294	53.17	In Earth orbit
236	S58951	2024-027W	Starlink 31330	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	294	53.17	Reentered
237	S58952	2024-027X	Starlink 31293	2024 Feb 10 0034:00	2024 Feb 10 0136:30	SPXS	US	284	294	53.17	In Earth orbit
238	S58955	2024-028A	HBTSS-SV2	2024 Feb 14 2230:00	2024 Feb 14 2330?	MDA	US	993	1002	40.00	In Earth orbit
239	S58956	2024-028B	RAPTOR 4	2024 Feb 14 2230:00	2024 Feb 14 2330?	SDA	US	992	1002	39.99	In Earth orbit
240	S58957	2024-028C	RAPTOR 1	2024 Feb 14 2230:00	2024 Feb 14 2330?	SDA	US	994	1001	40.01	In Earth orbit
241	S58958	2024-028D	RAPTOR 3	2024 Feb 14 2230:00	2024 Feb 14 2330?	SDA	US	991	1003	39.99	In Earth orbit
242	S58959	2024-028E	RAPTOR 2	2024 Feb 14 2230:00	2024 Feb 14 2330?	SDA	US	988	1003	39.98	In Earth orbit
243	S58960	2024-028F	HBTSS-SV1	2024 Feb 15 0035:06	2024 Feb 15 0035:55	MDA	US	992	1004	39.99	In Earth orbit
244	S58961	2024-029A	Progress MS-26	2024 Feb 15 0035:06	2024 Feb 15 0653:37	RKKE	RU	282	318	51.64	Deorbited
245	S58963	2024-030A	IM-1 Odyssey	2024 Feb 15 0653:37	2024 Feb 15 0653	INTMA	US	223	411633	28.60	Luna
246	A11152	2024-030C	EagleCam	2024 Feb 15 0605:37	2024 Feb 28	ERAU	US	223	411633	28.60	Lunar landing

247	S88965	2024-031A	Startlink 31373	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
248	S88966	2024-031B	Startlink 31449	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
249	S88967	2024-031C	Startlink 31314	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
250	S88968	2024-031D	Startlink 31356	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
251	S88969	2024-031E	Startlink 31335	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
252	S88970	2024-031F	Startlink 31368	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
253	S88971	2024-031G	Startlink 31333	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
254	S88972	2024-031H	Startlink 31351	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
255	S88973	2024-031J	Startlink 31365	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
256	S88974	2024-031K	Startlink 31361	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
257	S88975	2024-031L	Startlink 31369	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
258	S88976	2024-031M	Startlink 31324	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
259	S88977	2024-031N	Startlink 31328	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
260	S88978	2024-031P	Startlink 31355	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
261	S88979	2024-031Q	Startlink 31380	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
262	S88980	2024-031R	Startlink 31353	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
263	S88981	2024-031S	Startlink 31339	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	286	294	53.17	In Earth orbit
264	S88982	2024-031T	Startlink 31360	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	285	294	53.17	In Earth orbit
265	S88983	2024-031U	Startlink 31384	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	285	294	53.17	In Earth orbit
266	S88984	2024-031V	Startlink 31379	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	285	294	53.17	In Earth orbit
267	S88985	2024-031W	Startlink 31385	2024 Feb 15 21:34:30	2024 Feb 15 22:37:09	SPXS	US	285	294	53.17	In Earth orbit
268	S88986	2024-031X	Startlink 31229	2024 Feb 17 00:22:55	2024 Feb 17 00:39:52	CANON	US	285	294	53.17	In Earth orbit
269	S88987	2024-032A	CE-SAT1E	2024 Feb 17 00:22:55	2024 Feb 17 00:48:12	JSS	J	671	673	98.12	In Earth orbit
270	S88988	2024-032C	TURSAT	2024 Feb 17 00:22:55	2024 Feb 17 00:48:12	JSS	J	667	675	98.11	In Earth orbit
271	S88990	2024-033A	Insat 3DS	2024 Feb 17 12:05	2024 Feb 17 12:23	ISRO	IN	35743	35830	0.10	In Earth orbit
272	S88992	2024-034A	ADRAAS-J	2024 Feb 18 14:52	2024 Feb 18 15:36	ASTSC	J	533	597	98.20	In Earth orbit
273	S88995	2024-035A	Merah Putih 2	2024 Feb 20 20:11	2024 Feb 20 05:49	TELK	ID	35782	35789	0.02	In Earth orbit
274	S88998	2024-036A	Startlink 31468	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	285	294	53.17	In Earth orbit
275	S88999	2024-036B	Startlink 31440	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	289	290	53.17	In Earth orbit
276	S89000	2024-036C	Startlink 31529	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	285	294	53.17	In Earth orbit
277	S89001	2024-036D	Startlink 31525	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	285	294	53.17	Reentered
278	S89002	2024-036E	Startlink 31431	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	289	289	53.17	In Earth orbit
279	S89003	2024-036F	Startlink 31429	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	285	294	53.17	Reentered
280	S89004	2024-036G	Startlink 31435	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
281	S89005	2024-036H	Startlink 31484	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
282	S89006	2024-036I	Startlink 31450	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	288	289	53.17	In Earth orbit
283	S89007	2024-036K	Startlink 31456	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	285	294	53.17	In Earth orbit
284	S89008	2024-036L	Startlink 31460	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
285	S89009	2024-036M	Startlink 31428	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
286	S89010	2024-036N	Startlink 31528	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
287	S89011	2024-036P	Startlink 31491	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
288	S89012	2024-036Q	Startlink 31465	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
289	S89013	2024-036R	Startlink 31389	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	286	288	53.17	In Earth orbit
290	S89014	2024-036S	Startlink 31454	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
291	S89015	2024-036T	Startlink 31521	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
292	S89016	2024-036U	Startlink 31526	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
293	S89017	2024-036V	Startlink 31406	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
294	S89018	2024-036W	Startlink 31527	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	285	289	53.17	In Earth orbit
295	S89019	2024-036X	Startlink 31436	2024 Feb 23 04:11:50	2024 Feb 23 05:14:15	SPXS	US	284	294	53.17	In Earth orbit
296	S89020	2024-037A	Tongxin Jishu Shiyuan 11	2024 Feb 23 11:30	2024 Feb 23 12:08*	ZZBC/CAST	CN	35770	35804	5.43	In Earth orbit
297	S89023	2024-038A	Startlink 30996	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	274	277	43.01	In Earth orbit
298	S89024	2024-038B	Startlink 31006	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	274	277	43.01	In Earth orbit
299	S89025	2024-038C	Startlink 31178	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	274	277	43.01	In Earth orbit
300	S89026	2024-038D	Startlink 31227	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	274	277	43.01	In Earth orbit
301	S89027	2024-038E	Startlink 30863	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	274	277	43.01	In Earth orbit
302	S89028	2024-038F	Startlink 31206	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	283	43.01	In Earth orbit
303	S89029	2024-038G	Startlink 31202	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	277	43.01	In Earth orbit
304	S89030	2024-038H	Startlink 31186	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	277	43.01	In Earth orbit
305	S89031	2024-038I	Startlink 31211	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	276	43.01	In Earth orbit
306	S89032	2024-038K	Startlink 30862	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	276	43.01	In Earth orbit
307	S89033	2024-038L	Startlink 30862	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	276	43.01	In Earth orbit
308	S89034	2024-038M	Startlink 31210	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	283	43.01	In Earth orbit
309	S89035	2024-038N	Startlink 31231	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	283	43.01	In Earth orbit
310	S89036	2024-038P	Startlink 31207	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	283	43.01	In Earth orbit
311	S89037	2024-038Q	Startlink 31208	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	283	43.01	In Earth orbit
312	S89038	2024-038R	Startlink 31235	2024 Feb 25 22:06:00	2024 Feb 25 23:10:57	SPXS	US	273	283	43.01	In Earth orbit

313	S59039	2024-0388	Starlink 31220	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
314	S59040	2024-0381	Starlink 31225	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
315	S59041	2024-0380	Starlink 31240	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
316	S59042	2024-0387	Starlink 31202	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
317	S59043	2024-0388	Starlink 31234	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
318	S59044	2024-038X	Starlink 31153	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
319	S59045	2024-038Y	Starlink 31241	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
320	S59046	2024-038Z	Starlink 31205	2024 Feb 25 2206:00	2024 Feb 25 2310:57	SPXS		US	273	283	43.01	In Earth orbit
321	S59051	2024-039A	Meteor-M No. 2-4	2024 Feb 29 0543:26	2024 Feb 29 0643:37	RGMS/VNIEMI		RU	812	823	98.58	In Earth orbit
322	S59052	2024-039B	SITRO-AIS-29	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	484	504	97.38	In Earth orbit
323	S59053	2024-039C	SITRO-AIS-30	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	508	97.38	In Earth orbit
324	S59054	2024-039D	SITRO-AIS-31	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	486	510	97.38	In Earth orbit
325	S59055	2024-039E	SITRO-AIS-33	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	510	97.38	In Earth orbit
326	S59056	2024-039F	SITRO-AIS-35	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	510	97.38	In Earth orbit
327	S59057	2024-039G	SITRO-AIS-32	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	510	97.38	In Earth orbit
328	S59058	2024-039H	SITRO-AIS-34	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	510	97.38	In Earth orbit
329	S59059	2024-039I	SITRO-AIS-36	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	509	97.38	In Earth orbit
330	S59060	2024-039K	SITRO-AIS-49	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	509	97.38	In Earth orbit
331	S59061	2024-039L	SITRO-AIS-50	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	509	97.38	In Earth orbit
332	S59062	2024-039M	SITRO-AIS-51	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	509	97.38	In Earth orbit
333	S59063	2024-039N	SITRO-AIS-52	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	485	509	97.39	In Earth orbit
334	S59064	2024-039Q	Zorkiy-2M No. 2	2024 Feb 29 0543:26	2024 Feb 29 0815:57	SPUT		RU	486	510	97.38	In Earth orbit
335	S59065	2024-039Q	Pars-1	2024 Feb 29 0543:26	2024 Feb 29 0815:57	IRSA		IR	485	511	97.38	In Earth orbit
336	S59066	2024-039R	SITRO-AIS-25	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	503	747	95.40	In Earth orbit
337	S59067	2024-039S	SITRO-AIS-26	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	503	747	95.40	In Earth orbit
338	S59068	2024-039T	SITRO-AIS-27	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	503	747	95.39	In Earth orbit
339	S59071	2024-039U	SITRO-AIS-28	2024 Feb 29 0543:26	2024 Feb 29 0820:07	SITRO		RU	503	747	95.40	In Earth orbit
340	S59072	2024-039V	Maratou-D GVM	2024 Feb 29 0543:26	2024 Feb 29 0940:07	NPOPM		RU	731	751	89.00	In Earth orbit
341	S59074	2024-040A	HG-01	2024 Feb 29 1530:00	2024 Feb 29 1325:59	CNSA		CN	35771	35803	0.04	In Earth orbit
342	S59074	2024-041A	Starlink 31265	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	284	292	43.01	In Earth orbit
343	S59075	2024-041B	Starlink 31276	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	284	292	43.01	In Earth orbit
344	S59076	2024-041C	Starlink 31259	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	284	292	43.01	In Earth orbit
345	S59077	2024-041D	Starlink 31281	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
346	S59078	2024-041E	Starlink 31274	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	284	292	43.01	In Earth orbit
347	S59079	2024-041F	Starlink 31257	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	284	292	43.01	In Earth orbit
348	S59080	2024-041G	Starlink 31299	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
349	S59081	2024-041H	Starlink 31292	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
350	S59082	2024-041I	Starlink 31286	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
351	S59083	2024-041K	Starlink 31252	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
352	S59084	2024-041L	Starlink 31261	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
353	S59085	2024-041M	Starlink 31290	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
354	S59086	2024-041N	Starlink 31279	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
355	S59087	2024-041P	Starlink 31266	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
356	S59088	2024-041Q	Starlink 31313	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
357	S59089	2024-041R	Starlink 31307	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
358	S59090	2024-041S	Starlink 31316	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
359	S59091	2024-041T	Starlink 31352	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
360	S59092	2024-041U	Starlink 31310	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
361	S59093	2024-041V	Starlink 31343	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
362	S59094	2024-041W	Starlink 31302	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	Reentered
363	S59095	2024-041X	Starlink 31295	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
364	S59096	2024-041Y	Starlink 31291	2024 Feb 29 1530:00	2024 Feb 29 1635:29	SPXS		US	283	292	43.01	In Earth orbit
365	S59097	2024-042A	Horacio Endavour (Crew-8)	2024 Mar 4 0353:38	2024 Mar 4 0405:39	SPX		US	191	215	51.65	Landed
366	S59098	2024-043A	ORACIO	2024 Mar 4 2205:00	2024 Mar 5 0032:33	SATLAN		E	588	603	97.75	In Earth orbit
367	S59099	2024-043B	MuSat-2	2024 Mar 4 2205:00	2024 Mar 5 0033:08	MUON		US	588	601	97.74	In Earth orbit
368	S59100	2024-043C	ICEYE-X38	2024 Mar 4 2205:00	2024 Mar 5 0035:03	ICEYE		FI	588	601	97.74	In Earth orbit
369	S59101	2024-043D	MethaneSat	2024 Mar 4 2205:00	2024 Mar 5 0036:29	METHS		US	588	600	97.75	In Earth orbit
370	S59102	2024-043E	ICEYE-X37	2024 Mar 4 2205:00	2024 Mar 5 0035:31	ICEUS		US	587	599	97.75	In Earth orbit
371	S59103	2024-043F	ICEYE-X36	2024 Mar 4 2205:00	2024 Mar 5 0034:35	ICEUS		US	587	598	97.74	In Earth orbit
372	S59104	2024-043G	Pony Express-2 SV2	2024 Mar 4 2205:00	2024 Mar 5 0033:23	TYVAK		US	587	597	97.74	In Earth orbit
373	S59105	2024-043H	Pony Express-2 SV1	2024 Mar 4 2205:00	2024 Mar 5 0034:01	TYVAK		US	586	597	97.74	In Earth orbit
374	S59106	2024-043I	RROCI-2	2024 Mar 4 2205:00	2024 Mar 5 0032:45	SFSSC/ORISS		US	587	597	97.74	In Earth orbit
375	S59107	2024-043K	BRO-13	2024 Mar 4 2205:00	2024 Mar 5 0032:19	UNSEEN		F	586	598	97.75	In Earth orbit
376	S59108	2024-043L	BRO-12	2024 Mar 4 2205:00	2024 Mar 5 0032:07	UNSEEN		F	585	597	97.75	In Earth orbit
377	S59109	2024-043M	PX 4 SV3	2024 Mar 4 2205:00	2024 Mar 4 2258:39	ARC		US	505	521	97.47	Reentered
378	S59110	2024-043N	IRIS-F1	2024 Mar 4 2205:00	2024 Mar 4 2300:10	SATORO/NCKU		TW	508	528	97.46	In Earth orbit

379	S59111	2024-043P	Lace B	2024 Mar 4 22:05:00	2024 Mar 4 23:05:42	NIWCP	US	508	97.46	In Earth orbit	
380	S59112	2024-043Q	SONATE-2	2024 Mar 4 22:05:00	2024 Mar 4 22:59:34	WURZ	D	508	97.46	In Earth orbit	
381	S59113	2024-043R	PYXIS	2024 Mar 4 22:05:00	2024 Mar 4 23:07:40	AXEL	J	507	97.46	In Earth orbit	
382	S59114	2024-043S	Veery-0E	2024 Mar 4 22:05:00	2024 Mar 4 22:58:41	CAREWX	US	505	97.47	In Earth orbit	
383	S59115	2024-043T	Lemur-2, CharlieRose	2024 Mar 4 22:05:00	2024 Mar 4 22:59:59	SPIRE/MYRI	US	508	97.46	Reentered	
384	S59116	2024-043U	Lemur-2, Feldhus	2024 Mar 4 22:05:00	2024 Mar 4 23:00:21	SPIRE/MYRI	US	508	97.46	Reentered	
385	S59117	2024-043V	OREUM	2024 Mar 4 22:05:00	2024 Mar 4 22:58:33	CONTEC	KR	507	97.47	In Earth orbit	
386	S59118	2024-043W	Lace A	2024 Mar 4 22:05:00	2024 Mar 4 23:05:08	NIWCP	US	508	97.46	In Earth orbit	
387	S59119	2024-043X	PY4 SV4	2024 Mar 4 22:05:00	2024 Mar 4 22:58:39	ARC	US	505	97.47	In Earth orbit	
388	S59120	2024-043Y	TIGER-8	2024 Mar 4 22:05:00	2024 Mar 4 23:04:34	OOOT	L	507	97.46	In Earth orbit	
389	S59121	2024-043Z	Lynk Tower 5	2024 Mar 4 22:05:00	2024 Mar 4 23:02:30	LYNK	US	508	97.46	In Earth orbit	
390	S59122	2024-043AA	Maria Mitchell	2024 Mar 4 22:05:00	2024 Mar 4 23:00:58	URLUGUS	UY	507	97.46	In Earth orbit	
391	S59123	2024-043AB	Lynk Tower 6	2024 Mar 4 22:05:00	2024 Mar 4 23:02:34	LYNK	US	508	97.46	In Earth orbit	
392	S59124	2024-043AC	VSP Rose	2024 Mar 4 22:05:00	2024 Mar 4 23:08:44	ASPLB	B	508	97.46	In Earth orbit	
393	S59125	2024-043AD	Optimus-2	2024 Mar 4 22:05:00	2024 Mar 4 23:15:35	SPMACH	AU	507	97.46	In Earth orbit	
394	S59126	2024-043AE	YAM-6	2024 Mar 4 22:05:00	2024 Mar 4 23:11:01	LOFT	US	508	97.46	In Earth orbit	
395	S59127	2024-043AF	Jackal X-1L-001	2024 Mar 4 22:05:00	2024 Mar 4 23:17:46	TANOM	US	508	97.46	In Earth orbit	
396	S59128	2024-043AG	OrbAstro-TR2	2024 Mar 4 22:05:00	2024 Mar 4 22:59:23	ORBAS	UK	507	97.46	In Earth orbit	
397	S59129	2024-043AH	Aries 1	2024 Mar 4 22:05:00	2024 Mar 4 23:14:59	APEX	US	508	97.46	In Earth orbit	
398	S59130	2024-043AJ	GHOST-5	2024 Mar 4 22:05:00	2024 Mar 4 23:21:11	ORBSK	US	507	97.46	In Earth orbit	
399	S59131	2024-043AK	MESON-1	2024 Mar 4 22:05:00	2024 Mar 4 23:18:18	ATOMOS	US	507	97.46	In Earth orbit	
400	S59132	2024-043AL	LizhosiSat-1	2024 Mar 4 22:05:00	2024 Mar 4 23:23:08	SIDUS	US	507	97.46	In Earth orbit	
401	S59133	2024-043AM	GHOST-4	2024 Mar 4 22:05:00	2024 Mar 4 23:19:11	ORBSK	US	507	97.46	In Earth orbit	
402	S59134	2024-043AN	Jackal X-1L-002	2024 Mar 4 22:05:00	2024 Mar 4 23:16:36	TANOM	US	507	97.46	In Earth orbit	
403	S59135	2024-043AP	Fifi	2024 Mar 4 22:05:00	2024 Mar 4 23:08:13	ASPLB	B	506	97.46	In Earth orbit	
404	S59136	2024-043AQ	Rifi	2024 Mar 4 22:05:00	2024 Mar 4 23:08:44	ASPLB	B	506	97.46	In Earth orbit	
405	S59137	2024-043AR	Loulou	2024 Mar 4 22:05:00	2024 Mar 4 23:14:24	ASPLB	B	506	97.46	In Earth orbit	
406	S59138	2024-043AS	M3	2024 Mar 4 22:05:00	2024 Mar 4 23:03:32	UMIROL	US	506	97.46	In Earth orbit	
407	S59139	2024-043AT	ONDOSAT-OWL-1	2024 Mar 4 22:05:00	2024 Mar 4 22:59:46	ONDO	US	508	97.46	Reentered	
408	S59140	2024-043AU	Sentry	2024 Mar 4 22:05:00	2024 Mar 4 23:06:55	QUISP	US	507	97.46	In Earth orbit	
409	S59141	2024-043AV	TIGER-7	2024 Mar 4 22:05:00	2024 Mar 4 23:02:54	OOOT	L	507	97.46	In Earth orbit	
410	S59142	2024-043AW	ONDOSAT-OWL-2	2024 Mar 4 22:05:00	2024 Mar 4 22:59:46	ONDO	US	508	97.46	In Earth orbit	
411	S59143	2024-043AX	PY4 SV2	2024 Mar 4 22:05:00	2024 Mar 4 22:59:44	ARC	US	507	97.45	In Earth orbit	
412	S59144	2024-043AY	PY4 SV1	2024 Mar 4 22:05:00	2024 Mar 4 22:59:44	ARC	US	507	97.45	In Earth orbit	
413	S59145	2024-043AZ	AEROS/MH-1	2024 Mar 4 22:05:00	2024 Mar 4 22:58:29	CEIA/VEDISF	P	505	97.47	In Earth orbit	
414	S59146	2024-043BA	Lemur-2, Johnny/Tuung	2024 Mar 4 22:05:00	2024 Mar 4 22:59:10	SPIREG/HUBN	US	506	97.46	In Earth orbit	
415	S59147	2024-043BB	Lemur-2, Rocinante	2024 Mar 4 22:05:00	2024 Mar 4 22:58:50	SPIREG/HUBN	US	506	97.46	In Earth orbit	
416	S59148	2024-043BC	Hammer	2024 Mar 4 22:05:00	2024 Mar 4 22:58:19	OCOS	UK	505	97.46	In Earth orbit	
417	T00023	2024-043	Gluon	2024 Mar 4 22:05:00	-	ATOMOS	US	0	0.00	Attached to PY4 SV4	
418	S59152	2024-044A	Starlink 31312	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	284	292	43.01	In Earth orbit
419	S59153	2024-044B	Starlink 31308	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	284	292	43.01	In Earth orbit
420	S59154	2024-044C	Starlink 31270	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	284	292	43.01	In Earth orbit
421	S59155	2024-044D	Starlink 31341	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	284	292	43.01	In Earth orbit
422	S59156	2024-044E	Starlink 31338	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	284	292	43.01	In Earth orbit
423	S59157	2024-044F	Starlink 31334	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	284	292	43.01	In Earth orbit
424	S59158	2024-044G	Starlink 31297	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	292	43.01	In Earth orbit
425	S59159	2024-044H	Starlink 31182	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	292	43.01	In Earth orbit
426	S59160	2024-044I	Starlink 31327	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
427	S59161	2024-044J	Starlink 31256	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
428	S59162	2024-044L	Starlink 31272	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
429	S59163	2024-044M	Starlink 31278	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
430	S59164	2024-044N	Starlink 31309	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
431	S59165	2024-044P	Starlink 31325	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
432	S59166	2024-044Q	Starlink 31342	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
433	S59167	2024-044R	Starlink 31298	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
434	S59168	2024-044S	Starlink 31322	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
435	S59169	2024-044T	Starlink 31329	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
436	S59170	2024-044U	Starlink 31340	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
437	S59171	2024-044V	Starlink 31344	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
438	S59172	2024-044W	Starlink 31348	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
439	S59173	2024-044X	Starlink 31289	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
440	S59174	2024-044Y	Starlink 31283	2024 Mar 4 23:56:00	2024 Mar 5 01:00:46	SPXS	US	283	291	43.01	In Earth orbit
441	S59175	2024-045A	Starlink 31439	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
442	S59176	2024-045B	Starlink 31459	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
443	S59177	2024-045C	Starlink 31395	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
444	S59181	2024-045D	Starlink 31486	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit

445	S59182	2024-045E	Starlink 31411	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
446	S59183	2024-045F	Starlink 31347	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
447	S59184	2024-045G	Starlink 31382	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
448	S59185	2024-045H	Starlink 31394	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
449	S59186	2024-045I	Starlink 31403	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
450	S59187	2024-045J	Starlink 31514	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
451	S59188	2024-045L	Starlink 31478	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
452	S59189	2024-045M	Starlink 31498	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
453	S59190	2024-045N	Starlink 31558	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
454	S59191	2024-045P	Starlink 31551	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
455	S59192	2024-045Q	Starlink 31536	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
456	S59193	2024-045R	Starlink 31548	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
457	S59194	2024-045S	Starlink 31542	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
458	S59195	2024-045T	Starlink 31554	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
459	S59196	2024-045U	Starlink 31558	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
460	S59197	2024-045V	Starlink 31275	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
461	S59198	2024-045W	Starlink 31590	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
462	S59199	2024-045X	Starlink 31567	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
463	S59200	2024-045Y	Starlink 31503	2024 Mar 10 23:05:00	2024 Mar 11 00:10:29	SPXS	US	284	292	43.01	In Earth orbit
464	S59201	2024-046A	Starlink 31603	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	270	280	53.17	In Earth orbit
465	S59202	2024-046B	Starlink 31602	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	270	280	53.17	In Earth orbit
466	S59203	2024-046C	Starlink 31577	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	270	280	53.17	In Earth orbit
467	S59204	2024-046D	Starlink 31522	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	270	280	53.17	In Earth orbit
468	S59205	2024-046E	Starlink 31586	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	273	276	53.17	In Earth orbit
469	S59206	2024-046F	Starlink 31247	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	273	276	53.17	In Earth orbit
470	S59207	2024-046G	Starlink 31591	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	270	280	53.17	In Earth orbit
471	S59208	2024-046H	Starlink 31576	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	272	276	53.17	In Earth orbit
472	S59209	2024-046I	Starlink 31601	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	269	280	53.17	In Earth orbit
473	S59210	2024-046K	Starlink 31520	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	272	276	53.17	In Earth orbit
474	S59211	2024-046L	Starlink 31496	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	272	276	53.17	In Earth orbit
475	S59212	2024-046M	Starlink 31492	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	269	280	53.17	In Earth orbit
476	S59213	2024-046N	Starlink 31517	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	269	280	53.17	In Earth orbit
477	S59214	2024-046P	Starlink 31604	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	271	277	53.17	In Earth orbit
478	S59215	2024-046Q	Starlink 31434	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	271	277	53.17	In Earth orbit
479	S59216	2024-046R	Starlink 31417	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	269	280	53.17	In Earth orbit
480	S59217	2024-046S	Starlink 31499	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	271	277	53.17	In Earth orbit
481	S59218	2024-046T	Starlink 31421	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	271	277	53.17	In Earth orbit
482	S59219	2024-046U	Starlink 31518	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	269	280	53.17	In Earth orbit
483	S59220	2024-046V	Starlink 31523	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	269	280	53.17	In Earth orbit
484	S59221	2024-046W	Starlink 31516	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	270	277	53.17	In Earth orbit
485	S59222	2024-046X	Starlink 31490	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	270	277	53.17	In Earth orbit
486	S59223	2024-046Y	Starlink 31420	2024 Mar 11 04:09:00	2024 Mar 11 05:11:03	SPXS	US	269	280	53.17	In Earth orbit
487	S59224	2024-047A	SriX-3	2024 Mar 12 15:03	2024 Mar 12 15:56	SYNSP	J	554	580	97.56	In Earth orbit
488	S59228	2024-048A	DRO-A	2024 Mar 13 12:51	2024 Mar 13 13:20	CASC/CSUCAS	CN	537	132602	27.76	Luna
489	S60058	2024-048D	DRO-B	2024 Mar 13 12:51	2024 Mar 13 13:20	CASC/CSUCAS	CN	525	132577	27.72	Luna
490	A11167	2024-U01	Starship FT-3	2024 Mar 14 13:25:00	2024 Mar 14 13:33:35	SPX	US	-50	234	26.50	Orbit insertion
491	S59231	2024-049A	Starlink 31304	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
492	S59232	2024-049B	Starlink 31305	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
493	S59233	2024-049C	Starlink 31459	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
494	S59234	2024-049D	Starlink 31438	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
495	S59235	2024-049E	Starlink 31467	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
496	S59236	2024-049F	Starlink 31444	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
497	S59237	2024-049G	Starlink 31505	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
498	S59238	2024-049H	Starlink 31494	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
499	S59239	2024-049I	Starlink 31303	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
500	S59240	2024-049K	Starlink 31408	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
501	S59241	2024-049L	Starlink 31427	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
502	S59242	2024-049M	Starlink 31423	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
503	S59243	2024-049N	Starlink 31433	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
504	S59244	2024-049P	Starlink 31285	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
505	S59245	2024-049Q	Starlink 31268	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
506	S59246	2024-049R	Starlink 31284	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
507	S59247	2024-049S	Starlink 31424	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
508	S59248	2024-049T	Starlink 31405	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
509	S59249	2024-049U	Starlink 31426	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
510	S59250	2024-049V	Starlink 31407	2024 Mar 16 00:21:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit

511	S59251	2024-049W	Starlink 31418	2024 Mar 16 0021:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
512	S59252	2024-049X	Starlink 31393	2024 Mar 16 0021:00	2024 Mar 16 01:26:29	SPXS	US	279	288	43.01	In Earth orbit
513	S59253	2024-049Y	Starlink 31425	2024 Mar 16 0021:00	2024 Mar 16 01:26:29	SPXS	US	278	288	43.01	In Earth orbit
514	S59254	2024-050A	Starlink 31659	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
515	S59255	2024-050B	Starlink 31629	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
516	S59256	2024-050C	Starlink 31652	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
517	S59257	2024-050D	Starlink 31655	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
518	S59258	2024-050E	Starlink 31637	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
519	S59259	2024-050F	Starlink 31506	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
520	S59260	2024-050G	Starlink 31288	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
521	S59261	2024-050H	Starlink 31639	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
522	S59262	2024-050I	Starlink 31673	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
523	S59263	2024-050K	Starlink 31598	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
524	S59264	2024-050L	Starlink 31645	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
525	S59265	2024-050M	Starlink 31646	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
526	S59266	2024-050N	Starlink 31648	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
527	S59267	2024-050P	Starlink 31579	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
528	S59268	2024-050Q	Starlink 31627	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
529	S59269	2024-050R	Starlink 31609	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
530	S59270	2024-050S	Starlink 31616	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
531	S59271	2024-050T	Starlink 31630	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
532	S59272	2024-050U	Starlink 31623	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
533	S59273	2024-050V	Starlink 31595	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
534	S59274	2024-050W	USA 350	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
535	S59275	2024-050X	USA 351	2024 Mar 19 02:28:00	2024 Mar 19 03:30:26	SPXS	US	305	314	53.17	In Earth orbit
536	S59276	2024-051A	Queqiao-2	2024 Mar 20 00:55:00	2024 Mar 20 00:55:00	CLEP	CN	199	420000	22.63	Luna
537	S59278	2024-051C	Tiandu-1	2024 Mar 20 00:31:28	2024 Mar 20 00:55:00	SKTSS	CN	358	402360	21.01	Luna
538	S59279	2024-051D	Tiandu-2	2024 Mar 20 00:31:28	2024 Apr 3	SKTSS	CN	358	402360	21.01	Luna
539	S59280	2024-052A	Yunhai-2 02 zu 01 xing	2024 Mar 21 05:27	2024 Mar 21 07:00?	CASC	CN	1131	1140	50.10	In Earth orbit
540	S59281	2024-052B	Yunhai-2 02 zu 02 xing	2024 Mar 21 05:27	2024 Mar 21 07:00?	CASC	CN	1130	1139	50.09	In Earth orbit
541	S59282	2024-052C	Yunhai-2 02 zu 03 xing	2024 Mar 21 05:27	2024 Mar 21 07:00?	CASC	CN	1128	1138	50.10	In Earth orbit
542	S59283	2024-052D	Yunhai-2 02 zu 04 xing	2024 Mar 21 05:27	2024 Mar 21 07:00?	CASC	CN	475	486	50.10	In Earth orbit
543	S59284	2024-052E	Yunhai-2 02 zu 05 xing	2024 Mar 21 05:27	2024 Mar 21 07:00?	CASC	CN	473	485	50.10	In Earth orbit
544	S59285	2024-052F	Yunhai-2 02 zu 06 xing	2024 Mar 21 05:27	2024 Mar 21 07:00?	CASC	CN	471	485	50.10	In Earth orbit
545	S59288	2024-053A	USA 352	2024 Mar 21 07:25	2024 Mar 21 08:26?	NROC	US	417	430	50.00	In Earth orbit
546	S59290	2024-053B	Mola	2024 Mar 21 07:25	2024 Mar 21 08:26?	USNPS	US	509	517	50.00	In Earth orbit
547	S59292	2024-053C	Aerocube 16A	2024 Mar 21 07:25	2024 Mar 21 08:26?	AERO	US	509	515	50.01	In Earth orbit
548	S59291	2024-053D	Aerocube 16B	2024 Mar 21 07:25	2024 Mar 21 08:26?	AERO	US	509	514	50.00	In Earth orbit
549	S59287	2024-054A	Dragon CRS-30	2024 Mar 21 20:55:09	2024 Mar 21 21:07:01	SPX	US	193	211	51.65	Landed
550	S59283	1998-067WF	MicroOrbiter-1	2024 Mar 21 20:55:09	2024 Apr 11 10:35	MICORB	J	411	415	51.64	Reentered
551	S59507	1998-067WG	CURTIS	2024 Mar 21 20:55:09	2024 Apr 11 10:35	KYUT	J	410	414	51.64	Reentered
552	S59508	1998-067WH	Kashiwa	2024 Mar 21 20:55:09	2024 Apr 11 10:35	CHIBA	J	411	416	51.64	Reentered
553	S59559	1998-067WJ	Killick-1	2024 Mar 21 20:55:09	2024 Apr 18 17:55	MUNF	CA	409	413	51.64	Reentered
554	S59560	1998-067WK	QMSAT	2024 Mar 21 20:55:09	2024 Apr 18 17:55	UDES	CA	409	412	51.64	Reentered
555	S59561	1998-067WL	HyTi	2024 Mar 21 20:55:09	2024 Apr 18 17:55	UHI	US	410	413	51.64	Reentered
556	S59562	1998-067WM	BurstCube	2024 Mar 21 20:55:09	2024 Apr 18 11:26	GSFC	US	409	416	51.64	Reentered
557	S59563	1998-067WN	SNoOPI	2024 Mar 21 20:55:09	2024 Apr 18 11:26	GSFC	US	407	412	51.64	Reentered
558	S59596	1998-067WP	VIOLLET	2024 Mar 21 20:55:09	2024 Apr 18 17:55	UNBRUN	CA	404	410	51.64	Reentered
559	S59597	1998-067WQ	Big Red Sat 1	2024 Mar 21 20:55:09	2024 Apr 18 18:05	UNL	US	404	410	51.64	Reentered
560	S59294	2024-055A	Soyuz MS-25	2024 Mar 23 12:36:10	2024 Mar 23 12:46:59	RKKE	RU	330	367	51.64	Landed
561	S59296	2024-056A	Starlink 31463	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	285	292	43.01	In Earth orbit
562	S59297	2024-056B	Starlink 31487	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	285	292	43.01	In Earth orbit
563	S59298	2024-056C	Starlink 31386	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	285	292	43.01	In Earth orbit
564	S59299	2024-056D	Starlink 31409	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	285	292	43.01	In Earth orbit
565	S59300	2024-056E	Starlink 31489	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
566	S59301	2024-056F	Starlink 31502	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
567	S59302	2024-056G	Starlink 31447	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
568	S59303	2024-056H	Starlink 31504	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
569	S59304	2024-056I	Starlink 31474	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
570	S59305	2024-056K	Starlink 31500	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
571	S59306	2024-056L	Starlink 31480	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
572	S59307	2024-056M	Starlink 31282	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
573	S59308	2024-056N	Starlink 31485	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
574	S59309	2024-056P	Starlink 31455	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
575	S59310	2024-056Q	Starlink 31475	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
576	S59311	2024-056K	Starlink 31469	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	Reentered

577	S59312	2024-0565	Startlink 31445	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
578	S59313	2024-0561	Startlink 31495	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
579	S59314	2024-0560	Startlink 31477	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
580	S59315	2024-056V	Startlink 31446	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
581	S59316	2024-056V	Startlink 31479	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
582	S59317	2024-056X	Startlink 31349	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
583	S59318	2024-056Y	Startlink 31464	2024 Mar 24 03:09:00	2024 Mar 24 04:14:27	SPXS	US	284	292	43.01	In Earth orbit
584	S59320	2024-057A	Startlink 31402	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
585	S59321	2024-057B	Startlink 31578	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
586	S59322	2024-057C	Startlink 31530	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
587	S59323	2024-057D	Startlink 31565	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
588	S59324	2024-057E	Startlink 31570	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
589	S59325	2024-057F	Startlink 31611	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
590	S59326	2024-057G	Startlink 31632	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	285	293	43.01	In Earth orbit
591	S59327	2024-057H	Startlink 31599	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
592	S59328	2024-057I	Startlink 31614	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	285	292	43.01	In Earth orbit
593	S59329	2024-057K	Startlink 31493	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	285	293	43.01	In Earth orbit
594	S59330	2024-057L	Startlink 31634	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	285	292	43.01	In Earth orbit
595	S59331	2024-057M	Startlink 31633	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	285	293	43.01	In Earth orbit
596	S59332	2024-057N	Startlink 31594	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
597	S59333	2024-057P	Startlink 31572	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
598	S59334	2024-057Q	Startlink 31573	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
599	S59335	2024-057R	Startlink 31588	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
600	S59336	2024-057S	Startlink 31596	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	292	43.01	In Earth orbit
601	S59337	2024-057T	Startlink 31612	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	292	43.01	In Earth orbit
602	S59338	2024-057U	Startlink 31550	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	293	43.01	In Earth orbit
603	S59339	2024-057V	Startlink 31473	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	292	43.01	In Earth orbit
604	S59340	2024-057W	Startlink 31562	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	292	43.01	In Earth orbit
605	S59341	2024-057X	Startlink 31600	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	292	43.01	In Earth orbit
606	S59342	2024-057Y	Startlink 31628	2024 Mar 25 23:42:00	2024 Mar 26 00:47:27	SPXS	US	284	292	43.01	In Earth orbit
607	S59343	2024-058A	Yunhai-3 02	2024 Mar 26 22:51	2024 Mar 26 23:07:7	SASIT	CN	840	856	98.82	In Earth orbit
608	S59346	2024-060A	EUTELSAT 36D	2024 Mar 30 21:52:00	2024 Mar 30 22:25	EUTSA	F	265	6146	26.94	In Earth orbit
609	S59348	2024-060A	Startlink 31605	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	285	292	43.01	In Earth orbit
610	S59349	2024-060B	Startlink 31532	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	285	292	43.01	In Earth orbit
611	S59350	2024-060C	Startlink 31593	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
612	S59351	2024-060D	Startlink 31555	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
613	S59352	2024-060E	Startlink 31561	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
614	S59353	2024-060F	Startlink 31413	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
615	S59354	2024-060G	Startlink 31422	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
616	S59355	2024-060H	Startlink 31416	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
617	S59356	2024-060I	Startlink 31552	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
618	S59357	2024-060K	Startlink 31557	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
619	S59358	2024-060L	Startlink 31559	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
620	S59359	2024-060M	Startlink 31501	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
621	S59360	2024-060N	Startlink 31549	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
622	S59361	2024-060O	Startlink 31560	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
623	S59362	2024-060Q	Startlink 31571	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
624	S59363	2024-060R	Startlink 31553	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.00	In Earth orbit
625	S59364	2024-060S	Startlink 31547	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.00	In Earth orbit
626	S59365	2024-060T	Startlink 31537	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.00	In Earth orbit
627	S59366	2024-060U	Startlink 31451	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.00	In Earth orbit
628	S59367	2024-060V	Startlink 31428	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.00	In Earth orbit
629	S59368	2024-060W	Startlink 31419	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.00	In Earth orbit
630	S59369	2024-060X	Startlink 31583	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
631	S59370	2024-060Y	Startlink 31461	2024 Mar 31 01:30:00	2024 Mar 31 02:35:21	SPXS	US	284	292	43.01	In Earth orbit
632	S59371	2024-061A	Resurs-P No. 4	2024 Mar 31 09:36:45	2024 Mar 31 09:46:07	TSSKBPP?	RU	285	465	97.19	In Earth orbit
633	S59374	2024-062A	Startlink 31641	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
634	S59375	2024-062B	Startlink 31430	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
635	S59376	2024-062C	Startlink 31695	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
636	S59377	2024-062D	Startlink 31716	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
637	S59378	2024-062E	Startlink 31710	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
638	S59379	2024-062F	Startlink 31698	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
639	S59380	2024-062G	Startlink 31680	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
640	S59381	2024-062H	Startlink 31713	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
641	S59382	2024-062I	Startlink 31705	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	285	293	53.17	In Earth orbit
642	S59383	2024-062K	Startlink 31709	2024 Apr 2 02:30:00	2024 Apr 2 03:32:22	SPXS	US	284	293	53.17	In Earth orbit

643	S59384	2024-062L	Starlink 31715	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
644	S59385	2024-062M	Starlink 31717	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
645	S59386	2024-062N	Starlink 31688	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
646	S59387	2024-062P	Starlink 31714	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
647	S59388	2024-062Q	Starlink 31643	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
648	S59389	2024-062R	Starlink 31647	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
649	S59390	2024-062S	Starlink 31649	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
650	S59391	2024-062T	Starlink 31644	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
651	S59392	2024-062U	Starlink 31626	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
652	S59393	2024-062V	Starlink 31443	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
653	S59394	2024-062W	Starlink 31607	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
654	S59395	2024-062X	Starlink 31608	2024 Apr 2 0230:00	2024 Apr 2 0332:22	SPXS	US	284	293	53.17	In Earth orbit
655	S59396	2024-062A	Yaogun-42 hao 01 xing	2024 Apr 2 2256	2024 Apr 2 2308?2	ZZB	CN	491	502	35.00	In Earth orbit
656	S59398	2024-064A	Starlink 31534	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	285	292	43.01	In Earth orbit
657	S59399	2024-064B	Starlink 31544	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	285	292	43.01	In Earth orbit
658	S59400	2024-064C	Starlink 31545	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	285	292	43.01	In Earth orbit
659	S59401	2024-064D	Starlink 31507	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
660	S59402	2024-064E	Starlink 31543	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
661	S59403	2024-064F	Starlink 31366	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
662	S59404	2024-064G	Starlink 31374	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
663	S59405	2024-064H	Starlink 31400	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
664	S59406	2024-064J	Starlink 31391	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
665	S59407	2024-064K	Starlink 31387	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
666	S59408	2024-064L	Starlink 31367	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.01	In Earth orbit
667	S59409	2024-064M	Starlink 31396	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
668	S59410	2024-064N	Starlink 31412	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
669	S59411	2024-064P	Starlink 31483	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
670	S59412	2024-064Q	Starlink 31568	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
671	S59413	2024-064R	Starlink 31615	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
672	S59414	2024-064S	Starlink 31457	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
673	S59415	2024-064T	Starlink 31398	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
674	S59416	2024-064U	Starlink 31399	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
675	S59417	2024-064V	Starlink 31401	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
676	S59418	2024-064W	Starlink 31414	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
677	S59419	2024-064X	Starlink 31415	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
678	S59420	2024-064Y	Starlink 31466	2024 Apr 5 0912:00	2024 Apr 5 1017:29	SPXS	US	284	292	43.00	In Earth orbit
679	S59421	2024-065A	Starlink 11087	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
680	S59422	2024-065B	Starlink 11090	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
681	S59423	2024-065C	Starlink 11093	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
682	S59424	2024-065D	Starlink 11083	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
683	S59425	2024-065E	Starlink 11085	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
684	S59426	2024-065F	Starlink 11089	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
685	S59427	2024-065G	Starlink 31757	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
686	S59428	2024-065H	Starlink 31752	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
687	S59429	2024-065J	Starlink 31773	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
688	S59430	2024-065K	Starlink 31772	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
689	S59431	2024-065L	Starlink 31613	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	336	344	53.18	In Earth orbit
690	S59432	2024-065M	Starlink 31780	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
691	S59433	2024-065N	Starlink 31740	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
692	S59434	2024-065P	Starlink 31580	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
693	S59435	2024-065Q	Starlink 31696	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
694	S59436	2024-065R	Starlink 31700	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
695	S59437	2024-065S	Starlink 31706	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
696	S59438	2024-065T	Starlink 31711	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
697	S59439	2024-065U	Starlink 31708	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
698	S59440	2024-065V	Starlink 31682	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
699	S59441	2024-065W	Starlink 31693	2024 Apr 7 0225:00	2024 Apr 7 0327:37	SPXS	US	335	344	53.18	In Earth orbit
700	S59442	2024-066A	TSAT-1A	2024 Apr 7 2316	2024 Apr 8 0015?2	TA5L	IN	564	573	45.42	In Earth orbit
701	S59443	2024-066B	Hawk 8A	2024 Apr 7 2316	2024 Apr 8 0015?2	HE360	US	590	594	45.61	In Earth orbit
702	S59444	2024-066C	Capella 14	2024 Apr 7 2316	2024 Apr 8 0015?2	CAPSP	US	588	593	45.60	In Earth orbit
703	S59445	2024-066D	Hawk 8B	2024 Apr 7 2316	2024 Apr 8 0015?2	HE360	US	589	595	45.61	In Earth orbit
704	S59446	2024-066E	Hawk 9A	2024 Apr 7 2316	2024 Apr 8 0015?2	HE360	US	589	594	45.61	In Earth orbit
705	S59447	2024-066F	Tsukuyomi-II	2024 Apr 7 2316	2024 Apr 8 0015?2	QPS	J	590	595	45.61	In Earth orbit
706	S59448	2024-066G	Hawk 9C	2024 Apr 7 2316	2024 Apr 8 0015?2	HE360	US	589	592	45.61	In Earth orbit
707	S59449	2024-066H	Hawk 8C	2024 Apr 7 2316	2024 Apr 8 0015?2	HE360	US	589	594	45.61	In Earth orbit
708	S59450	2024-066I	Hawk 9B	2024 Apr 7 2316	2024 Apr 8 0015?2	HE360	US	589	594	45.61	In Earth orbit

709	S59451	2024-066K	Centauri 6	2024 Apr 7 2316	2024 Apr 8 0015?	FLEET	AU	589	592	45.61	In Earth orbit
710	S59452	2024-066L	425 Project SAR	2024 Apr 7 2316	2024 Apr 8 0010?	DAPA	KR	590	596	45.61	In Earth orbit
711	S59453	2024-067A	USA 353	2024 Apr 9 1653	2024 Apr 9 2235?	NROC	US	35511	36256	7.97	In Earth orbit
712	S59454	2024-068A	Startink 31617	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	285	292	43.01	In Earth orbit
713	S59455	2024-068B	Startink 31622	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
714	S59457	2024-068C	Startink 31319	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
715	S59458	2024-068D	Startink 31625	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
716	S59459	2024-068E	Startink 31631	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
717	S59460	2024-068F	Startink 31620	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
718	S59461	2024-068G	Startink 31482	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
719	S59462	2024-068H	Startink 31511	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	Reentered
720	S59463	2024-068I	Startink 31364	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
721	S59464	2024-068K	Startink 31597	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
722	S59465	2024-068L	Startink 31621	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
723	S59466	2024-068M	Startink 31462	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
724	S59467	2024-068N	Startink 31592	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
725	S59468	2024-068P	Startink 31267	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
726	S59469	2024-068Q	Startink 31381	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
727	S59470	2024-068R	Startink 31546	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
728	S59471	2024-068S	Startink 31575	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
729	S59472	2024-068T	Startink 31375	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	Reentered
730	S59473	2024-068U	Startink 31610	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
731	S59474	2024-068V	Startink 31581	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
732	S59475	2024-068W	Startink 31566	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
733	S59476	2024-068X	Startink 31515	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
734	S59477	2024-068Y	Startink 31531	2024 Apr 10 0540:00	2024 Apr 10 0645:34	SPXS	US	284	292	43.01	In Earth orbit
735	S59479	2024-069A	GMM KA	2024 Apr 11 0900	-	KHRU	RU	36051	36469	0.07	Attached to Orion No. 1TTL
736	S59480	2024-069B	ADY00.00.000-01	2024 Apr 11 0900	2024 Apr 11 0920?	KHRU	RU	196	447	51.72	Reentered
737	S59509	2024-069D	Gagamets	2024 Apr 11 0900	2024 Apr 11 0920?	AVSP	RU	196	450	51.73	Reentered
738	S59481	2024-070A	WSE-M SV1	2024 Apr 11 1425	2024 Apr 11 1519:57	SFSSC	US	819	828	98.71	In Earth orbit
739	S59484	2024-071A	Startink 31753	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
740	S59485	2024-071B	Startink 31653	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
741	S59486	2024-071C	Startink 31733	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
742	S59487	2024-071D	Startink 31657	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
743	S59488	2024-071E	Startink 31754	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
744	S59489	2024-071F	Startink 31638	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
745	S59490	2024-071G	Startink 31670	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
746	S59491	2024-071H	Startink 31712	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
747	S59492	2024-071J	Startink 31684	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
748	S59493	2024-071K	Startink 31678	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
749	S59494	2024-071L	Startink 31744	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
750	S59495	2024-071M	Startink 31719	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
751	S59496	2024-071N	Startink 31728	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
752	S59497	2024-071P	Startink 31720	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
753	S59498	2024-071Q	Startink 31731	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
754	S59499	2024-071R	Startink 31742	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
755	S59500	2024-071S	Startink 31512	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
756	S59501	2024-071T	Startink 31458	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
757	S59502	2024-071U	Startink 31357	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
758	S59503	2024-071V	Startink 31508	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
759	S59504	2024-071W	Startink 31535	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
760	S59505	2024-071X	Startink 31533	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
761	S59506	2024-071Y	Startink 31524	2024 Apr 13 0140:00	2024 Apr 13 0245:24	SPXS	US	283	291	43.01	In Earth orbit
762	S59510	2024-072A	Startink 31635	2024 Apr 15 0412	2024 Apr 15 0425?	SIWEI	CN	489	503	97.49	In Earth orbit
763	S59511	2024-073A	Startink 31635	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	285	292	43.01	In Earth orbit
764	S59512	2024-073B	Startink 31650	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	285	292	43.01	In Earth orbit
765	S59513	2024-073C	Startink 31638	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	285	292	43.01	In Earth orbit
766	S59514	2024-073D	Startink 31664	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	285	292	43.01	In Earth orbit
767	S59515	2024-073E	Startink 31669	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	285	292	43.01	In Earth orbit
768	S59516	2024-073F	Startink 31671	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	285	292	43.01	In Earth orbit
769	S59517	2024-073G	Startink 31674	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	284	292	43.01	In Earth orbit
770	S59518	2024-073H	Startink 31672	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	284	292	43.01	Reentered
771	S59519	2024-073I	Startink 31679	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	284	292	43.01	In Earth orbit
772	S59520	2024-073K	Startink 31370	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	284	292	43.01	In Earth orbit
773	S59521	2024-073L	Startink 31404	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	284	292	43.01	In Earth orbit
774	S59522	2024-073M	Startink 31453	2024 Apr 17 2126:00	2024 Apr 17 2231:23	SPXS	US	284	292	43.01	In Earth orbit

775	S59523	2024-073N	Startlink 31476	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	293	43.01	In Earth orbit
776	S59524	2024-073P	Startlink 31376	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
777	S59525	2024-073Q	Startlink 31538	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
778	S59526	2024-073R	Startlink 31564	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
779	S59527	2024-073S	Startlink 31452	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
780	S59528	2024-073T	Startlink 31618	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
781	S59529	2024-073U	Startlink 31513	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
782	S59530	2024-073V	Startlink 31392	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
783	S59531	2024-073W	Startlink 31619	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
784	S59532	2024-073X	Startlink 31624	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
785	S59533	2024-073Y	Startlink 31509	2024 Apr 17 21:26:00	2024 Apr 17 22:31:23	SPXS	US	284	292	43.01	In Earth orbit
786	S59534	2024-074A	Startlink 31734	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
787	S59535	2024-074B	Startlink 31738	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
788	S59536	2024-074C	Startlink 31721	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
789	S59537	2024-074D	Startlink 31722	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
790	S59538	2024-074E	Startlink 31757	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
791	S59539	2024-074F	Startlink 31725	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
792	S59540	2024-074G	Startlink 31539	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
793	S59541	2024-074H	Startlink 31397	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
794	S59542	2024-074I	Startlink 31481	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
795	S59543	2024-074J	Startlink 31540	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
796	S59544	2024-074K	Startlink 31574	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
797	S59545	2024-074L	Startlink 31556	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
798	S59546	2024-074M	Startlink 31582	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
799	S59547	2024-074N	Startlink 31519	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	284	292	43.01	In Earth orbit
800	S59548	2024-074P	Startlink 31736	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
801	S59549	2024-074R	Startlink 31675	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
802	S59550	2024-074S	Startlink 31722	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
803	S59551	2024-074T	Startlink 31741	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
804	S59552	2024-074U	Startlink 31699	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
805	S59553	2024-074V	Startlink 31750	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
806	S59554	2024-074W	Startlink 31723	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
807	S59555	2024-074X	Startlink 31724	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
808	S59556	2024-074Y	Startlink 31730	2024 Apr 18 22:40:00	2024 Apr 18 23:46:10	SPXS	US	283	292	43.01	In Earth orbit
809	S59557	2024-075A	Startlink 31718	2024 Apr 20 23:45	2024 Apr 20 23:57	Z/B	CN	490	502	35.00	In Earth orbit
810	S59564	2024-076A	Yaogan 42 hao 02 xing	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
811	S59565	2024-076B	Startlink 31388	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
812	S59566	2024-076C	Startlink 31332	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
813	S59567	2024-076D	Startlink 31689	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
814	S59568	2024-076E	Startlink 31471	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
815	S59569	2024-076F	Startlink 31470	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
816	S59570	2024-076G	Startlink 31587	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
817	S59571	2024-076H	Startlink 31606	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
818	S59572	2024-076I	Startlink 31666	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
819	S59573	2024-076K	Startlink 31683	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
820	S59574	2024-076L	Startlink 31751	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
821	S59575	2024-076M	Startlink 31510	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
822	S59576	2024-076N	Startlink 31663	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
823	S59577	2024-076P	Startlink 31692	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
824	S59578	2024-076Q	Startlink 31685	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
825	S59579	2024-076R	Startlink 31686	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.01	In Earth orbit
826	S59580	2024-076S	Startlink 31668	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.00	In Earth orbit
827	S59581	2024-076T	Startlink 31690	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.00	In Earth orbit
828	S59582	2024-076U	Startlink 31701	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.00	In Earth orbit
829	S59583	2024-076V	Startlink 31697	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.00	In Earth orbit
830	S59584	2024-076W	Startlink 31662	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.00	In Earth orbit
831	S59585	2024-076X	Startlink 31702	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.00	In Earth orbit
832	S59586	2024-076Y	Startlink 31704	2024 Apr 23 22:17:00	2024 Apr 23 23:22:06	SPXS	US	284	292	43.00	In Earth orbit
833	S59587	2024-077A	Neonsat-1	2024 Apr 23 22:32	2024 Apr 23 23:22	KAISIT	KR	504	528	97.41	In Earth orbit
834	S59588	2024-077B	ACS3	2024 Apr 24 00:17	2024 Apr 24 00:17	ARC	US	987	1020	97.41	In Earth orbit
835	S59591	2024-078A	Shenzhou 18	2024 Apr 25 13:08:36	2024 Apr 25 13:08:36	CMISEO	CN	374	385	41.47	Launched
836	S59598	2024-079A	GalileoSat-29	2024 Apr 28 00:34	2024 Apr 28 04:20	EUSPA	I-UEU	22945	23074	54.67	In Earth orbit
837	S59600	2024-079C	GalileoSat-30	2024 Apr 28 00:08	2024 Apr 28 04:20	EUSPA	I-UEU	23190	23322	54.68	In Earth orbit
838	S59601	2024-080A	Startlink 31770	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	293	43.01	In Earth orbit
839	S59602	2024-080B	Startlink 31778	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	293	43.01	In Earth orbit
840	S59603	2024-080C	Startlink 31776	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	293	43.01	In Earth orbit

841	S59604	2024-080D	Startlink 31765	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	293	43.01	In Earth orbit
842	S59605	2024-080E	Startlink 31767	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	293	43.01	In Earth orbit
843	S59606	2024-080F	Startlink 31782	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
844	S59607	2024-080G	Startlink 31755	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	293	43.01	In Earth orbit
845	S59608	2024-080H	Startlink 31585	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	293	43.01	In Earth orbit
846	S59609	2024-080I	Startlink 31667	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
847	S59610	2024-080K	Startlink 31729	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
848	S59611	2024-080L	Startlink 31448	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
849	S59612	2024-080M	Startlink 31748	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
850	S59613	2024-080N	Startlink 31746	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
851	S59614	2024-080P	Startlink 31762	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
852	S59615	2024-080Q	Startlink 31761	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
853	S59616	2024-080R	Startlink 31768	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
854	S59617	2024-080S	Startlink 31769	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
855	S59618	2024-080T	Startlink 31784	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
856	S59619	2024-080U	Startlink 31777	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	285	292	43.01	In Earth orbit
857	S59620	2024-080V	Startlink 31771	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	284	293	43.01	In Earth orbit
858	S59621	2024-080W	Startlink 31758	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	284	292	43.01	In Earth orbit
859	S59622	2024-080X	Startlink 31774	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	284	292	43.01	In Earth orbit
860	S59623	2024-080Y	Startlink 31763	2024 Apr 28 22:08:00	2024 Apr 28 23:13:24	SPXS	US	284	292	43.01	In Earth orbit
861	S59625	2024-081A	WorldView Legion 1	2024 May 2 18:36	2024 May 2 18:49:05	MAXXARI	US	514	520	97.58	In Earth orbit
862	S59626	2024-081B	WorldView Legion 2	2024 May 3 02:37:00	2024 May 3 03:42:29	MAXXARI	US	514	520	97.58	In Earth orbit
863	S59631	2024-082A	Startlink 31749	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
864	S59632	2024-082B	Startlink 31781	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
865	S59633	2024-082C	Startlink 31541	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
866	S59634	2024-082D	Startlink 31797	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
867	S59635	2024-082E	Startlink 31798	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
868	S59636	2024-082F	Startlink 31802	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
869	S59637	2024-082G	Startlink 31791	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
870	S59638	2024-082H	Startlink 31727	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
871	S59639	2024-082I	Startlink 31807	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
872	S59640	2024-082K	Startlink 31806	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
873	S59641	2024-082L	Startlink 31804	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
874	S59642	2024-082M	Startlink 31800	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
875	S59643	2024-082N	Startlink 31800	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
876	S59644	2024-082P	Startlink 31789	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
877	S59645	2024-082Q	Startlink 31795	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
878	S59646	2024-082R	Startlink 31796	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
879	S59647	2024-082S	Startlink 31801	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	284	292	43.01	In Earth orbit
880	S59648	2024-082T	Startlink 31790	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	283	292	43.01	In Earth orbit
881	S59649	2024-082U	Startlink 31803	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	283	292	43.01	In Earth orbit
882	S59650	2024-082V	Startlink 31787	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	283	292	43.01	In Earth orbit
883	S59651	2024-082W	Startlink 31277	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	283	292	43.01	In Earth orbit
884	S59652	2024-082X	Startlink 31799	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	283	292	43.01	In Earth orbit
885	S59653	2024-082Y	Startlink 31764	2024 May 3 02:37:00	2024 May 3 03:42:29	SPXS	US	283	292	43.01	In Earth orbit
886	S59627	2024-083A	Chang e-6 Guidao Qi	2024 May 3 09:27:29	2024 May 3 10:04:19	LDSE/SAST	US	267	386843	24.51	In Earth orbit
887	S59629	2024-083C	ICUBE-Q	2024 May 3 09:27:29	2024 May 8 08:14:36	ISTPK/SJTU	PK	-88	518078	23.04	Luna
888	S59654	2024-084A	Startlink 31589	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
889	S59655	2024-084B	Startlink 31665	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
890	S59656	2024-084C	Startlink 31912	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
891	S59657	2024-084D	Startlink 31904	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
892	S59658	2024-084E	Startlink 31858	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
893	S59659	2024-084F	Startlink 31881	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
894	S59660	2024-084G	Startlink 31885	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
895	S59661	2024-084H	Startlink 31880	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
896	S59662	2024-084I	Startlink 31886	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
897	S59663	2024-084K	Startlink 31909	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
898	S59664	2024-084L	Startlink 31910	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
899	S59665	2024-084M	Startlink 31894	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
900	S59666	2024-084N	Startlink 31902	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
901	S59667	2024-084P	Startlink 31913	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	292	43.01	In Earth orbit
902	S59668	2024-084Q	Startlink 31866	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
903	S59669	2024-084R	Startlink 31917	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
904	S59670	2024-084S	Startlink 31860	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
905	S59671	2024-084T	Startlink 31854	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
906	S59672	2024-084U	Startlink 31842	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit

907	S59673	2024-084V	Starlink 31871	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
908	S59674	2024-084W	Starlink 31875	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
909	S59675	2024-084X	Starlink 31877	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	284	291	43.01	In Earth orbit
910	S59676	2024-084Y	Starlink 31884	2024 May 6 18:14:00	2024 May 6 19:19:23	SPXS	US	283	291	43.01	In Earth orbit
911	S59677	2024-085A	Haixiangxing-01	2024 May 7 03:21	2024 May 7 03:36:67	ZHKO	CN	493	511	97.41	In Earth orbit
912	S59678	2024-085B	Zhixing 1C	2024 May 7 03:21	2024 May 7 03:36:67	ZHKO	CN	491	510	97.41	In Earth orbit
913	S59679	2024-085C	Kuantu Guangxue Weixing	2024 May 7 03:21	2024 May 7 03:36:67	HARB	CN	492	511	97.40	In Earth orbit
914	S59680	2024-085D	Gaofen Shipin Weixing	2024 May 7 03:21	2024 May 7 03:36:67	HARB	CN	493	511	97.41	In Earth orbit
915	S59682	2024-086A	Starlink 32108	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
916	S59683	2024-086B	Starlink 32080	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
917	S59684	2024-086C	Starlink 32091	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
918	S59685	2024-086D	Starlink 32085	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
919	S59686	2024-086E	Starlink 32100	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
920	S59687	2024-086F	Starlink 32089	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
921	S59688	2024-086G	Starlink 32103	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
922	S59689	2024-086H	Starlink 32105	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
923	S59690	2024-086I	Starlink 32106	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
924	S59691	2024-086K	Starlink 32090	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	313	320	43.01	In Earth orbit
925	S59692	2024-086L	Starlink 32095	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
926	S59693	2024-086M	Starlink 32088	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
927	S59694	2024-086N	Starlink 32107	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
928	S59695	2024-086P	Starlink 32104	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
929	S59696	2024-086Q	Starlink 32094	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
930	S59697	2024-086R	Starlink 32099	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
931	S59698	2024-086S	Starlink 32096	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
932	S59699	2024-086T	Starlink 32102	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
933	S59700	2024-086U	Starlink 32092	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
934	S59701	2024-086V	Starlink 32093	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
935	S59702	2024-086W	Starlink 32087	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
936	S59703	2024-086X	Starlink 32086	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
937	S59704	2024-086Y	Starlink 32098	2024 May 8 18:42:00	2024 May 8 19:47:39	SPXS	US	312	320	43.01	In Earth orbit
938	S59705	2024-087A	Zhiliu Tianwang 1-01A	2024 May 9 01:43	2024 May 9 02:08:7	QINGSH	CN	20164	20194	53.14	In Earth orbit
939	S59706	2024-087B	Zhiliu Tianwang 1-01B	2024 May 9 01:43	2024 May 9 02:08:7	QINGSH	CN	20168	20196	53.15	In Earth orbit
940	S59707	2024-088A	Starlink 11107	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	296	53.17	In Earth orbit
941	S59709	2024-088B	Starlink 11088	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	296	53.17	In Earth orbit
942	S59710	2024-088C	Starlink 11092	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
943	S59711	2024-088D	Starlink 11082	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
944	S59712	2024-088E	Starlink 11108	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
945	S59713	2024-088F	Starlink 11100	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
946	S59714	2024-088G	Starlink 11094	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
947	S59715	2024-088H	Starlink 11101	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
948	S59716	2024-088I	Starlink 11099	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
949	S59717	2024-088K	Starlink 11084	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
950	S59718	2024-088L	Starlink 11103	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
951	S59719	2024-088M	Starlink 11096	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
952	S59720	2024-088N	Starlink 11095	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
953	S59721	2024-088P	Starlink 31834	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
954	S59722	2024-088Q	Starlink 31843	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
955	S59723	2024-088R	Starlink 31766	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
956	S59724	2024-088S	Starlink 31836	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
957	S59725	2024-088T	Starlink 31820	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
958	S59726	2024-088U	Starlink 31642	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
959	S59727	2024-088V	Starlink 31827	2024 May 10 04:30:00	2024 May 10 04:21:33	SPXS	US	285	295	53.17	In Earth orbit
960	S59728	2024-089A	Shiyuan 23 Weixing	2024 May 11 23:43	2024 May 11 23:48:7	CNSA	CN	591	601	97.76	In Earth orbit
961	S59730	2024-090A	Starlink 31472	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	285	293	43.01	In Earth orbit
962	S59731	2024-090B	Starlink 31817	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	285	293	43.01	In Earth orbit
963	S59732	2024-090C	Starlink 31841	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
964	S59733	2024-090D	Starlink 31833	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
965	S59734	2024-090E	Starlink 31849	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
966	S59735	2024-090F	Starlink 31661	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	293	43.01	In Earth orbit
967	S59736	2024-090G	Starlink 31707	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
968	S59737	2024-090H	Starlink 31821	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
969	S59738	2024-090I	Starlink 31819	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
970	S59739	2024-090K	Starlink 31726	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
971	S59740	2024-090L	Starlink 31759	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit
972	S59741	2024-090M	Starlink 31818	2024 May 13 00:53:00	2024 May 13 01:58:25	SPXS	US	284	292	43.01	In Earth orbit

973	S59742	2024-090N	Starlink 31816	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
974	S59743	2024-090P	Starlink 31809	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
975	S59744	2024-090Q	Starlink 31779	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
976	S59745	2024-090R	Starlink 31805	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
977	S59746	2024-090S	Starlink 31681	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
978	S59747	2024-090T	Starlink 31636	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
979	S59748	2024-090U	Starlink 31640	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
980	S59749	2024-090V	Starlink 31677	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
981	S59750	2024-090W	Starlink 31783	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
982	S59751	2024-090X	Starlink 31808	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
983	S59752	2024-090Y	Starlink 31822	2024 May 13 0053:00	2024 May 13 0158:25	SPXS	US	284	292	43.01	In Earth orbit
984	S59753	2024-091A	Starlink 11125	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	284	296	53.17	In Earth orbit
985	S59754	2024-091B	Starlink 11118	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	284	295	53.17	In Earth orbit
986	S59755	2024-091C	Starlink 11132	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	284	295	53.17	In Earth orbit
987	S59756	2024-091D	Starlink 11131	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	284	295	53.17	In Earth orbit
988	S59757	2024-091E	Starlink 11114	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	284	295	53.17	In Earth orbit
989	S59758	2024-091F	Starlink 11105	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	284	295	53.17	In Earth orbit
990	S59759	2024-091G	Starlink 11097	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	284	295	53.17	In Earth orbit
991	S59760	2024-091H	Starlink 11098	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
992	S59761	2024-091J	Starlink 11117	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
993	S59762	2024-091K	Starlink 11110	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
994	S59763	2024-091L	Starlink 11104	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
995	S59764	2024-091M	Starlink 11111	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
996	S59765	2024-091N	Starlink 11106	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
997	S59766	2024-091P	Starlink 31739	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
998	S59767	2024-091Q	Starlink 31828	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
999	S59768	2024-091R	Starlink 31826	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
1000	S59769	2024-091S	Starlink 31830	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
1001	S59770	2024-091T	Starlink 31829	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
1002	S59771	2024-091U	Starlink 31786	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
1003	S59772	2024-091V	Starlink 31835	2024 May 14 1839:00	2024 May 14 1940:14	SPXS	US	283	295	53.17	In Earth orbit
1004	S59773	2024-092A	Kosmos-2576	2024 May 16 2121	2024 May 16 2130?	TSVS	RU	456	451	97.25	In Earth orbit
1005	S59774	2024-092B	Zorky-2M No. 4	2024 May 16 2121	2024 May 17 0600?	SPUT	RU	780	796	98.59	In Earth orbit
1006	S59775	2024-092C	Zorky-2M No. 6	2024 May 16 2121	2024 May 17 0600?	SPUT	RU	779	796	98.60	In Earth orbit
1007	S59776	2024-092D	SITRO-AIS-53	2024 May 16 2121	2024 May 17 0600?	SITRO	RU	531	548	97.59	In Earth orbit
1008	S59777	2024-092E	SITRO-AIS-54	2024 May 16 2121	2024 May 17 0600?	SITRO	RU	531	548	97.60	In Earth orbit
1009	S59778	2024-092F	SITRO-AIS-55	2024 May 16 2121	2024 May 17 0600?	SITRO	RU	535	552	97.60	In Earth orbit
1010	S59779	2024-092G	Rassvet-2 No. 1	2024 May 16 2121	2024 May 17 0415?	B1440	RU	780	796	98.59	In Earth orbit
1011	S59780	2024-092H	Rassvet-2 No. 2	2024 May 16 2121	2024 May 17 0415?	B1440	RU	780	796	98.59	In Earth orbit
1012	S59781	2024-092I	Rassvet-2 No. 3	2024 May 16 2121	2024 May 17 0415?	B1440	RU	780	796	98.59	In Earth orbit
1013	S59782	2024-092K	SITRO-AIS-56	2024 May 16 2121	2024 May 17 0600?	SITRO	RU	535	551	97.59	In Earth orbit
1014	S59783	2024-093A	Starlink 31363	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1015	S59784	2024-093B	Starlink 31868	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	293	43.01	In Earth orbit
1016	S59784	2024-093C	Starlink 31848	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	293	43.01	In Earth orbit
1017	S59785	2024-093D	Starlink 31890	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1018	S59786	2024-093E	Starlink 31850	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1019	S59787	2024-093F	Starlink 31862	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1020	S59788	2024-093G	Starlink 31870	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	293	43.01	In Earth orbit
1021	S59789	2024-093H	Starlink 31888	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1022	S59790	2024-093I	Starlink 31863	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1023	S59791	2024-093J	Starlink 31873	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1024	S59792	2024-093K	Starlink 31865	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1025	S59793	2024-093L	Starlink 31893	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1026	S59794	2024-093M	Starlink 31901	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1027	S59795	2024-093N	Starlink 31823	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1028	S59796	2024-093P	Starlink 31916	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1029	S59796	2024-093Q	Starlink 31915	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1030	S59797	2024-093R	Starlink 31907	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1031	S59798	2024-093S	Starlink 31687	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1032	S59799	2024-093T	Starlink 31810	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1033	S59800	2024-093U	Starlink 31812	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1034	S59801	2024-093V	Starlink 31815	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1035	S59802	2024-093W	Starlink 31814	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1036	S59803	2024-093X	Starlink 31794	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1037	S59805	2024-093Y	Starlink 31824	2024 May 18 0032:00	2024 May 18 0137:23	SPXS	US	283	292	43.01	In Earth orbit
1038	S59806	2024-094A	Beijing-3C 01	2024 May 20 0306	2024 May 20 0312?	21AT	CN	488	502	97.47	In Earth orbit
	S59806	2024-094B	Beijing-3C 02	2024 May 20 0306	2024 May 20 0312?	21AT	CN	486	500	97.47	In Earth orbit

1039	S59807	2024-094C	Beijing-3C 03	2024 May 20 0306	2024 May 20 0312?	21AT	CN	486	501	97.47	In Earth orbit
1040	S59808	2024-094D	Beijing-3C 04	2024 May 20 0306	2024 May 20 0312?	21AT	CN	487	501	97.47	In Earth orbit
1041	S59810	2024-095A	Wuhua-1	2024 May 21 0415	2024 May 21 0430?	YUNCHI/NANNI	CN	538	97.60	525	In Earth orbit
1042	S59811	2024-095B	Chutian xingzao 001 xing	2024 May 21 0415	2024 May 21 0430?	CASIC	CN	525	538	97.59	In Earth orbit
1043	S59812	2024-095C	Qinghuan-Nanxidaxing	2024 May 21 0415	2024 May 21 0430?	LINGH/TLCJ	CN	525	537	97.60	In Earth orbit
1044	S59813	2024-095D	Qingheng-1	2024 May 21 0415	2024 May 21 0430?	LINGZ	CN	525	535	97.60	In Earth orbit
1045	S59814	2024-096A	USA 354	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1046	S59815	2024-096B	USA 355	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1047	S59816	2024-096C	USA 356	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1048	S59817	2024-096D	USA 357	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1049	S59818	2024-096E	USA 358	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1050	S59819	2024-096F	USA 359	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1051	S59820	2024-096G	USA 360	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1052	S59821	2024-096H	USA 361	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1053	S59822	2024-096I	USA 362	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1054	S59823	2024-096K	USA 363	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1055	S59824	2024-096L	USA 364	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1056	S59825	2024-096M	USA 365	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1057	S59826	2024-096N	USA 366	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1058	S59827	2024-096P	USA 367	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1059	S59828	2024-096Q	USA 368	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1060	S59829	2024-096R	USA 369	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1061	S59830	2024-096S	USA 370	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1062	S59831	2024-096T	USA 371	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1063	S59832	2024-096U	USA 372	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1064	S59833	2024-096V	USA 373	2024 May 22 0800	2024 May 22 0905?	NROC	US	310	315	70.01	In Earth orbit
1065	S59834	2024-096W	USA 374	2024 May 22 0800	2024 May 22 0905?	NROC	US	325	326	69.72	In Earth orbit
1066	S59835	2024-097A	Startink 31947	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1067	S59836	2024-097B	Startink 31852	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1068	S59837	2024-097C	Startink 31927	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1069	S59838	2024-097D	Startink 31855	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1070	S59839	2024-097E	Startink 31887	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1071	S59840	2024-097F	Startink 31925	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1072	S59841	2024-097G	Startink 31852	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1073	S59842	2024-097H	Startink 31906	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1074	S59843	2024-097I	Startink 31857	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1075	S59844	2024-097K	Startink 31851	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1076	S59845	2024-097L	Startink 31903	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1077	S59846	2024-097M	Startink 31922	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	285	292	43.01	In Earth orbit
1078	S59847	2024-097N	Startink 31892	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1079	S59848	2024-097Q	Startink 31859	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1080	S59849	2024-097Q	Startink 31895	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1081	S59850	2024-097R	Startink 31899	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1082	S59851	2024-097S	Startink 31896	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1083	S59852	2024-097T	Startink 31897	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1084	S59853	2024-097U	Startink 31892	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1085	S59854	2024-097V	Startink 31891	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1086	S59855	2024-097W	Startink 31882	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1087	S59856	2024-097X	Startink 31691	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1088	S59857	2024-097Y	Startink 31569	2024 May 23 0235	2024 May 23 0340-22	SPXS	US	284	292	43.01	In Earth orbit
1089	S59858	2024-098A	Startink 31654	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1090	S59859	2024-098B	Startink 31442	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1091	S59860	2024-098C	Startink 31651	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1092	S59861	2024-098D	Startink 31703	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1093	S59862	2024-098E	Startink 31584	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1094	S59863	2024-098F	Startink 31950	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1095	S59864	2024-098G	Startink 31931	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1096	S59865	2024-098H	Startink 31938	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	291	43.01	In Earth orbit
1097	S59866	2024-098I	Startink 31941	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1098	S59867	2024-098K	Startink 31952	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1099	S59868	2024-098L	Startink 31921	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	292	43.01	In Earth orbit
1100	S59869	2024-098M	Startink 31760	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	291	43.01	In Earth orbit
1101	S59870	2024-098N	Startink 31945	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	291	43.01	In Earth orbit
1102	S59871	2024-098P	Startink 31937	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	291	43.01	In Earth orbit
1103	S59872	2024-098Q	Startink 31944	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	291	43.01	In Earth orbit
1104	S59873	2024-098R	Startink 31940	2024 May 24 0245	2024 May 24 0350-22	SPXS	US	285	291	43.01	In Earth orbit

1105	S59874	2024-0985	Starlink 31933	2024 May 24 02:45	2024 May 24 03:50:22	SPXS	US	285	291	43.01	In Earth orbit
1106	S59875	2024-0981	Starlink 31936	2024 May 24 02:45	2024 May 24 03:50:22	SPXS	US	284	291	43.01	In Earth orbit
1107	S59876	2024-0980	Starlink 31935	2024 May 24 02:45	2024 May 24 03:50:22	SPXS	US	284	291	43.01	In Earth orbit
1108	S59877	2024-0987	Starlink 31934	2024 May 24 02:45	2024 May 24 03:50:22	SPXS	US	284	291	43.01	In Earth orbit
1109	S59878	2024-0988	Starlink 31943	2024 May 24 02:45	2024 May 24 03:50:22	SPXS	US	284	291	43.01	In Earth orbit
1110	S59879	2024-098X	Starlink 31926	2024 May 24 02:45	2024 May 24 03:50:22	SPXS	US	284	291	43.01	In Earth orbit
1111	S59880	2024-098Y	Starlink 31919	2024 May 24 02:45	2024 May 24 03:50:22	SPXS	US	285	291	43.01	In Earth orbit
1112	S59881	2024-099A	PREFIRE 2	2024 May 25 07:41	2024 May 25 08:34	JPL	US	524	541	97.50	In Earth orbit
1113	S59885	2024-100A	Starlink 31974	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1114	S59886	2024-100B	Starlink 31975	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1115	S59887	2024-100C	Starlink 31976	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1116	S59888	2024-100D	Starlink 31965	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1117	S59889	2024-100E	Starlink 31969	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1118	S59890	2024-100F	Starlink 31951	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1119	S59891	2024-100G	Starlink 31949	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1120	S59892	2024-100H	Starlink 31977	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1121	S59893	2024-100I	Starlink 31963	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1122	S59894	2024-100K	Starlink 31961	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1123	S59895	2024-100L	Starlink 31964	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1124	S59896	2024-100M	Starlink 31905	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1125	S59897	2024-100N	Starlink 31928	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1126	S59898	2024-100P	Starlink 31953	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1127	S59899	2024-100Q	Starlink 31942	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1128	S59900	2024-100R	Starlink 31676	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	277	283	43.01	In Earth orbit
1129	S59901	2024-100S	Starlink 31908	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	276	283	43.01	In Earth orbit
1130	S59902	2024-100T	Starlink 31914	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	276	283	43.01	In Earth orbit
1131	S59903	2024-100U	Starlink 31850	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	276	283	43.01	In Earth orbit
1132	S59904	2024-100V	Starlink 31924	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	276	283	43.01	In Earth orbit
1133	S59905	2024-100W	Starlink 31898	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	276	283	43.01	In Earth orbit
1134	S59906	2024-100X	Starlink 31861	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	276	283	43.01	In Earth orbit
1135	S59907	2024-100Y	Starlink 31920	2024 May 28 14:24	2024 May 28 15:29:15	SPXS	US	276	283	43.01	In Earth orbit
1136	S59908	2024-101A	EarthCARE	2024 May 28 22:20	2024 May 28 22:30	ESA/JAXA	H-ESA	398	404	96.98	In Earth orbit
1137	S59909	2024-102A	Tianqi Xingzuo 25	2024 May 29 08:12:27	2024 May 29 08:32	GUOG	CN	836	852	44.98	In Earth orbit
1138	S59910	2024-102B	Tianqi Xingzuo 26	2024 May 29 08:12:27	2024 May 29 08:32	GUOG	CN	835	852	44.97	In Earth orbit
1139	S59911	2024-102C	Tianqi Xingzuo 27	2024 May 29 08:12:27	2024 May 29 08:32	GUOG	CN	835	852	44.97	In Earth orbit
1140	S59912	2024-102D	Tianqi Xingzuo 28	2024 May 29 08:12:27	2024 May 29 08:32	GUOG	CN	834	853	44.98	In Earth orbit
1141	S59913	2024-103A	Progress M52-27	2024 May 30 09:42:59	2024 May 30 09:51:48	RKKE	RU	184	216	51.65	Deorbited
1142	S59915	2024-104A	Paksat MM1	2024 May 30 12:12	2024 May 30 12:40:17	SUPA	PK	35785	35788	0.04	In Earth orbit
1143	S59917	2024-105A	Jinguang Xingzuo 01 xing	2024 May 30 23:39	2024 May 30 23:54	JIGU	CN	529	548	97.60	In Earth orbit
1144	S59918	2024-105B	Jinguang Xingzuo 02 xing	2024 May 30 23:39	2024 May 30 23:54	JIGU	CN	528	546	97.60	In Earth orbit
1145	S59919	2024-105C	Hebei Lmx1	2024 May 30 23:39	2024 May 30 23:54	YYAO	CN	528	547	97.60	In Earth orbit
1146	S59920	2024-105D	Zhangjiang Gaok	2024 May 30 23:39	2024 May 30 23:54	YYAO	CN	528	547	97.61	In Earth orbit
1147	S59921	2024-105E	Yunhao-1.26	2024 May 30 23:39	2024 May 30 23:54	YYAO	CN	528	547	97.60	In Earth orbit
1148	S59922	2024-106A	Starlink 31872	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1149	S59923	2024-106B	Starlink 31972	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1150	S59924	2024-106C	Starlink 31958	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1151	S59925	2024-106D	Starlink 31959	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1152	S59926	2024-106E	Starlink 31957	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1153	S59927	2024-106F	Starlink 31968	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1154	S59928	2024-106G	Starlink 31970	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1155	S59929	2024-106H	Starlink 31932	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1156	S59930	2024-106I	Starlink 31956	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1157	S59931	2024-106K	Starlink 31960	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	282	43.01	In Earth orbit
1158	S59932	2024-106L	Starlink 31432	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1159	S59933	2024-106M	Starlink 31853	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1160	S59934	2024-106N	Starlink 31971	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1161	S59935	2024-106P	Starlink 31301	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	Reentered
1162	S59936	2024-106Q	Starlink 31962	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1163	S59937	2024-106R	Starlink 31879	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1164	S59938	2024-106S	Starlink 31876	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1165	S59939	2024-106T	Starlink 31955	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1166	S59940	2024-106U	Starlink 31946	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1167	S59941	2024-106V	Starlink 31948	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	274	281	43.01	In Earth orbit
1168	S59942	2024-106W	Starlink 31900	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	273	281	43.01	In Earth orbit
1169	S59943	2024-106X	Starlink 31973	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	273	281	43.01	In Earth orbit
1170	S59944	2024-106Y	Starlink 31966	2024 Jun 1 02:37:00	2024 Jun 1 03:16:19	SPXS	US	273	281	43.01	In Earth orbit

1171	S59945	2024-107A	Starlink 11145	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.15	In Earth orbit
1172	S59946	2024-107B	Starlink 11121	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.15	In Earth orbit
1173	S59947	2024-107C	Starlink 11143	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.15	In Earth orbit
1174	S59948	2024-107D	Starlink 11123	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1175	S59949	2024-107E	Starlink 11138	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1176	S59950	2024-107F	Starlink 11130	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1177	S59951	2024-107G	Starlink 11126	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1178	S59952	2024-107H	Starlink 11124	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1179	S59953	2024-107I	Starlink 11143	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1180	S59954	2024-107K	Starlink 11133	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1181	S59955	2024-107L	Starlink 11144	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	273	286	53.16	In Earth orbit
1182	S59956	2024-107M	Starlink 11134	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1183	S59957	2024-107N	Starlink 11142	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1184	S59958	2024-107P	Starlink 31995	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1185	S59959	2024-107Q	Starlink 31989	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1186	S59960	2024-107R	Starlink 31856	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1187	S59961	2024-107S	Starlink 31993	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1188	S59962	2024-107T	Starlink 31980	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1189	S59963	2024-107U	Starlink 31991	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1190	S59964	2024-107V	Starlink 31979	2024 Jun 5 02:16:00	2024 Jun 5 03:07:44	SPXS	US	272	286	53.16	In Earth orbit
1191	S59965	2024-108A	PREFIRE 1	2024 Jun 5 03:15	2024 Jun 5 04:08	JPL	US	523	538	97.45	In Earth orbit
1192	S59966	2024-108B	Calypto	2024 Jun 5 14:52:15	2024 Jun 5 15:07:10	BOCC	US	319	328	51.63	Landed
1193	S59967	2024-109A	TEE-01B	2024 Jun 6 05:00	2024 Jun 6 05:12?	MUMEI	CN	540	556	97.61	In Earth orbit
1194	S60001	2024-110A	Naxing 3A	2024 Jun 6 05:00	2024 Jun 6 05:12?	TSHUA	CN	541	554	97.60	In Earth orbit
1195	S60004	2024-110B	Naxing 3B	2024 Jun 6 05:00	2024 Jun 6 05:12?	TSHUA	CN	538	555	97.60	In Earth orbit
1196	S60015	2024-110D	AI Shen	2024 Jun 6 05:00	-	XIDO	CN	538	557	97.60	Attached to Guoshengxing-1 Y13 Stage 4
1197	A11233	2024-110E	Starship FT-4	2024 Jun 6 12:50:00	2024 Jun 6 12:58:41	SPX	US	-15	213	26.80	Orbit insertion
1198	S60016	2024-111A	Starlink 31978	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1199	S60017	2024-111B	Starlink 31987	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1200	S60018	2024-111C	Starlink 31984	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1201	S60019	2024-111D	Starlink 31986	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1202	S60020	2024-111E	Starlink 31883	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1203	S60021	2024-111F	Starlink 31967	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1204	S60022	2024-111G	Starlink 31982	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1205	S60023	2024-111H	Starlink 31992	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1206	S60024	2024-111J	Starlink 31990	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1207	S60025	2024-111K	Starlink 31864	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1208	S60026	2024-111L	Starlink 31939	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1209	S60027	2024-111M	Starlink 32012	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1210	S60028	2024-111N	Starlink 32008	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1211	S60029	2024-111O	Starlink 32006	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1212	S60030	2024-111P	Starlink 32011	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	279	53.15	In Earth orbit
1213	S60031	2024-111R	Starlink 31878	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	278	53.15	In Earth orbit
1214	S60032	2024-111S	Starlink 32017	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	278	53.15	In Earth orbit
1215	S60033	2024-111T	Starlink 31998	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	278	53.15	In Earth orbit
1216	S60034	2024-111U	Starlink 32005	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	278	53.15	In Earth orbit
1217	S60035	2024-111V	Starlink 31981	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	278	53.15	In Earth orbit
1218	S60036	2024-111W	Starlink 31985	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	278	53.15	In Earth orbit
1219	S60037	2024-111X	Starlink 31918	2024 Jun 8 01:56:00	2024 Jun 8 02:48:41	SPXS	US	265	278	53.15	In Earth orbit
1220	S60038	2024-112A	Starlink 11129	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1221	S60039	2024-112B	Starlink 11140	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1222	S60040	2024-112C	Starlink 11122	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1223	S60041	2024-112D	Starlink 11149	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1224	S60042	2024-112E	Starlink 11120	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1225	S60043	2024-112F	Starlink 11086	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1226	S60044	2024-112G	Starlink 11148	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1227	S60045	2024-112H	Starlink 11140	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1228	S60046	2024-112I	Starlink 11155	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1229	S60047	2024-112K	Starlink 11163	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1230	S60048	2024-112L	Starlink 11135	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1231	S60049	2024-112M	Starlink 11151	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.17	In Earth orbit
1232	S60050	2024-112N	Starlink 11137	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.16	In Earth orbit
1233	S60051	2024-112P	Starlink 31811	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.16	In Earth orbit
1234	S60052	2024-112Q	Starlink 31775	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.16	In Earth orbit
1235	S60053	2024-112R	Starlink 31793	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.16	In Earth orbit
1236	S60054	2024-112S	Starlink 31735	2024 Jun 8 12:58	2024 Jun 8 13:59:14	SPXS	US	279	289	53.16	In Earth orbit

1237	S60055	2024-112T	Startlink 31788	2024 Jun 8 1258	2024 Jun 8 1359:14	SPXS	US	279	289	53.16	In Earth orbit
1238	S60056	2024-112U	Startlink 31825	2024 Jun 8 1258	2024 Jun 8 1359:14	SPXS	US	279	289	53.16	In Earth orbit
1239	S60057	2024-112V	Startlink 31457	2024 Jun 8 1258	2024 Jun 8 1359:14	SPXS	US	279	289	53.17	In Earth orbit
1240	S60059	2024-113A	Startlink 11181	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1241	S60060	2024-113B	Startlink 11176	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1242	S60061	2024-113C	Startlink 11167	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1243	S60062	2024-113D	Startlink 11166	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1244	S60063	2024-113E	Startlink 11165	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1245	S60064	2024-113F	Startlink 11169	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1246	S60065	2024-113G	Startlink 11102	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1247	S60066	2024-113H	Startlink 11141	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1248	S60067	2024-113I	Startlink 11153	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1249	S60068	2024-113K	Startlink 11170	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1250	S60069	2024-113L	Startlink 11171	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1251	S60070	2024-113M	Startlink 11186	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1252	S60071	2024-113N	Startlink 11184	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1253	S60072	2024-113P	Startlink 32119	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	In Earth orbit
1254	S60073	2024-113Q	Startlink 32111	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	Reentered
1255	S60074	2024-113R	Startlink 32115	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	Reentered
1256	S60075	2024-113S	Startlink 32116	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	Reentered
1257	S60076	2024-113T	Startlink 32117	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	Reentered
1258	S60077	2024-113U	Startlink 32032	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	Reentered
1259	S60078	2024-113V	Startlink 32110	2024 Jun 19 0340:00	2024 Jun 19 0440:16	SPXS	US	284	296	53.17	Reentered
1260	S60079	2024-114A	Kneiss-IB	2024 Jun 20 1813	2024 Jun 20 1919	KINEIS	F	637	640	98.03	In Earth orbit
1261	S60081	2024-114C	Kneiss-IC	2024 Jun 20 1813	2024 Jun 20 1919	KINEIS	F	637	639	98.03	In Earth orbit
1262	S60082	2024-114D	Kneiss-ID	2024 Jun 20 1813	2024 Jun 20 1919	KINEIS	F	637	639	98.03	In Earth orbit
1263	S60083	2024-114E	Kneiss-IE	2024 Jun 20 1813	2024 Jun 20 1919	KINEIS	F	637	639	98.03	In Earth orbit
1264	S60084	2024-114F	Kneiss-IA	2024 Jun 20 1813	2024 Jun 20 1919	KINEIS	F	636	638	98.03	In Earth orbit
1265	S60086	2024-115A	Astra 1P	2024 Jun 22 0700	2024 Jun 22 0700	SESSA	L	4045	62437	18.52	In Earth orbit
1266	S60088	2024-116A	SVOM	2024 Jun 22 0700	2024 Jun 22 07107	CASC/CNES	CN	626	632	29.00	In Earth orbit
1267	S60089	2024-116B	CATCH-1	2024 Jun 22 0700	2024 Jun 23 1807:26	CAS	CN	626	632	29.00	In Earth orbit
1268	S60091	2024-117A	Startlink 31441	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	278	53.15	In Earth orbit
1269	S60092	2024-117B	Startlink 32044	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	264	278	53.15	In Earth orbit
1270	S60093	2024-117C	Startlink 31239	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	278	53.15	In Earth orbit
1271	S60094	2024-117D	Startlink 32007	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	264	278	53.15	In Earth orbit
1272	S60095	2024-117E	Startlink 32028	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	264	278	53.15	In Earth orbit
1273	S60096	2024-117F	Startlink 32016	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	278	53.15	In Earth orbit
1274	S60097	2024-117G	Startlink 32003	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	264	278	53.15	In Earth orbit
1275	S60098	2024-117H	Startlink 32026	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	278	53.15	In Earth orbit
1276	S60099	2024-117I	Startlink 31732	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	264	277	53.15	In Earth orbit
1277	S60100	2024-117K	Startlink 31996	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1278	S60101	2024-117L	Startlink 31999	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1279	S60102	2024-117M	Startlink 31954	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1280	S60103	2024-117N	Startlink 32013	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1281	S60104	2024-117P	Startlink 32009	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	264	277	53.15	In Earth orbit
1282	S60105	2024-117Q	Startlink 32018	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1283	S60106	2024-117R	Startlink 32045	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1284	S60107	2024-117S	Startlink 32035	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1285	S60108	2024-117T	Startlink 32042	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1286	S60109	2024-117U	Startlink 32040	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1287	S60110	2024-117V	Startlink 32001	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	264	277	53.15	In Earth orbit
1288	S60111	2024-117W	Startlink 32015	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1289	S60112	2024-117X	Startlink 32024	2024 Jun 23 1715:00	2024 Jun 23 1807:26	SPXS	US	263	277	53.15	In Earth orbit
1290	S60113	2024-118A	Startlink 11201	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1291	S60114	2024-118B	Startlink 11198	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1292	S60115	2024-118C	Startlink 11112	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1293	S60116	2024-118D	Startlink 11210	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1294	S60117	2024-118E	Startlink 11203	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1295	S60118	2024-118F	Startlink 11177	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1296	S60119	2024-118G	Startlink 11127	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1297	S60120	2024-118H	Startlink 11164	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1298	S60121	2024-118I	Startlink 11119	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1299	S60122	2024-118K	Startlink 11157	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1300	S60123	2024-118L	Startlink 11162	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1301	S60124	2024-118M	Startlink 11161	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit
1302	S60125	2024-118N	Startlink 11160	2024 Jun 24 0347:00	2024 Jun 24 0447:19	SPXS	US	284	295	53.17	In Earth orbit

1303	S60126	2024-118P	Startlink 31846	2024 Jun 24 03:47:00	2024 Jun 24 04:47:19	SPXS	US	284	295	53.17	In Earth orbit
1304	S60127	2024-118Q	Startlink 31840	2024 Jun 24 03:47:00	2024 Jun 24 04:47:19	SPXS	US	284	295	53.17	In Earth orbit
1305	S60128	2024-118R	Startlink 31813	2024 Jun 24 03:47:00	2024 Jun 24 04:47:19	SPXS	US	284	295	53.17	In Earth orbit
1306	S60129	2024-118S	Startlink 31845	2024 Jun 24 03:47:00	2024 Jun 24 04:47:19	SPXS	US	284	295	53.17	In Earth orbit
1307	S60130	2024-118T	Startlink 31838	2024 Jun 24 03:47:00	2024 Jun 24 04:47:19	SPXS	US	284	295	53.17	In Earth orbit
1308	S60131	2024-118U	Startlink 31785	2024 Jun 24 03:47:00	2024 Jun 24 04:47:19	SPXS	US	284	295	53.17	In Earth orbit
1309	S60132	2024-118V	Startlink 31792	2024 Jun 24 03:47:00	2024 Jun 24 04:47:19	SPXS	US	284	295	53.17	In Earth orbit
1310	S60133	2024-119A	GOES 19	2024 Jun 25 21:26	2024 Jun 26 01:56:02	NOAA	US	35776	35798	0.04	In Earth orbit
1311	S60135	2024-120A	Startlink 32043	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	275	53.16	In Earth orbit
1312	S60136	2024-120B	Startlink 32112	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	275	53.16	In Earth orbit
1313	S60137	2024-120C	Startlink 32050	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	275	53.16	In Earth orbit
1314	S60138	2024-120D	Startlink 32025	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	275	53.16	In Earth orbit
1315	S60139	2024-120E	Startlink 31867	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	275	53.16	In Earth orbit
1316	S60140	2024-120F	Startlink 31694	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1317	S60141	2024-120G	Startlink 32036	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1318	S60142	2024-120H	Startlink 32031	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1319	S60143	2024-120I	Startlink 32027	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1320	S60144	2024-120K	Startlink 32033	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1321	S60145	2024-120L	Startlink 32029	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1322	S60146	2024-120M	Startlink 32127	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1323	S60147	2024-120N	Startlink 32019	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1324	S60148	2024-120Q	Startlink 32021	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1325	S60149	2024-120Q	Startlink 32022	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1326	S60150	2024-120R	Startlink 32014	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1327	S60151	2024-120S	Startlink 32004	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1328	S60152	2024-120T	Startlink 32147	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1329	S60153	2024-120U	Startlink 32131	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1330	S60154	2024-120V	Startlink 32145	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1331	S60155	2024-120W	Startlink 32137	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1332	S60156	2024-120X	Startlink 32048	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1333	S60157	2024-120Y	Startlink 32129	2024 Jun 27 11:14	2024 Jun 27 12:16:44	SPXS	US	264	274	53.16	In Earth orbit
1334	S60158	2024-121A	USA 375	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	293	356	70.01	In Earth orbit
1335	S60159	2024-121B	USA 376	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	310	323	70.01	In Earth orbit
1336	S60160	2024-121C	USA 377	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	314	323	70.01	In Earth orbit
1337	S60161	2024-121D	USA 378	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	298	360	70.01	In Earth orbit
1338	S60162	2024-121E	USA 379	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	318	318	70.01	In Earth orbit
1339	S60163	2024-121F	USA 380	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	310	319	70.01	In Earth orbit
1340	S60164	2024-121G	USA 381	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	309	318	70.01	In Earth orbit
1341	S60165	2024-121H	USA 382	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	309	326	70.01	In Earth orbit
1342	S60166	2024-121J	USA 383	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	309	320	70.01	In Earth orbit
1343	S60167	2024-121K	USA 384	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	292	324	70.01	In Earth orbit
1344	S60168	2024-121L	USA 385	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	308	324	70.01	In Earth orbit
1345	S60169	2024-121M	USA 386	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	303	349	70.01	In Earth orbit
1346	S60170	2024-121N	USA 387	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	315	325	70.01	In Earth orbit
1347	S60171	2024-121P	USA 388	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	308	316	70.01	In Earth orbit
1348	S60172	2024-121Q	USA 389	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	311	358	70.01	In Earth orbit
1349	S60173	2024-121R	USA 390	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	316	327	70.01	In Earth orbit
1350	S60174	2024-121S	USA 391	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	306	325	70.01	In Earth orbit
1351	S60175	2024-121T	USA 392	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	311	328	70.01	In Earth orbit
1352	S60176	2024-121U	USA 393	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	313	323	70.01	In Earth orbit
1353	S60177	2024-121V	USA 394	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	314	331	70.01	In Earth orbit
1354	S60178	2024-121W	USA 395	2024 Jun 29 03:14	2024 Jun 29 04:15?	NROC	US	314	325	70.01	In Earth orbit
1355	S60179	2024-122A	Zhongxing 3A	2024 Jun 29 11:57	2024 Jun 29 12:35?	ZLXB	CN	35778	35794	0.02	In Earth orbit
1356	S60182	2024-123A	Daichi-4	2024 Jul 1 03:06:00	2024 Jul 1 03:22	JAXA	J	609	612	97.87	In Earth orbit
1357	S60183	2024-124A	Startlink 11168	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	297	53.16	In Earth orbit
1358	S60184	2024-124B	Startlink 11187	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	297	53.16	In Earth orbit
1359	S60185	2024-124C	Startlink 11180	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	297	53.16	In Earth orbit
1360	S60186	2024-124D	Startlink 11197	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1361	S60187	2024-124E	Startlink 11194	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1362	S60188	2024-124F	Startlink 11189	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1363	S60189	2024-124G	Startlink 11183	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1364	S60190	2024-124H	Startlink 11179	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1365	S60191	2024-124J	Startlink 11175	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1366	S60192	2024-124K	Startlink 11173	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1367	S60193	2024-124L	Startlink 11172	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit
1368	S60194	2024-124M	Startlink 11152	2024 Jul 3 08:55:00	2024 Jul 3 09:58:50	SPXS	US	285	296	53.16	In Earth orbit

1369	S60195	2024-124N	Starlink 11193	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1370	S60196	2024-124P	Starlink 13869	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1371	S60197	2024-124Q	Starlink 32023	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1372	S60198	2024-124R	Starlink 32046	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1373	S60199	2024-124S	Starlink 32049	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1374	S60200	2024-124T	Starlink 32002	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1375	S60201	2024-124U	Starlink 32020	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1376	S60202	2024-124V	Starlink 32041	2024 Jul 3 0855:00	2024 Jul 3 0958:50	SPXS	US	285	296	53.16	In Earth orbit	
1377	S60203	2024-125A	SOC-1	2024 Jul 4 0404	2024 Jul 4 0448:33	UWA	US	490	526	97.32	In Earth orbit	
1378	S60204	2024-125B	KUbesat-1	2024 Jul 4 0404	2024 Jul 4 0457:43	UKS	US	489	525	97.32	In Earth orbit	
1379	S60205	2024-125C	Serenity	2024 Jul 4 0404	2024 Jul 4 0451:18	TIS	US	489	518	97.32	In Earth orbit	
1380	S60206	2024-125D	RS-S4	2024 Jul 4 0404	2024 Jul 4 0452:43	JSC	US	488	523	97.32	In Earth orbit	
1381	S60207	2024-125E	RS-S2-2.0	2024 Jul 4 0404	2024 Jul 4 0454:23	JSC	US	488	524	97.32	In Earth orbit	
1382	S60208	2024-125F	TechEdSat-11	2024 Jul 4 0404	2024 Jul 4 0449:38	ARC/SISU	US	488	517	97.32	In Earth orbit	
1383	S60209	2024-125G	MESAT-1	2024 Jul 4 0404	2024 Jul 4 0459:13	UME	US	491	525	97.32	In Earth orbit	
1384	S60246	2024-125I	CATSAT	2024 Jul 4 0404	2024 Jul 4 0455:53	UAZ	US	489	525	97.32	In Earth orbit	
1385	S60211	2024-126A	Tianhui-5 2-01	2024 Jul 4 2249	2024 Jul 5 0001:7	GCDX	CN	606	610	97.82	In Earth orbit	
1386	S60212	2024-126B	Tianhui-5 2-02	2024 Jul 4 2249	2024 Jul 5 0001:7	GCDX	CN	607	608	97.83	In Earth orbit	
1387	S60233	2024-127A	Turksat 6A	2024 Jul 8 2330	2024 Jul 9 0005:31	TURKS	TR	383	69598	24.10	In Earth orbit	
1388	S60235	2024-128A	CURIE A	2024 Jul 9 1900:00	2024 Jul 9 2006:02	UCB/NASA	US	578	579	61.99	In Earth orbit	
1389	S60236	2024-128B	3Cat-4	2024 Jul 9 1900:00	2024 Jul 9 2005:56	UIC	E	570	592	61.99	In Earth orbit	
1390	S60237	2024-128C	GRBBeta	2024 Jul 9 1900:00	2024 Jul 9 2005:56	TUKE	SK	572	588	62.00	In Earth orbit	
1391	S60238	2024-128D	IS'Isat-1	2024 Jul 9 1900:00	2024 Jul 9 2005:56	ISTL	P	570	583	62.00	In Earth orbit	
1392	S60239	2024-128E	Ariane 6 Dummy Payload	2024 Jul 9 1900:00	-	ESA	L-ESA	570	596	62.00	Attached to Ariane 6001 ULPM	
1393	S60240	2024-128F	TUBSAT-30	2024 Jul 9 1900:00	2024 Jul 9 2005:53	TUB	D	572	589	61.99	In Earth orbit	
1394	S60241	2024-128G	Replicator	2024 Jul 9 1900:00	2024 Jul 9 2006:02	ORB/MAT	PL	574	584	62.01	In Earth orbit	
1395	S60242	2024-128H	Curium One	2024 Jul 9 1900:00	2024 Jul 9 2005:53	PIS	F	577	584	62.00	In Earth orbit	
1396	S60243	2024-128I	Robusta-3A	2024 Jul 9 1900:00	2024 Jul 9 2005:53	MONTP	D	574	586	62.00	In Earth orbit	
1397	A11250	2024-128	CURIE B	2024 Jul 9 1900:00	-	EXCO	US	570	592	61.99	Attached to CURIE A	
1398	A11251	2024-128G	Nyx Bikini	2024 Jul 9 1900:00	-	ADSAQ	F	570	592	61.99	Attached to Ariane 6 Dummy Payload	
1399	A11252	2024-128H	SpaceCase SC-X01	2024 Jul 9 1900:00	-	SPXS	US	136	255	53.17	Reentered	
1400	S60244	2024-129A	Starlink 11214	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	143	277	53.15	Reentered	
1401	S60245	2024-129B	Starlink 11202	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	135	308	53.15	Reentered	
1402	A11253	2024-129C	Starlink 11212	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	135	308	53.15	Reentered	
1403	A11254	2024-129D	Starlink 11219	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	117	328	53.15	Reentered	
1404	A11255	2024-129E	Starlink 31832	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	112	334	53.15	Reentered	
1405	A11256	2024-129F	Starlink 11220	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	190	235	53.14	Reentered	
1406	A11257	2024-129G	Starlink 11216	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	141	276	53.15	Reentered	
1407	A11258	2024-129H	Starlink 11195	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	142	279	53.15	Reentered	
1408	A11259	2024-129I	Starlink 11211	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	138	280	53.16	Reentered	
1409	A11260	2024-129K	Starlink 11215	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	136	287	53.15	Reentered	
1410	A11261	2024-129L	Starlink 11217	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	137	278	53.15	Reentered	
1411	A11262	2024-129M	Starlink 11222	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	139	277	53.16	Reentered	
1412	A11263	2024-129N	Starlink 11221	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	115	322	53.15	Reentered	
1413	A11264	2024-129P	Starlink 32157	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	115	322	53.15	Reentered	
1414	A11265	2024-129Q	Starlink 32146	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	150	262	53.15	Reentered	
1415	A11266	2024-129R	Starlink 11218	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	130	253	53.15	Reentered	
1416	A11267	2024-129S	Starlink 31839	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	115	322	53.15	Reentered	
1417	A11268	2024-129T	Starlink 31743	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	128	259	53.15	Reentered	
1418	A11269	2024-129U	Starlink 31847	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	130	253	53.15	Reentered	
1419	A11270	2024-129V	Starlink 31831	2024 Jul 12 0235:00	2024 Jul 12 0334:23	SPXS	US	140	244	697	97.48	In Earth orbit
1420	S60249	2024-130A	Gao Fen 11-05	2024 Jul 19 0303	2024 Jul 19 0315:7	YWZB	CN	244	697	97.48	In Earth orbit	
1421	S60255	2024-131A	Starlink 32138	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1422	S60256	2024-131B	Starlink 32212	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1423	S60257	2024-131C	Starlink 32166	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1424	S60258	2024-131D	Starlink 32200	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1425	S60259	2024-131E	Starlink 32207	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1426	S60260	2024-131F	Starlink 32125	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1427	S60261	2024-131G	Starlink 32160	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1428	S60262	2024-131H	Starlink 32163	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1429	S60263	2024-131I	Starlink 32148	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1430	S60264	2024-131K	Starlink 32121	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	276	53.16	In Earth orbit	
1431	S60265	2024-131L	Starlink 32205	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	275	53.16	In Earth orbit	
1432	S60266	2024-131M	Starlink 32205	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	275	53.16	In Earth orbit	
1433	S60267	2024-131N	Starlink 32158	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	275	53.16	In Earth orbit	
1434	S60268	2024-131P	Starlink 32167	2024 Jul 27 0545:00	2024 Jul 27 0648:44	SPXS	US	265	275	53.16	In Earth orbit	

1501	S60338	2024-136K	Starlink 32078	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1502	S60339	2024-136L	Starlink 32175	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1503	S60340	2024-136M	Starlink 32176	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1504	S60341	2024-136N	Starlink 32185	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1505	S60342	2024-136P	Starlink 32221	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1506	S60343	2024-136Q	Starlink 32203	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1507	S60344	2024-136R	Starlink 32077	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1508	S60345	2024-136S	Starlink 32075	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1509	S60346	2024-136T	Starlink 32082	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1510	S60347	2024-136U	Starlink 32084	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1511	S60348	2024-136V	Starlink 32081	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1512	S60349	2024-136W	Starlink 32181	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1513	S60350	2024-136X	Starlink 32076	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1514	S60351	2024-136Y	Starlink 32097	2024 Aug 2 0501:00	2024 Aug 2 0605:02	SPXS	US	273	284	53.16	In Earth orbit
1515	S60352	2024-137A	Str-X-4	2024 Aug 2 1639	2024 Aug 2 1736	SYNSNP	J	542	550	53.02	In Earth orbit
1516	S60355	2024-138A	Starlink 32285	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	267	279	53.17	In Earth orbit
1517	S60356	2024-138B	Starlink 32278	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	279	53.17	In Earth orbit
1518	S60357	2024-138C	Starlink 32286	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	267	279	53.17	In Earth orbit
1519	S60358	2024-138D	Starlink 32287	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1520	S60359	2024-138E	Starlink 32290	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1521	S60360	2024-138F	Starlink 32275	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1522	S60361	2024-138G	Starlink 32277	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	267	279	53.17	In Earth orbit
1523	S60362	2024-138H	Starlink 32256	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1524	S60363	2024-138I	Starlink 32267	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1525	S60364	2024-138K	Starlink 32270	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1526	S60365	2024-138L	Starlink 32188	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1527	S60366	2024-138M	Starlink 32230	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1528	S60367	2024-138N	Starlink 32233	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1529	S60368	2024-138P	Starlink 32243	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1530	S60369	2024-138Q	Starlink 32271	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1531	S60370	2024-138R	Starlink 32266	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1532	S60371	2024-138S	Starlink 32220	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1533	S60372	2024-138T	Starlink 32263	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1534	S60373	2024-138U	Starlink 32268	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1535	S60374	2024-138V	Starlink 32223	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1536	S60375	2024-138W	Starlink 32180	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1537	S60376	2024-138X	Starlink 32281	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	266	278	53.17	In Earth orbit
1538	S60377	2024-138Y	Starlink 32277	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	267	279	53.17	In Earth orbit
1539	S60378	2024-139A	Starlink 32269	2024 Aug 4 0724:00	2024 Aug 4 0824:56	SPXS	US	267	279	53.17	In Earth orbit
1540	S60952	1998-067WS	S.S. Francis R. Scobee	2024 Aug 4 1502:53	2024 Aug 4 1543:52	NGIS	US	238	253	51.65	Attached to Falcon 9-361 Stage 2
1541	S60953	1998-067WT	Binar-4	2024 Aug 4 1502:53	2024 Aug 29 1120	CURTIN	AU	404	423	51.64	Reentered
1542	S60954	1998-067WU	Emma	2024 Aug 4 1502:53	2024 Aug 29 0945	COGIR	J	404	422	51.64	Reentered
1543	S60955	1998-067WV	SAKURA	2024 Aug 4 1502:53	2024 Aug 29 0945	CHIBA	J	404	422	51.64	Reentered
1544	S60956	1998-067WV	Wisseed Sat	2024 Aug 4 1502:53	2024 Aug 29 0945	WISS	J	402	420	51.64	Reentered
1545	S60957	1998-067WX	Binar-2	2024 Aug 4 1502:53	2024 Aug 29 1120	CURTIN	AU	404	422	51.64	Reentered
1546	S60958	1998-067WY	Binar-3	2024 Aug 4 1502:53	2024 Aug 29 1120	CURTIN	AU	404	421	51.64	Reentered
1547	S61501	1998-067WZ	SaganSat0	2024 Aug 4 1502:53	2024 Aug 29 0945	KYUT	J	404	423	51.64	Reentered
1548	S61502	1998-067WA	CySat 1	2024 Aug 4 1502:53	2024 Oct 8 1025:12	IOWASU	US	408	421	51.64	In Earth orbit
1549	S60379	2024-140A	DORA	2024 Aug 4 1502:53	2024 Oct 8 1035:12	ASU	US	410	420	51.64	Reentered
1550	S60380	2024-140B	Qianfan Jigui 01-01	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1551	S60381	2024-140C	Qianfan Jigui 01-02	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	814	89.00	In Earth orbit
1552	S60382	2024-140D	Qianfan Jigui 01-03	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1553	S60383	2024-140E	Qianfan Jigui 01-04	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1554	S60384	2024-140F	Qianfan Jigui 01-05	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1555	S60385	2024-140G	Qianfan Jigui 01-06	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1556	S60386	2024-140H	Qianfan Jigui 01-07	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1557	S60387	2024-140I	Qianfan Jigui 01-08	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1558	S60388	2024-140J	Qianfan Jigui 01-09	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1559	S60389	2024-140K	Qianfan Jigui 01-10	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1560	S60390	2024-140L	Qianfan Jigui 01-11	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1561	S60391	2024-140M	Qianfan Jigui 01-12	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1562	S60392	2024-140N	Qianfan Jigui 01-13	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1563	S60393	2024-140P	Qianfan Jigui 01-14	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1564	S60394	2024-140R	Qianfan Jigui 01-15	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1565	S60395	2024-140S	Qianfan Jigui 01-16	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1566	S60396	2024-140T	Qianfan Jigui 01-17	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit
1567	S60396	2024-140U	Qianfan Jigui 01-18	2024 Aug 6 0642	2024 Aug 6 07167	YUANX	CN	792	813	89.00	In Earth orbit

1567	S60398	2024-141A	Starlink 11228	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	297	53.16	In Earth orbit
1568	S60399	2024-141B	Starlink 11182	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	297	53.16	In Earth orbit
1569	S60400	2024-141C	Starlink 11234	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	297	53.16	In Earth orbit
1570	S60401	2024-141D	Starlink 11232	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	297	53.16	In Earth orbit
1571	S60402	2024-141E	Starlink 11139	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	297	53.16	In Earth orbit
1572	S60403	2024-141F	Starlink 11158	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	297	53.16	In Earth orbit
1573	S60404	2024-141G	Starlink 11199	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	297	53.16	In Earth orbit
1574	S60405	2024-141H	Starlink 11081	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1575	S60406	2024-141I	Starlink 11150	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1576	S60407	2024-141K	Starlink 11136	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1577	S60408	2024-141L	Starlink 11196	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1578	S60409	2024-141M	Starlink 11174	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1579	S60410	2024-141N	Starlink 11191	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1580	S60411	2024-141P	Starlink 32244	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1581	S60412	2024-141Q	Starlink 32186	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1582	S60413	2024-141R	Starlink 32234	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1583	S60414	2024-141S	Starlink 32234	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1584	S60415	2024-141T	Starlink 32265	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1585	S60416	2024-141U	Starlink 32197	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1586	S60417	2024-141V	Starlink 32255	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1587	S60418	2024-141W	Starlink 32236	2024 Aug 10 1250:00	2024 Aug 10 1353:53	SPXS	US	284	296	53.16	In Earth orbit
1588	S60419	2024-142A	Capella 13	2024 Aug 11 1318	2024 Aug 11 1414:39	CAPSP	US	606	619	53.01	In Earth orbit
1589	S60422	2024-143A	ASBM 1	2024 Aug 12 0202:00	2024 Aug 12 0244:28	SPNOR/SFSSC	N	8719	42874	62.36	In Earth orbit
1590	S60423	2024-143B	ASBM 2	2024 Aug 12 0202:00	2024 Aug 12 0244:28	SPNOR/SFSSC	N	8732	42863	62.32	In Earth orbit
1591	S60425	2024-144A	Starlink 32250	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	268	278	53.16	In Earth orbit
1592	S60426	2024-144B	Starlink 32226	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	268	278	53.16	In Earth orbit
1593	S60427	2024-144C	Starlink 32254	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1594	S60428	2024-144D	Starlink 32193	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1595	S60429	2024-144E	Starlink 32242	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1596	S60430	2024-144F	Starlink 32196	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1597	S60431	2024-144G	Starlink 32232	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1598	S60432	2024-144H	Starlink 32246	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1599	S60433	2024-144I	Starlink 32183	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1600	S60434	2024-144K	Starlink 32233	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1601	S60435	2024-144L	Starlink 32222	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	268	277	53.16	In Earth orbit
1602	S60436	2024-144M	Starlink 32229	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	268	277	53.16	In Earth orbit
1603	S60437	2024-144N	Starlink 32241	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1604	S60438	2024-144P	Starlink 32240	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1605	S60439	2024-144Q	Starlink 32231	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1606	S60440	2024-144R	Starlink 32195	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1607	S60441	2024-144S	Starlink 32177	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1608	S60442	2024-144T	Starlink 32252	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1609	S60443	2024-144U	Starlink 32237	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	268	277	53.16	In Earth orbit
1610	S60444	2024-144V	Starlink 32249	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1611	S60445	2024-144W	Starlink 32228	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1612	S60446	2024-144X	Starlink 32247	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1613	S60447	2024-144Y	Starlink 32101	2024 Aug 12 1037:00	2024 Aug 12 1140:45	SPXS	US	267	277	53.16	In Earth orbit
1614	S60450	2024-145A	Progress MS-28	2024 Aug 15 0320:18	2024 Aug 15 0329:06	RKKE	RU	277	306	51.64	Attached to Soyuz-2-1a No. 072 Blok-I
1615	S60452	2024-146A	WorldView Legion 3	2024 Aug 15 1300:00	2024 Aug 15 1347:21	MAXARI	US	446	453	44.99	In Earth orbit
1616	S60453	2024-146B	WorldView Legion 4	2024 Aug 15 1300:00	2024 Aug 15 1449:12	MAXARI	US	699	704	45.04	In Earth orbit
1617	S60454	2024-147A	EOS-08	2024 Aug 16 0347	2024 Aug 16 0400:28	ISRO	IN	444	523	37.39	In Earth orbit
1618	S60455	2024-147B	EOS-08	2024 Aug 16 0347	2024 Aug 16 0400:28	ISRO	IN	444	523	37.39	In Earth orbit
1619	S60458	2024-148A	Yaogan 43-01-01	2024 Aug 16 0735	2024 Aug 16 0755?	SRICK/SKI	IN	412	510	37.40	Reentered
1620	S60459	2024-148B	Yaogan 43-01-02	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	492	500	35.00	In Earth orbit
1621	S60460	2024-148C	Yaogan 43-01-03	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	492	500	35.00	In Earth orbit
1622	S60461	2024-148D	Yaogan 43-01-04	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	491	501	35.01	In Earth orbit
1623	S60462	2024-148E	Yaogan 43-01-05	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	493	499	35.01	In Earth orbit
1624	S60463	2024-148F	Yaogan 43-01-06	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	492	500	35.00	In Earth orbit
1625	S60464	2024-148G	Yaogan 43-01-07	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	492	500	35.01	In Earth orbit
1626	S60465	2024-148H	Yaogan 43-01-08	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	491	500	35.00	In Earth orbit
1627	S60466	2024-148I	Yaogan 43-01-09	2024 Aug 16 0735	2024 Aug 16 0755?	ZBZ	CN	490	500	35.00	In Earth orbit
1628	S60468	2024-149A	Flock 4bc-21	2024 Aug 16 1856:00	2024 Aug 16 2012:02	PLAN	US	507	516	97.44	In Earth orbit
1629	S60469	2024-149B	Waratah Steed WS-1	2024 Aug 16 1856:00	2024 Aug 16 1950:14	USYD	AU	513	518	97.44	In Earth orbit
1630	S60470	2024-149C	PhSat-2	2024 Aug 16 1856:00	2024 Aug 16 1950:14	ESA	I-ESA	513	517	97.45	In Earth orbit
1631	S60471	2024-149D	Lemur-2	2024 Aug 16 1856:00	2024 Aug 16 1954:04	SPREG/HUBN	US	512	517	97.45	In Earth orbit
1632	S60472	2024-149E	Connecta T4.1	2024 Aug 16 1856:00	2024 Aug 16 1951:54	PLNSST	TR	512	517	97.45	In Earth orbit

1633	S60473	2024-149F	Lopen	2024 Aug 16 1856:00	2024 Aug 16 1950:33	ARRAY	US	513	517	97.45	In Earth orbit
1634	S60474	2024-149G	Rock	2024 Aug 16 1856:00	2024 Aug 16 1950:33	ARRAY	US	513	517	97.45	In Earth orbit
1635	S60475	2024-149H	Connecta T4.3	2024 Aug 16 1856:00	2024 Aug 16 1956:08	PLNSST	TR	511	519	97.44	In Earth orbit
1636	S60476	2024-149I	QUBE	2024 Aug 16 1856:00	2024 Aug 16 1956:31	ZFT	D	511	517	97.45	In Earth orbit
1637	S60477	2024-149K	Satiro-T2	2024 Aug 16 1856:00	2024 Aug 16 1950:54	SATORO	HU	512	518	97.44	In Earth orbit
1638	S60478	2024-149L	WIREN	2024 Aug 16 1856:00	2024 Aug 16 2018:14	C3S	TW	508	519	97.44	In Earth orbit
1639	S60479	2024-149M	Tomorrow-S1	2024 Aug 16 1856:00	2024 Aug 16 1951:04	TOMIO	US	511	517	97.44	In Earth orbit
1640	S60480	2024-149N	Flock 4be-18	2024 Aug 16 1856:00	2024 Aug 16 2007:02	PLAN	US	509	519	97.44	In Earth orbit
1641	S60481	2024-149P	Flock 4be-17	2024 Aug 16 1856:00	2024 Aug 16 2003:56	PLAN	US	510	518	97.45	In Earth orbit
1642	S60482	2024-149Q	Flock 4be-4	2024 Aug 16 1856:00	2024 Aug 16 2000:03	PLAN	US	510	518	97.45	In Earth orbit
1643	S60483	2024-149R	Flock 4be-16	2024 Aug 16 1856:00	2024 Aug 16 1958:55	PLAN	US	510	518	97.45	In Earth orbit
1644	S60484	2024-149S	Flock 4be-26	2024 Aug 16 1856:00	2024 Aug 16 2001:59	PLAN	US	509	518	97.44	In Earth orbit
1645	S60485	2024-149T	Tomorrow-S2	2024 Aug 16 1856:00	2024 Aug 16 1958:19	TOMIO	US	511	517	97.45	In Earth orbit
1646	S60486	2024-149U	Flock 4be-36	2024 Aug 16 1856:00	2024 Aug 16 2009:52	PLAN	US	508	519	97.44	In Earth orbit
1647	S60487	2024-149V	Flock 4be-25	2024 Aug 16 1856:00	2024 Aug 16 2001:10	PLAN	US	510	517	97.45	In Earth orbit
1648	S60488	2024-149W	Flock 4be-31	2024 Aug 16 1856:00	2024 Aug 16 2005:03	PLAN	US	509	517	97.45	In Earth orbit
1649	S60489	2024-149X	Flock 4be-20	2024 Aug 16 1856:00	2024 Aug 16 2003:26	PLAN	US	509	518	97.44	In Earth orbit
1650	S60490	2024-149Y	Flock 4be-23	2024 Aug 16 1856:00	2024 Aug 16 2010:14	PLAN	US	509	518	97.45	In Earth orbit
1651	S60491	2024-149Z	Flock 4be-15	2024 Aug 16 1856:00	2024 Aug 16 1959:36	PLAN	US	508	518	97.44	In Earth orbit
1652	S60492	2024-149AA	Flock 4be-17	2024 Aug 16 1856:00	2024 Aug 16 2006:12	PLAN	US	509	517	97.45	In Earth orbit
1653	S60493	2024-149AB	Nancy Roman	2024 Aug 16 1856:00	2024 Aug 16 2012:27	URUGUS	UY	509	517	97.45	In Earth orbit
1654	S60494	2024-149AC	Flock 4be-22	2024 Aug 16 1856:00	2024 Aug 16 2011:27	PLAN	US	508	518	97.44	In Earth orbit
1655	S60495	2024-149AD	Flock 4be-34	2024 Aug 16 1856:00	2024 Aug 16 2012:43	PLAN	US	509	517	97.45	In Earth orbit
1656	S60496	2024-149AE	Tyche	2024 Aug 16 1856:00	2024 Aug 16 2014:56	UKSC	UK	508	517	97.44	In Earth orbit
1657	S60497	2024-149AF	Flock 4be-32	2024 Aug 16 1856:00	2024 Aug 16 2006:18	PLAN	US	508	518	97.44	In Earth orbit
1658	S60498	2024-149AG	H. Leavitt	2024 Aug 16 1856:00	2024 Aug 16 2015:34	URUGUS	UY	508	517	97.45	In Earth orbit
1659	S60499	2024-149AH	Flock 4be-30	2024 Aug 16 1856:00	2024 Aug 16 2008:42	PLAN	US	509	516	97.45	In Earth orbit
1660	S60500	2024-149AJ	K. Von Neumann	2024 Aug 16 1856:00	2024 Aug 16 2013:45	URUGUS	UY	508	518	97.44	In Earth orbit
1661	S60501	2024-149AK	Flock 4be-11	2024 Aug 16 1856:00	2024 Aug 16 2009:02	PLAN	US	507	517	97.44	In Earth orbit
1662	S60502	2024-149AL	Flock 4be-33	2024 Aug 16 1856:00	2024 Aug 16 2014:24	PLAN	US	507	517	97.44	In Earth orbit
1663	S60503	2024-149AM	Flock 4be-10	2024 Aug 16 1856:00	2024 Aug 16 2011:05	PLAN	US	508	516	97.45	In Earth orbit
1664	S60504	2024-149AN	YAMF-7	2024 Aug 16 1856:00	2024 Aug 16 2013:53	LOFT	US	508	516	97.45	In Earth orbit
1665	S60505	2024-149AP	Flock 4be-24	2024 Aug 16 1856:00	2024 Aug 16 2007:55	PLAN	US	507	517	97.44	In Earth orbit
1666	S60506	2024-149AQ	LUR-1	2024 Aug 16 1856:00	2024 Aug 16 2016:23	AVS	E	507	516	97.44	In Earth orbit
1667	S60507	2024-149AR	Imager 1	2024 Aug 16 1856:00	2024 Aug 16 2015:25	PLAN	US	507	516	97.44	In Earth orbit
1668	S60508	2024-149AS	EngleEye	2024 Aug 16 1856:00	2024 Aug 16 2013:16	CREO	PL	507	516	97.44	In Earth orbit
1669	S60509	2024-149AT	Flock 4be-29	2024 Aug 16 1856:00	2024 Aug 16 2008:19	PLAN	US	508	515	97.45	In Earth orbit
1670	S60510	2024-149AU	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1671	S60511	2024-149AV	Flock 4be-2	2024 Aug 16 1856:00	2024 Aug 16 2003:00	PLAN	US	507	515	97.45	In Earth orbit
1672	S60512	2024-149AW	Flock 4be-13	2024 Aug 16 1856:00	2024 Aug 16 2000:15	PLAN	US	506	517	97.44	In Earth orbit
1673	S60513	2024-149AX	Flock 4be-27	2024 Aug 16 1856:00	2024 Aug 16 2000:09	PLAN	US	506	516	97.45	In Earth orbit
1674	S60514	2024-149AY	Flock 4be-9	2024 Aug 16 1856:00	2024 Aug 16 2010:34	PLAN	US	507	515	97.45	In Earth orbit
1675	S60515	2024-149AZ	Flock 4be-8	2024 Aug 16 1856:00	2024 Aug 16 2005:42	PLAN	US	506	516	97.44	In Earth orbit
1676	S60516	2024-149BA	Flock 4be-6	2024 Aug 16 1856:00	2024 Aug 16 2006:37	PLAN	US	506	515	97.45	In Earth orbit
1677	S60517	2024-149BB	Flock 4be-14	2024 Aug 16 1856:00	2024 Aug 16 2000:37	PLAN	US	505	516	97.44	In Earth orbit
1678	S60518	2024-149BC	Flock 4be-1	2024 Aug 16 1856:00	2024 Aug 16 2002:33	PLAN	US	506	515	97.45	In Earth orbit
1679	S60519	2024-149BD	Flock 4be-28	2024 Aug 16 1856:00	2024 Aug 16 1959:28	PLAN	US	505	516	97.44	In Earth orbit
1680	S60520	2024-149BE	Iperdrome.0	2024 Aug 16 1856:00	2024 Aug 16 1954:43	ASI	US	504	516	97.44	In Earth orbit
1681	S60521	2024-149BF	GNA-3	2024 Aug 16 1856:00	2024 Aug 16 1954:58	FOI	I	505	516	97.45	In Earth orbit
1682	S60522	2024-149BG	Connecta T4.2	2024 Aug 16 1856:00	2024 Aug 16 1954:17	PLNSST	TR	503	516	97.45	In Earth orbit
1683	S60523	2024-149BH	PTD-R	2024 Aug 16 1856:00	2024 Aug 16 1955:31	ARC/TERRAN	US	504	516	97.44	In Earth orbit
1684	S60524	2024-149BI	Connecta T4.4	2024 Aug 16 1856:00	2024 Aug 16 1953:45	PLNSST	TR	502	516	97.44	In Earth orbit
1685	S60525	2024-149BK	ORESATIO.5	2024 Aug 16 1856:00	2024 Aug 16 1953:18	PSAS	US	504	516	97.44	In Earth orbit
1686	S60526	2024-149BL	Aethero	2024 Aug 16 1856:00	2024 Aug 16 1952:26	AETH	US	504	516	97.45	In Earth orbit
1687	S60527	2024-149BM	CUAVA-2	2024 Aug 16 1856:00	2024 Aug 16 1951:33	USYDUNSW	AU	501	516	97.44	In Earth orbit
1688	S60528	2024-149BN	Ernst	2024 Aug 16 1856:00	2024 Aug 16 1952:09	FRAUN	D	502	516	97.45	In Earth orbit
1689	S60529	2024-149BP	GaiudeSit	2024 Aug 16 1856:00	2024 Aug 16 1949:56	SENSAT/MONTP	SN	501	516	97.45	In Earth orbit
1690	S60530	2024-149BQ	TOKO	2024 Aug 16 1856:00	2024 Aug 16 2126:22	TASA	TW	593	596	97.75	In Earth orbit
1691	S60531	2024-149BR	HYPSO-2	2024 Aug 16 1856:00	2024 Aug 16 2127:32	NTNU	N	592	595	97.75	In Earth orbit
1692	S60532	2024-149BS	Lemu Nige	2024 Aug 16 1856:00	2024 Aug 16 2128:46	LEMU	CL	592	595	97.75	In Earth orbit
1693	S60533	2024-149BT	Lemur-2 Stella	2024 Aug 16 1856:00	2024 Aug 16 2127:42	SPIRE	US	592	595	97.75	In Earth orbit
1694	S60534	2024-149BU	Sateliot-2	2024 Aug 16 1856:00	2024 Aug 16 2126:51	STIOT	E	592	595	97.75	In Earth orbit
1695	S60535	2024-149BV	Nightjar	2024 Aug 16 1856:00	2024 Aug 16 2127:53	TASA	TW	592	595	97.75	In Earth orbit
1696	S60536	2024-149BW	Lemur-2 Marhisyam	2024 Aug 16 1856:00	2024 Aug 16 2127:53	SPIRE	US	591	596	97.75	In Earth orbit
1697	S60537	2024-149BX	Sateliot-4	2024 Aug 16 1856:00	2024 Aug 16 2127:25	STIOT	E	591	596	97.74	In Earth orbit
1698	S60538	2024-149BY	CAKRA-1	2024 Aug 16 1856:00	2024 Aug 16 1955:41	KOMI	ID	512	519	97.44	In Earth orbit

1699	S60539	2024-149BZ	ICEYE-X43	2024 Aug 16 1856:00	2024 Aug 16 2131:33	ICEYE/ICEUS?	FI	586	595	97.75	In Earth orbit
1700	S60540	2024-149CA	Hawk 10A	2024 Aug 16 1856:00	2024 Aug 16 2131:52	HE360	US	588	595	97.75	In Earth orbit
1701	S60541	2024-149CB	Umbra-09	2024 Aug 16 1856:00	2024 Aug 16 2131:21	UMBRA	US	588	595	97.75	In Earth orbit
1702	S60542	2024-149CC	Amateru 4	2024 Aug 16 1856:00	2024 Aug 16 2132:08	QPS	J	587	595	97.75	In Earth orbit
1703	S60543	2024-149CD	AWS	2024 Aug 16 1856:00	2024 Aug 16 2129:49	L-ESA	US	587	595	97.75	In Earth orbit
1704	S60544	2024-149CE	Capella 15	2024 Aug 16 1856:00	2024 Aug 16 2130:58	CAPS	US	587	595	97.75	In Earth orbit
1705	S60545	2024-149CF	Hawk 10B	2024 Aug 16 1856:00	2024 Aug 16 2131:11	HE360	US	586	595	97.75	In Earth orbit
1706	S60546	2024-149CG	ICEYE-X39	2024 Aug 16 1856:00	2024 Aug 16 2130:12	ICEYE/ICEUS?	FI	586	595	97.75	In Earth orbit
1707	S60547	2024-149CH	Umbra-10	2024 Aug 16 1856:00	2024 Aug 16 2130:22	UMBRA	US	586	594	97.75	In Earth orbit
1708	S60548	2024-149CI	ICEYE-X33	2024 Aug 16 1856:00	2024 Aug 16 2130:02	ALYAH	UAE	585	595	97.75	In Earth orbit
1709	S60549	2024-149CJ	ICEYE-X40	2024 Aug 16 1856:00	2024 Aug 16 2130:29	ICEYE/ICEUS?	FI	588	595	97.75	In Earth orbit
1710	S60550	2024-149CK	Satellite-1	2024 Aug 16 1856:00	2024 Aug 16 2128:38	STIOT	E	582	595	97.74	In Earth orbit
1711	S60551	2024-149CM	BRO-14	2024 Aug 16 1856:00	2024 Aug 16 2128:51	UNSEEN	F	583	594	97.75	In Earth orbit
1712	S60552	2024-149CN	Satellite-3	2024 Aug 16 1856:00	2024 Aug 16 2129:02	STIOT	E	581	594	97.75	In Earth orbit
1713	S60553	2024-149CP	BRO-15	2024 Aug 16 1856:00	2024 Aug 16 2128:16	UNSEEN	F	581	595	97.75	In Earth orbit
1714	S60554	2024-149CQ	UM5Sat-Ribat	2024 Aug 16 1856:00	2024 Aug 16 2126:46	UM5R	MA	580	595	97.74	In Earth orbit
1715	S60555	2024-149CR	UM5Sat-EOSAT	2024 Aug 16 1856:00	2024 Aug 16 2127:12	UM5R	MA	511	517	97.45	In Earth orbit
1716	S60556	2024-149CS	Kanyini	2024 Aug 16 1856:00	2024 Aug 16 1955:18	SMCRC	AU	511	517	97.45	In Earth orbit
1717	S60557	2024-149CT	TROOP-F2	2024 Aug 16 1856:00	2024 Aug 16 1958:26	NSL	US	509	518	97.44	In Earth orbit
1718	S60558	2024-149CV	Flock 4be-35	2024 Aug 16 1856:00	2024 Aug 16 2012:07	PLAN	US	508	515	97.45	In Earth orbit
1719	S60559	2024-149CW	Flock 4be-5	2024 Aug 16 1856:00	2024 Aug 16 2006:48	PLAN	US	507	515	97.45	In Earth orbit
1720	S60560	2024-149CX	Flock 4be-12	2024 Aug 16 1856:00	2024 Aug 16 2009:32	PLAN	US	506	516	97.44	In Earth orbit
1721	S60561	2024-149CX	Flock 4be-3	2024 Aug 16 1856:00	2024 Aug 16 2001:45	PLAN	US	506	516	97.44	In Earth orbit
1722	S60562	2024-149CY	Hyperfield-1A	2024 Aug 16 1856:00	2024 Aug 16 1955:18	KUVA	FI	505	516	97.45	In Earth orbit
1723	S60563	2024-149CZ	Flock 4be-19	2024 Aug 16 1856:00	2024 Aug 16 2004:35	PLAN	US	505	516	97.44	In Earth orbit
1724	S60564	2024-149DA	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1725	S60565	2024-149DB	PTD-4	2024 Aug 16 1856:00	2024 Aug 16 2129:18	ARC/TERRAN	US	589	595	97.75	In Earth orbit
1726	S60566	2024-149DC	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1727	S60567	2024-149DD	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1728	S60568	2024-149DE	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1729	S60569	2024-149DF	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1730	S60570	2024-149DG	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1731	S60571	2024-149DH	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2128:29	APOGEO	I	590	595	97.75	In Earth orbit
1732	S60572	2024-149DJ	PICO-1B1+	2024 Aug 16 1856:00	2024 Aug 16 2130:50	DORBIT	I	588	595	97.75	In Earth orbit
1733	S60573	2024-149DK	ION SCV Magnificent Monica	2024 Aug 16 1856:00	2024 Aug 16 2130:50	PLANQ	US	589	595	97.75	In Earth orbit
1734	S60574	2024-149DL	GNOMES-5	2024 Aug 16 1856:00	2024 Aug 16 2129:41	HE360	US	588	595	97.75	In Earth orbit
1735	S60575	2024-149DM	Hawk 10C	2024 Aug 16 1856:00	2024 Aug 16 2131:52	HE360	US	588	595	97.75	In Earth orbit
1736	S60576	2024-149DN	Lemur-2 Ahmed-Astar	2024 Aug 16 1856:00	2024 Aug 26	SPIRE/MYRI	US	582	592	97.75	In Earth orbit
1737	S60577	2024-149DP	Lemur-2 Lleyd	2024 Aug 16 1856:00	2024 Aug 27	SPIRE/MYRI	US	595	595	97.75	In Earth orbit
1738	S60578	2024-149DQ	Lemur-2 SquirrelComm	2024 Aug 16 1856:00	2024 Aug 28	SPIRE/MYRI	US	583	592	97.74	In Earth orbit
1739	S60579	2024-149DQ	Lemur-2 Sierrini	2024 Aug 16 1856:00	2024 Aug 29	SPIRE/MYRI	US	589	594	97.75	In Earth orbit
1740	S60580	2024-149DS	Sedna-1	2024 Aug 16 1856:00	2024 Aug 30?	CLAAC	UK	592	594	97.75	In Earth orbit
1741	S60583	2024-150A	Starlink 31844	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	298	53.16	In Earth orbit
1742	S60584	2024-150B	Starlink 32204	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1743	S60585	2024-150C	Starlink 32130	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	298	53.16	In Earth orbit
1744	S60586	2024-150D	Starlink 32173	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1745	S60587	2024-150E	Starlink 31911	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1746	S60588	2024-150F	Starlink 31994	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1747	S60589	2024-150G	Starlink 32169	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1748	S60590	2024-150H	Starlink 32209	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1749	S60591	2024-150I	Starlink 32170	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1750	S60592	2024-150K	Starlink 31497	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1751	S60593	2024-150L	Starlink 32161	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1752	S60594	2024-150M	Starlink 32210	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1753	S60595	2024-150N	Starlink 32202	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1754	S60596	2024-150P	Starlink 31930	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1755	S60597	2024-150Q	Starlink 32162	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1756	S60598	2024-150R	Starlink 32208	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1757	S60599	2024-150S	Starlink 32165	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1758	S60600	2024-150T	Starlink 31923	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1759	S60601	2024-150U	Starlink 31988	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1760	S60602	2024-150V	Starlink 31983	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1761	S60603	2024-150W	Starlink 31874	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1762	S60604	2024-150X	Starlink 32039	2024 Aug 20 1320:00	2024 Aug 20 1420:00	SPXS	US	284	297	53.16	In Earth orbit
1763	S60606	2024-151A	Zhongxing 4A	2024 Aug 22 1225	2024 Aug 22 1255?	ZLZB	CN	35779	35797	2.96	In Earth orbit
1764	S60720	2024-152A	Starlink 11247	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	296	296	53.16	In Earth orbit

1765	S60721	2024-152B	Starlink 11259	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	296	53.16	In Earth orbit
1766	S60722	2024-152C	Starlink 11188	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	282	298	53.16	In Earth orbit
1767	S60723	2024-152D	Starlink 11272	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1768	S60724	2024-152E	Starlink 11261	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1769	S60725	2024-152F	Starlink 11263	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	282	295	53.16	In Earth orbit
1770	S60726	2024-152G	Starlink 11235	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	298	53.16	In Earth orbit
1771	S60727	2024-152H	Starlink 11080	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	282	298	53.16	In Earth orbit
1772	S60728	2024-152I	Starlink 11249	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1773	S60729	2024-152K	Starlink 11146	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	282	298	53.16	In Earth orbit
1774	S60730	2024-152L	Starlink 11255	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1775	S60731	2024-152M	Starlink 11255	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1776	S60732	2024-152N	Starlink 11266	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1777	S60733	2024-152P	Starlink 32253	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1778	S60734	2024-152Q	Starlink 32179	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1779	S60735	2024-152R	Starlink 32272	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1780	S60736	2024-152S	Starlink 32280	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	295	53.16	In Earth orbit
1781	S60737	2024-152T	Starlink 32289	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	282	297	53.16	In Earth orbit
1782	S60738	2024-152U	Starlink 32304	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	282	297	53.16	In Earth orbit
1783	S60739	2024-152V	Starlink 32235	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	279	294	53.16	In Earth orbit
1784	S60740	2024-152W	Starlink 32315	2024 Aug 28 0748:00	2024 Aug 28 0851:47	SPXS	US	294	294	53.16	In Earth orbit
1785	S60745	2024-153A	Yunyao-115	2024 Aug 29 0522	2024 Aug 29 0535:57	YYAO	CN	527	549	97.61	In Earth orbit
1786	S60746	2024-153B	Yunyao-116	2024 Aug 29 0522	2024 Aug 29 0535:57	YYAO	CN	527	548	97.61	In Earth orbit
1787	S60747	2024-153C	Yunyao-117	2024 Aug 29 0522	2024 Aug 29 0535:57	YYAO	CN	527	549	97.61	In Earth orbit
1788	S60748	2024-153D	Jitaxing A-03 xing	2024 Aug 29 0522	2024 Aug 29 0535:57	JTXZ	CN	527	548	97.62	In Earth orbit
1789	S60749	2024-153E	Suxing-1 01	2024 Aug 29 0522	2024 Aug 29 0535:57	TZXX	CN	527	547	97.61	In Earth orbit
1790	S60750	2024-153F	Tianru Gaolen 2	2024 Aug 29 0522	2024 Aug 29 0535:57	XIAMT	CN	526	548	97.61	In Earth orbit
1791	S60903	2024-154A	Starlink 11242	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1792	S60904	2024-154B	Starlink 11256	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1793	S60905	2024-154C	Starlink 11159	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1794	S60906	2024-154D	Starlink 11264	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1795	S60907	2024-154E	Starlink 11226	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1796	S60908	2024-154F	Starlink 11229	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1797	S60909	2024-154G	Starlink 11265	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1798	S60910	2024-154H	Starlink 11250	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1799	S60911	2024-154I	Starlink 11190	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1800	S60912	2024-154K	Starlink 11225	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1801	S60913	2024-154L	Starlink 11273	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1802	S60914	2024-154M	Starlink 11248	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1803	S60915	2024-154N	Starlink 11271	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1804	S60916	2024-154P	Starlink 32371	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	287	300	53.16	In Earth orbit
1805	S60917	2024-154Q	Starlink 32369	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	287	300	53.16	In Earth orbit
1806	S60918	2024-154R	Starlink 32317	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	287	300	53.16	In Earth orbit
1807	S60919	2024-154S	Starlink 32367	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	300	53.16	In Earth orbit
1808	S60920	2024-154T	Starlink 32345	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	299	53.16	In Earth orbit
1809	S60921	2024-154U	Starlink 32356	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	287	299	53.16	In Earth orbit
1810	S60922	2024-154V	Starlink 32274	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	288	299	53.16	In Earth orbit
1811	S60923	2024-154W	Starlink 32373	2024 Aug 31 0743:00	2024 Aug 31 0846:55	SPXS	US	287	299	53.16	In Earth orbit
1812	S60924	2024-155A	Starlink 11239	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	283	292	53.17	In Earth orbit
1813	S60925	2024-155B	Starlink 11245	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	283	292	53.17	In Earth orbit
1814	S60926	2024-155C	Starlink 11244	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	283	292	53.17	In Earth orbit
1815	S60927	2024-155D	Starlink 11243	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	283	292	53.17	In Earth orbit
1816	S60928	2024-155E	Starlink 11238	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	283	292	53.17	In Earth orbit
1817	S60929	2024-155F	Starlink 11240	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	283	292	53.17	In Earth orbit
1818	S60930	2024-155G	Starlink 11251	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1819	S60931	2024-155H	Starlink 11204	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1820	S60932	2024-155I	Starlink 11246	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1821	S60933	2024-155K	Starlink 11207	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1822	S60934	2024-155L	Starlink 11237	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1823	S60935	2024-155M	Starlink 11253	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1824	S60936	2024-155N	Starlink 11241	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1825	S60937	2024-155P	Starlink 32259	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1826	S60938	2024-155Q	Starlink 32262	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1827	S60939	2024-155R	Starlink 32258	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1828	S60940	2024-155S	Starlink 32258	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1829	S60941	2024-155T	Starlink 32224	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1830	S60942	2024-155U	Starlink 32184	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit

1831	S60943	2024-155V	Starlink 32288	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1832	S60944	2024-155W	Starlink 32276	2024 Aug 31 0848:00	2024 Aug 31 0948:09	SPXS	US	282	292	53.17	In Earth orbit
1833	S60945	2024-156A	Yaogan 43-02-01	2024 Sep 3 0122	2024 Sep 3 0135?7	ZBZ	CN	474	481	34.99	In Earth orbit
1834	S60946	2024-156B	Yaogan 43-02-02	2024 Sep 3 0122	2024 Sep 3 0135?7	ZBZ	CN	488	501	35.00	In Earth orbit
1835	S60947	2024-156C	Yaogan 43-02-03	2024 Sep 3 0122	2024 Sep 3 0135?7	ZBZ	CN	489	500	34.99	In Earth orbit
1836	S60948	2024-156D	Yaogan 43-02-04	2024 Sep 3 0122	2024 Sep 3 0135?7	ZBZ	CN	489	501	35.00	In Earth orbit
1837	S60949	2024-156E	Yaogan 43-02-05	2024 Sep 3 0122	2024 Sep 3 0135?7	ZBZ	CN	489	501	35.00	In Earth orbit
1838	S60950	2024-156F	Yaogan 43-02-06	2024 Sep 3 0122	2024 Sep 3 0135?7	ZBZ	CN	476	501	35.00	In Earth orbit
1839	S60959	2024-157A	Scintinel-2C	2024 Sep 5 1533:00	2024 Sep 5 1636:51	COPERN/ESA	I-EU	780	780	98.58	In Earth orbit
1840	S60990	2024-158A	Starlink 11278	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	Reentered
1841	S60991	2024-158B	Starlink 11289	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1842	S60992	2024-158C	Starlink 11282	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1843	S60993	2024-158D	Starlink 11283	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1844	S60994	2024-158E	Starlink 11267	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1845	S60995	2024-158F	Starlink 11269	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1846	S60996	2024-158G	Starlink 11281	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1847	S60997	2024-158H	Starlink 11260	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1848	S60998	2024-158I	Starlink 11287	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1849	S60999	2024-158K	Starlink 11270	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1850	S61000	2024-158L	Starlink 11290	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1851	S61001	2024-158M	Starlink 11274	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1852	S61002	2024-158N	Starlink 11278	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1853	S61003	2024-158P	Starlink 11288	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	287	302	53.16	In Earth orbit
1854	S61004	2024-158Q	Starlink 32379	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	287	302	53.16	In Earth orbit
1855	S61005	2024-158R	Starlink 32336	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	287	302	53.16	In Earth orbit
1856	S61006	2024-158S	Starlink 32282	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1857	S61007	2024-158T	Starlink 32360	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	287	302	53.16	In Earth orbit
1858	S61008	2024-158U	Starlink 32340	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	287	302	53.16	In Earth orbit
1859	S61009	2024-158V	Starlink 32357	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	288	302	53.16	In Earth orbit
1860	S61010	2024-158W	Starlink 32347	2024 Sep 5 1533:00	2024 Sep 5 1636:51	SPXS	US	287	302	53.16	In Earth orbit
1861	S61011	2024-159A	Geely Xingrou03 zu 01 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	554	567	50.00	In Earth orbit
1862	S61012	2024-159B	Geely Xingrou03 zu 02 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	554	566	49.99	In Earth orbit
1863	S61013	2024-159C	Geely Xingrou03 zu 03 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	553	566	49.99	In Earth orbit
1864	S61014	2024-159D	Geely Xingrou03 zu 04 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	553	565	50.00	In Earth orbit
1865	S61015	2024-159E	Geely Xingrou03 zu 05 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	553	564	50.00	In Earth orbit
1866	S61016	2024-159F	Geely Xingrou03 zu 06 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	553	564	50.00	In Earth orbit
1867	S61017	2024-159G	Geely Xingrou03 zu 07 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	553	565	49.99	In Earth orbit
1868	S61018	2024-159H	Geely Xingrou03 zu 08 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	552	564	50.00	In Earth orbit
1869	S61019	2024-159I	Geely Xingrou03 zu 09 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	551	565	49.99	In Earth orbit
1870	S61020	2024-159K	Geely Xingrou03 zu 10 xing	2024 Sep 5 1830	2024 Sep 5 1845?7	GELEP	CN	552	565	50.00	In Earth orbit
1871	S61021	2024-160A	USA 400	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	299	307	70.00	In Earth orbit
1872	S61022	2024-160B	USA 401	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	294	316	69.99	In Earth orbit
1873	S61023	2024-160C	USA 402	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	283	323	69.94	In Earth orbit
1874	S61024	2024-160D	USA 403	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	289	314	69.99	In Earth orbit
1875	S61025	2024-160E	USA 404	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	292	312	70.00	In Earth orbit
1876	S61026	2024-160F	USA 405	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	293	312	70.01	In Earth orbit
1877	S61027	2024-160G	USA 406	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	298	313	70.01	In Earth orbit
1878	S61028	2024-160H	USA 407	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	286	319	69.94	In Earth orbit
1879	S61029	2024-160I	USA 408	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	285	322	69.95	In Earth orbit
1880	S61030	2024-160K	USA 409	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	283	318	69.96	In Earth orbit
1881	S61031	2024-160L	USA 410	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	284	320	69.96	In Earth orbit
1882	S61032	2024-160M	USA 411	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	285	322	69.95	In Earth orbit
1883	S61033	2024-160N	USA 412	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	295	312	70.01	In Earth orbit
1884	S61034	2024-160P	USA 413	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	289	327	69.92	In Earth orbit
1885	S61035	2024-160Q	USA 414	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	303	310	70.00	In Earth orbit
1886	S61036	2024-160R	USA 415	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	284	316	69.94	In Earth orbit
1887	S61037	2024-160S	USA 416	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	304	311	70.00	In Earth orbit
1888	S61038	2024-160T	USA 417	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	301	312	70.01	In Earth orbit
1889	S61039	2024-160U	USA 418	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	295	311	70.01	In Earth orbit
1890	S61040	2024-160V	USA 419	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	295	313	70.01	In Earth orbit
1891	S61041	2024-160W	USA 420	2024 Sep 6 0320	2024 Sep 6 0420?7	NROC	US	289	312	69.99	In Earth orbit
1892	S61042	2024-161A	Polaris Dawn	2024 Sep 10 0923:49	2024 Sep 10 0936:05	SPX	US	195	1200	51.65	Landed
1893	S61043	2024-162A	Soyuz MS-26	2024 Sep 11 1623:12	2024 Sep 11 1632:01	AKKE	RU	415	425	51.64	Attached to Soyuz-2-1a No. 070 Blok-I
1894	S61045	2024-163A	SpaceMobile-003	2024 Sep 12 0852	2024 Sep 12 0945:57	ASTIS	US	506	523	52.98	In Earth orbit
1895	S61046	2024-163B	SpaceMobile-005	2024 Sep 12 0852	2024 Sep 12 0947:32	ASTIS	US	505	522	52.98	In Earth orbit
1896	S61047	2024-163C	SpaceMobile-001	2024 Sep 12 0852	2024 Sep 12 0950:37	ASTIS	US	506	522	52.98	In Earth orbit

1897	S61048	2024-163D	SpaceMobile-002	2024 Sep 12 08:52	2024 Sep 12 09:54:22	ASTIS	US	505	521	52.98	In Earth orbit
1898	S61049	2024-163E	SpaceMobile-004	2024 Sep 12 08:52	2024 Sep 12 09:59:53	ASTIS	US	503	521	52.98	In Earth orbit
1899	S61050	2024-164A	Starlink 11286	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	289	298	53.17	In Earth orbit
1900	S61051	2024-164B	Starlink 11282	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	289	298	53.17	In Earth orbit
1901	S61052	2024-164C	Starlink 11284	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	289	298	53.17	In Earth orbit
1902	S61053	2024-164D	Starlink 11230	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	289	298	53.17	In Earth orbit
1903	S61054	2024-164E	Starlink 11294	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	289	298	53.17	In Earth orbit
1904	S61055	2024-164F	Starlink 11268	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	289	298	53.17	In Earth orbit
1905	S61056	2024-164G	Starlink 11156	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1906	S61057	2024-164H	Starlink 11231	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1907	S61058	2024-164I	Starlink 11209	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1908	S61059	2024-164K	Starlink 11154	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1909	S61060	2024-164L	Starlink 11297	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1910	S61061	2024-164M	Starlink 11233	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1911	S61062	2024-164N	Starlink 11236	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1912	S61063	2024-164P	Starlink 32350	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1913	S61064	2024-164Q	Starlink 32378	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1914	S61065	2024-164R	Starlink 32321	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1915	S61066	2024-164S	Starlink 32381	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1916	S61067	2024-164T	Starlink 32368	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1917	S61068	2024-164U	Starlink 32385	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1918	S61069	2024-164V	Starlink 32380	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1919	S61070	2024-164W	Starlink 32375	2024 Sep 13 01:45:00	2024 Sep 13 02:45:58	SPXS	US	288	298	53.17	In Earth orbit
1920	S61072	2024-165B	Chamran-1	2024 Sep 14 06:00:07	2024 Sep 14 06:08:22	IEIURSA	IR	546	556	64.10	In Earth orbit
1921	S61179	2024-166A	Kosmos-2577	2024 Sep 17 07:01:00	2024 Sep 17 07:23:37	MORF	RU	328	343	96.77	In Earth orbit
1922	S61180	2024-166B	Kosmos-2578	2024 Sep 17 07:01:00	2024 Sep 17 07:23:37	MORF	RU	328	343	96.77	In Earth orbit
1923	S61182	2024-167A	GalileoSat-31	2024 Sep 17 22:50	2024 Sep 18 02:24:22	EUSPA	I-EU	22864	22962	55.40	In Earth orbit
1924	S61183	2024-167B	GalileoSat-32	2024 Sep 17 22:50	2024 Sep 18 02:24:22	EUSPA	I-EU	23020	23214	55.40	In Earth orbit
1925	S61185	2024-168A	Beidou DW 59	2024 Sep 19 01:14	2024 Sep 19 04:33:09	CNSA	CN	21932	22384	54.92	In Earth orbit
1926	S61186	2024-168B	Beidou DW 60	2024 Sep 19 01:14	2024 Sep 19 04:33:09	CNSA	CN	21526	22191	54.94	In Earth orbit
1927	S61189	2024-169A	Jilin-1 Kuantiu-02B 01	2024 Sep 20 04:11	2024 Sep 20 04:22:27	CGSTL	CN	532	546	97.59	In Earth orbit
1928	S61190	2024-169B	Jilin-1 Kuantiu-02B 02	2024 Sep 20 04:11	2024 Sep 20 04:22:27	CGSTL	CN	530	546	97.58	In Earth orbit
1929	S61191	2024-169C	Jilin-1 Kuantiu-02B 03	2024 Sep 20 04:11	2024 Sep 20 04:22:27	CGSTL	CN	529	547	97.59	In Earth orbit
1930	S61192	2024-169D	Jilin-1 Kuantiu-02B 04	2024 Sep 20 04:11	2024 Sep 20 04:22:27	CGSTL	CN	529	546	97.58	In Earth orbit
1931	S61193	2024-169E	Jilin-1 Kuantiu-02B 05	2024 Sep 20 04:11	2024 Sep 20 04:22:27	CGSTL	CN	530	545	97.59	In Earth orbit
1932	S61194	2024-169F	Jilin-1 Kuantiu-02B 06	2024 Sep 20 04:11	2024 Sep 20 04:22:27	CGSTL	CN	529	546	97.59	In Earth orbit
1933	S61195	2024-170A	Tianqi Xingzuo 29	2024 Sep 20 09:43	2024 Sep 20 09:58:87	GUOG	CN	841	853	44.86	In Earth orbit
1934	S61196	2024-170B	Tianqi Xingzuo 30	2024 Sep 20 09:43	2024 Sep 20 09:58:87	GUOG	CN	841	852	44.85	In Earth orbit
1935	S61197	2024-170C	Tianqi Xingzuo 31	2024 Sep 20 09:43	2024 Sep 20 09:58:87	GUOG	CN	841	854	44.86	In Earth orbit
1936	S61198	2024-170D	Tianqi Xingzuo 32	2024 Sep 20 09:43	2024 Sep 20 09:58:87	GUOG	CN	842	854	44.86	In Earth orbit
1937	S61200	2024-171A	Starlink 11209	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1938	S61201	2024-171B	Starlink 11257	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1939	S61202	2024-171C	Starlink 11309	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1940	S61203	2024-171D	Starlink 11292	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1941	S61204	2024-171E	Starlink 11302	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1942	S61205	2024-171F	Starlink 11277	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1943	S61206	2024-171G	Starlink 11279	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1944	S61207	2024-171H	Starlink 11091	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1945	S61208	2024-171I	Starlink 11291	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1946	S61209	2024-171K	Starlink 11304	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1947	S61210	2024-171L	Starlink 11307	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1948	S61211	2024-171M	Starlink 11298	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1949	S61212	2024-171N	Starlink 11310	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1950	S61213	2024-171P	Starlink 32386	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1951	S61214	2024-171Q	Starlink 32392	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1952	S61215	2024-171R	Starlink 32436	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	295	53.17	In Earth orbit
1953	S61216	2024-171S	Starlink 32425	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	294	53.17	In Earth orbit
1954	S61217	2024-171T	Starlink 32342	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	294	53.17	In Earth orbit
1955	S61218	2024-171U	Starlink 32423	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	294	53.17	In Earth orbit
1956	S61219	2024-171V	Starlink 32248	2024 Sep 20 13:50:00	2024 Sep 20 14:50:45	SPXS	US	285	294	53.17	In Earth orbit
1957	S61220	2024-172A	Kineis-3C	2024 Sep 20 23:01	2024 Sep 21 00:06:0117	KINEIS	F	638	640	98.01	In Earth orbit
1958	S61221	2024-172B	Kineis-3D	2024 Sep 20 23:01	2024 Sep 21 00:06:357	KINEIS	F	638	640	98.02	In Earth orbit
1959	S61222	2024-172C	Kineis-3E	2024 Sep 20 23:01	2024 Sep 21 00:07:207	KINEIS	F	637	640	98.01	In Earth orbit
1960	S61223	2024-172D	Kineis-3A	2024 Sep 20 23:01	2024 Sep 21 00:06:357	KINEIS	F	636	640	98.02	In Earth orbit
1961	S61224	2024-172E	Kineis-3B	2024 Sep 20 23:01	2024 Sep 21 00:07:207	KINEIS	F	635	639	98.01	In Earth orbit
1962	S61227	2024-173A	Jitixiang A-01 Ximg	2024 Sep 24 02:31:41	2024 Sep 24 02:43:09	JITXZ	CN	487	501	97.41	In Earth orbit

1963	1963	S61228	2024-173B	Fudan-1	2024 Sep 24 02:31:41	2024 Sep 24 02:43:37	FUDAN	CN	485	501	97.40	In Earth orbit
1964	1964	S61229	2024-173C	Luojia-1 01	2024 Sep 24 02:31:41	2024 Sep 24 02:42:21	WUHAN	CN	486	501	97.40	In Earth orbit
1965	1965	S61230	2024-173D	Shenqi	2024 Sep 24 02:31:41	2024 Sep 24 02:43:37	XHZY	CN	485	501	97.40	In Earth orbit
1966	1966	S61231	2024-173E	Xingshidai-15	2024 Sep 24 02:31:41	2024 Sep 24 02:43:37	ZHGD	CN	485	501	97.39	In Earth orbit
1967	1967	S61232	2024-173F	Xingshidai-21	2024 Sep 24 02:31:41	2024 Sep 24 02:43:37	GUOX	CN	485	501	97.40	In Earth orbit
1968	1968	S61233	2024-173G	Xingshidai-22	2024 Sep 24 02:31:41	2024 Sep 24 02:43:37	GUOX	CN	484	501	97.40	In Earth orbit
1969	1969	S61234	2024-173H	Tianyan-15	2024 Sep 24 02:31:41	2024 Sep 24 02:43:37	TLCI/ZZQY	CN	485	500	97.40	In Earth orbit
1970	1970	S61238	2024-174A	AIRSAT-01	2024 Sep 24 23:33	2024 Sep 24 23:45:7	ZHWK/JIG	CN	506	527	97.45	In Earth orbit
1971	1971	S61239	2024-174B	AIRSAT-02	2024 Sep 24 23:33	2024 Sep 24 23:45:7	ZHWK/JIG	CN	528	528	97.46	In Earth orbit
1972	1972	S61240	2024-174C	Jilin-1 SAR-01A	2024 Sep 24 23:33	2024 Sep 24 23:45:7	CGSTL	CN	509	527	97.45	In Earth orbit
1973	1973	S61241	2024-174D	Yunyao-1 21	2024 Sep 24 23:33	2024 Sep 24 23:45:7	YYAO	CN	507	527	97.45	In Earth orbit
1974	1974	S61242	2024-174E	Yunyao-1 22	2024 Sep 24 23:33	2024 Sep 24 23:45:7	YYAO	CN	506	528	97.45	In Earth orbit
1975	1975	S61243	2024-175A	Starlink 11300	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1976	1976	S61244	2024-175B	Starlink 11276	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1977	1977	S61245	2024-175C	Starlink 11280	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1978	1978	S61246	2024-175D	Starlink 11308	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1979	1979	S61247	2024-175E	Starlink 11305	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1980	1980	S61248	2024-175F	Starlink 11317	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1981	1981	S61249	2024-175G	Starlink 11293	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1982	1982	S61250	2024-175H	Starlink 11334	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1983	1983	S61251	2024-175I	Starlink 11319	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1984	1984	S61252	2024-175K	Starlink 11318	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1985	1985	S61253	2024-175L	Starlink 11311	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1986	1986	S61254	2024-175M	Starlink 11306	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1987	1987	S61255	2024-175N	Starlink 11313	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1988	1988	S61256	2024-175P	Starlink 32431	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1989	1989	S61257	2024-175Q	Starlink 32432	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1990	1990	S61258	2024-175R	Starlink 32382	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1991	1991	S61259	2024-175S	Starlink 32435	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1992	1992	S61260	2024-175T	Starlink 32474	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1993	1993	S61261	2024-175U	Starlink 32447	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1994	1994	S61262	2024-175V	Starlink 32446	2024 Sep 25 04:01:00	2024 Sep 25 05:01:23	SPXS	US	289	299	53.17	In Earth orbit
1995	1995	S61439	2024-176A	JSE redia-8 gunki	2024 Sep 26 05:24	2024 Sep 26 05:47	CSICE	J	475	480	97.30	In Earth orbit
1996	1996	S61444	2024-177A	Shi Jian 19 RV	2024 Sep 27 10:30	2024 Oct 11 02:24:7	CASC	CN	333	342	41.60	Landed
1997	1997	S61506	2024-177D	Shi Jian 19	2024 Sep 27 10:30	2024 Sep 27 10:40:7	CASC	CN	319	338	41.60	In Earth orbit
1998	1998	S61447	2024-178A	Dragon Freedom (Crew-9)	2024 Sep 28 17:17:20	2024 Sep 28 17:19:21	SPX	USA	189	206	51.62	Attached to Falcon 9-379 Stage 2
1999	1999	S61449	2024-180A	HERA	2024 Oct 7 14:52	2024 Oct 7 16:08:02	ESA	ESA	190	-36368	34.20	Sun to HERA
2000	-	A11323	2024-180	Juventus	2024 Oct 7 14:52	-	ESA	ESA	190	-36368	34.20	Sun to HERA
2001	-	A11324	2024-180	Milani	2024 Oct 7 14:52	-	ESA	ESA	190	-36368	34.20	Sun to HERA
2002	2000	S61503	2024-181A	HG-03	2024 Oct 10 13:50	2024 Oct 10 14:12:7	CNSA	CN	35778	35793	0.04	In Earth orbit
2003	2001	A11326	2024-181A	Starship FT-5	2024 Oct 13 12:25:00	2024 Oct 13 12:27:41	SPXS	US	-15	213	26.80	Orbit insertion
2004	2002	S61507	2024-182A	Europa Clipper	2024 Oct 14 16:06:00	2024 Oct 14 17:08:12	JPL	US	179	-32541	32.89	In Earth orbit
2005	2003	S61509	2024-183A	Starlink 32174	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2006	2004	S61510	2024-183B	Starlink 32139	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2007	2005	S61511	2024-183C	Starlink 32140	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2008	2006	S61512	2024-183D	Starlink 32201	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2009	2007	S61513	2024-183E	Starlink 32030	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2010	2008	S61514	2024-183F	Starlink 31837	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2011	2009	S61515	2024-183G	Starlink 32136	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2012	2010	S61516	2024-183H	Starlink 32047	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2013	2011	S61517	2024-183J	Starlink 31756	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2014	2012	S61518	2024-183K	Starlink 32172	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2015	2013	S61519	2024-183L	Starlink 32338	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2016	2014	S61520	2024-183M	Starlink 32306	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2017	2015	S61521	2024-183N	Starlink 32297	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2018	2016	S61522	2024-183P	Starlink 32260	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2019	2017	S61523	2024-183Q	Starlink 32305	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2020	2018	S61524	2024-183R	Starlink 32296	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2021	2019	S61525	2024-183S	Starlink 32298	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2022	2020	S61526	2024-183T	Starlink 32293	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2023	2021	S61527	2024-183U	Starlink 32313	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2024	2022	S61528	2024-183V	Starlink 32319	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2025	2023	S61529	2024-183X	Starlink 32351	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2026	2024	S61530	2024-183Y	Starlink 32261	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	291	53.16	In Earth orbit
2027	2025	S61531	2024-183Y	Starlink 32358	2024 Oct 15 06:10	2024 Oct 15 07:13:53	SPXS	US	280	290	53.16	In Earth orbit
2028	2026	S61532	2024-184A	Starlink 11354	2024 Oct 15 08:21	2024 Oct 15 09:22:20	SPXS	US	280	280	53.17	In Earth orbit

2029	S61533	2024-184B	Starlink 11323	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	279	280	53.17	In Earth orbit
2030	S61534	2024-184C	Starlink 11338	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	279	280	53.17	In Earth orbit
2031	S61535	2024-184D	Starlink 11362	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	278	288	53.17	In Earth orbit
2032	S61536	2024-184E	Starlink 11295	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	278	280	53.17	In Earth orbit
2033	S61537	2024-184F	Starlink 11331	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	278	288	53.17	In Earth orbit
2034	S61538	2024-184G	Starlink 11325	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	278	279	53.17	In Earth orbit
2035	S61539	2024-184H	Starlink 11332	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	278	279	53.17	In Earth orbit
2036	S61540	2024-184J	Starlink 11350	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	288	53.17	In Earth orbit
2037	S61541	2024-184K	Starlink 11357	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	278	279	53.17	In Earth orbit
2038	S61542	2024-184L	Starlink 11322	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	278	278	53.17	In Earth orbit
2039	S61543	2024-184M	Starlink 11364	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	288	53.17	In Earth orbit
2040	S61544	2024-184N	Starlink 11349	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	288	53.17	In Earth orbit
2041	S61545	2024-184P	Starlink 32406	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	287	53.17	In Earth orbit
2042	S61546	2024-184Q	Starlink 32445	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	287	53.17	In Earth orbit
2043	S61547	2024-184R	Starlink 32411	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	287	53.17	In Earth orbit
2044	S61548	2024-184S	Starlink 32424	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	287	53.17	In Earth orbit
2045	S61549	2024-184T	Starlink 32389	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	287	53.17	In Earth orbit
2046	S61550	2024-184U	Starlink 32476	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	287	53.17	In Earth orbit
2047	S61551	2024-184V	Starlink 32366	2024 Oct 15 0821	2024 Oct 15 0922:20	SPXS	US	277	287	53.17	In Earth orbit
2048	S61552	2024-185A	Qianfan Jigui 02-01	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	797	812	88.99	In Earth orbit
2049	S61553	2024-185B	Qianfan Jigui 02-02	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	796	811	88.99	In Earth orbit
2050	S61554	2024-185C	Qianfan Jigui 02-03	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	801	816	88.99	In Earth orbit
2051	S61555	2024-185D	Qianfan Jigui 02-04	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	801	816	88.99	In Earth orbit
2052	S61556	2024-185E	Qianfan Jigui 02-05	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	800	815	88.99	In Earth orbit
2053	S61557	2024-185F	Qianfan Jigui 02-06	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	796	811	88.99	In Earth orbit
2054	S61558	2024-185G	Qianfan Jigui 02-07	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	801	816	88.99	In Earth orbit
2055	S61559	2024-185H	Qianfan Jigui 02-08	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	797	811	88.99	In Earth orbit
2056	S61560	2024-185I	Qianfan Jigui 02-09	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	795	810	88.99	In Earth orbit
2057	S61561	2024-185K	Qianfan Jigui 02-10	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	795	810	88.99	In Earth orbit
2058	S61562	2024-185L	Qianfan Jigui 02-11	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	800	815	88.99	In Earth orbit
2059	S61563	2024-185M	Qianfan Jigui 02-12	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	800	814	88.99	In Earth orbit
2060	S61564	2024-185N	Qianfan Jigui 02-13	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	797	812	88.99	In Earth orbit
2061	S61565	2024-185P	Qianfan Jigui 02-14	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	800	815	88.99	In Earth orbit
2062	S61566	2024-185Q	Qianfan Jigui 02-15	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	800	815	88.99	In Earth orbit
2063	S61567	2024-185R	Qianfan Jigui 02-16	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	796	811	88.99	In Earth orbit
2064	S61568	2024-185S	Qianfan Jigui 02-17	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	795	808	88.99	In Earth orbit
2065	S61569	2024-185T	Qianfan Jigui 02-18	2024 Oct 15 1106	2024 Oct 15 1140?	YUANX	CN	800	815	88.99	In Earth orbit
2066	S61571	2024-186A	Gao Fen 12-05	2024 Oct 15 2345	2024 Oct 16 0007?	ZLZB	CN	594	601	97.92	In Earth orbit
2067	S61574	2024-187A	Starlink 11356	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2068	S61575	2024-187B	Starlink 11376	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2069	S61576	2024-187C	Starlink 11372	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2070	S61577	2024-187D	Starlink 11375	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2071	S61578	2024-187E	Starlink 11285	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2072	S61579	2024-187F	Starlink 11275	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2073	S61580	2024-187G	Starlink 11342	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2074	S61581	2024-187H	Starlink 11374	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2075	S61582	2024-187I	Starlink 11373	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2076	S61583	2024-187K	Starlink 11368	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2077	S61584	2024-187L	Starlink 11370	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2078	S61585	2024-187M	Starlink 11361	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2079	S61586	2024-187N	Starlink 11360	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2080	S61587	2024-187P	Starlink 32353	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	295	53.16	In Earth orbit
2081	S61588	2024-187Q	Starlink 32325	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	294	53.16	In Earth orbit
2082	S61589	2024-187R	Starlink 32416	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	294	53.16	In Earth orbit
2083	S61590	2024-187S	Starlink 32413	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	294	53.16	In Earth orbit
2084	S61591	2024-187T	Starlink 32409	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	294	53.16	In Earth orbit
2085	S61592	2024-187U	Starlink 32422	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	294	53.16	In Earth orbit
2086	S61593	2024-187V	Starlink 32397	2024 Oct 18 2331	2024 Oct 19 0034:51	SPXS	US	285	294	53.16	In Earth orbit
2087	S61594	2024-188A	OneWeb SL0015	2024 Oct 20 0513	2024 Oct 20 0612:03	ONEWEBE	UK	591	595	86.51	In Earth orbit
2088	S61595	2024-188B	OneWeb SL0688	2024 Oct 20 0513	2024 Oct 20 0612:03	ONEWEBE	UK	592	595	86.51	In Earth orbit
2089	S61596	2024-188C	OneWeb SL0688	2024 Oct 20 0513	2024 Oct 20 0612:35	ONEWEBE	UK	592	595	86.51	In Earth orbit
2090	S61597	2024-188D	OneWeb SL0689	2024 Oct 20 0513	2024 Oct 20 0612:35	ONEWEBE	UK	594	595	86.51	In Earth orbit
2091	S61598	2024-188E	OneWeb SL0690	2024 Oct 20 0513	2024 Oct 20 0613:31	ONEWEBE	UK	590	595	86.51	In Earth orbit
2092	S61599	2024-188F	OneWeb SL0691	2024 Oct 20 0513	2024 Oct 20 0613:31	ONEWEBE	UK	591	595	86.51	In Earth orbit
2093	S61600	2024-188G	OneWeb SL0692	2024 Oct 20 0513	2024 Oct 20 0613:33	ONEWEBE	UK	595	596	86.51	In Earth orbit
2094	S61601	2024-188H	OneWeb SL0693	2024 Oct 20 0513	2024 Oct 20 0613:33	ONEWEBE	UK	595	595	86.51	In Earth orbit

2095	2093	S61602	2024-188J	OneWeb SL0695	2024 Oct 20 0513	2024 Oct 20 0615:13	ONEWEBE	UK	595	595	86.51	In Earth orbit
2096	2094	S61603	2024-188K	OneWeb SL0697	2024 Oct 20 0513	2024 Oct 20 0615:13	ONEWEBE	UK	595	595	86.51	In Earth orbit
2097	2095	S61604	2024-188L	OneWeb SL0698	2024 Oct 20 0513	2024 Oct 20 0625:43	ONEWEBE	UK	590	595	86.51	In Earth orbit
2098	2096	S61605	2024-188M	OneWeb SL0699	2024 Oct 20 0513	2024 Oct 20 0625:43	ONEWEBE	UK	595	595	86.51	In Earth orbit
2099	2097	S61606	2024-188N	OneWeb SL0700	2024 Oct 20 0513	2024 Oct 20 0629:15	ONEWEBE	UK	594	595	86.51	In Earth orbit
2100	2098	S61607	2024-188P	OneWeb SL0701	2024 Oct 20 0513	2024 Oct 20 0629:15	ONEWEBE	UK	592	595	86.51	In Earth orbit
2101	2099	S61608	2024-188Q	OneWeb SL0702	2024 Oct 20 0513	2024 Oct 20 0630:11	ONEWEBE	UK	590	595	86.51	In Earth orbit
2102	2100	S61609	2024-188R	OneWeb SL0704	2024 Oct 20 0513	2024 Oct 20 0630:11	ONEWEBE	UK	595	596	86.51	In Earth orbit
2103	2101	S61610	2024-188S	OneWeb SL0705	2024 Oct 20 0513	2024 Oct 20 0631:27	ONEWEBE	UK	591	595	86.51	In Earth orbit
2104	2102	S61611	2024-188T	OneWeb SL0706	2024 Oct 20 0513	2024 Oct 20 0631:27	ONEWEBE	UK	591	595	86.51	In Earth orbit
2105	2103	S61612	2024-188U	OneWeb SL0707	2024 Oct 20 0513	2024 Oct 20 0631:53	ONEWEBE	UK	595	595	86.51	In Earth orbit
2106	2104	S61613	2024-188V	OneWeb SL0708	2024 Oct 20 0513	2024 Oct 20 0631:53	ONEWEBE	UK	594	595	86.51	In Earth orbit
2107	2105	S61614	2024-188A	Tianping-3A(01)	2024 Oct 22 0010	2024 Oct 22 0025:57	ZJUNI	CN	558	569	97.64	In Earth orbit
2108	2106	S61615	2024-188B	Tianping-3B(01)	2024 Oct 22 0010	2024 Oct 22 0025:57	ZJUNI	CN	557	569	97.64	In Earth orbit
2109	2107	S61616	2024-189C	Tianping-3B(02)	2024 Oct 22 0010	2024 Oct 22 0025:57	ZJUNI	CN	555	566	97.64	In Earth orbit
2110	2108	S61617	2024-190A	Yaogan 43-03-01	2024 Oct 23 0109	2024 Oct 23 0125:57	ZJB	CN	484	507	35.01	In Earth orbit
2111	2109	S61618	2024-190B	Yaogan 43-03-02	2024 Oct 23 0109	2024 Oct 23 0125:57	ZJB	CN	490	502	34.99	In Earth orbit
2112	2110	S61619	2024-190C	Yaogan 43-03-03	2024 Oct 23 0109	2024 Oct 23 0125:57	ZJB	CN	490	501	35.00	In Earth orbit
2113	2111	S61621	2024-191A	Starlink 32302	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2114	2112	S61622	2024-191B	Starlink 32364	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2115	2113	S61623	2024-191C	Starlink 32331	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2116	2114	S61624	2024-191D	Starlink 32398	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2117	2115	S61625	2024-191E	Starlink 32365	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2118	2116	S61626	2024-191F	Starlink 32333	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2119	2117	S61627	2024-191G	Starlink 32399	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2120	2118	S61628	2024-191H	Starlink 32421	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2121	2119	S61629	2024-191I	Starlink 32403	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2122	2120	S61630	2024-191K	Starlink 32390	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2123	2121	S61631	2024-191L	Starlink 32348	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2124	2122	S61632	2024-191M	Starlink 32455	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2125	2123	S61633	2024-191N	Starlink 32396	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2126	2124	S61634	2024-191P	Starlink 32355	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2127	2125	S61635	2024-191Q	Starlink 32370	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2128	2126	S61636	2024-191R	Starlink 32405	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2129	2127	S61637	2024-191S	Starlink 32419	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2130	2128	S61638	2024-191T	Starlink 32320	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2131	2129	S61639	2024-191U	Starlink 32341	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2132	2130	S61640	2024-191V	Starlink 32339	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2133	2131	S61641	2024-191W	Starlink 32327	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2134	2132	S61642	2024-191X	Starlink 32264	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2135	2133	S61643	2024-191Y	Starlink 32337	2024 Oct 23 2147:00	2024 Oct 23 2252:23	SPXS	US	283	291	43.01	In Earth orbit
2136	2134	S61644	2024-192A	USA 421	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	512	516	70.01	In Earth orbit
2137	2135	S61645	2024-192B	USA 422	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	511	517	70.01	In Earth orbit
2138	2136	S61646	2024-192C	USA 423	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	514	514	70.01	In Earth orbit
2139	2137	S61647	2024-192D	USA 424	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	501	507	70.01	In Earth orbit
2140	2138	S61648	2024-192E	USA 425	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	524	556	70.01	In Earth orbit
2141	2139	S61649	2024-192F	USA 426	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	481	485	70.01	In Earth orbit
2142	2140	S61650	2024-192G	USA 427	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	512	516	70.01	In Earth orbit
2143	2141	S61651	2024-192H	USA 428	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	513	516	70.01	In Earth orbit
2144	2142	S61652	2024-192I	USA 429	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	510	515	70.01	In Earth orbit
2145	2143	S61653	2024-192K	USA 430	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	490	495	70.01	In Earth orbit
2146	2144	S61654	2024-192L	USA 431	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	512	516	70.01	In Earth orbit
2147	2145	S61655	2024-192M	USA 432	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	485	488	70.01	In Earth orbit
2148	2146	S61656	2024-192N	USA 433	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	485	489	70.01	In Earth orbit
2149	2147	S61657	2024-192P	USA 434	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	512	516	70.01	In Earth orbit
2150	2148	S61658	2024-192Q	USA 435	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	487	492	70.01	In Earth orbit
2151	2149	S61659	2024-192R	USA 436	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	512	516	70.01	In Earth orbit
2152	2150	S61660	2024-192S	USA 437	2024 Oct 24 1814:49	2024 Oct 24 1814:49	NROC	US	480	485	70.01	In Earth orbit
2153	2151	S61661	2024-193A	Starlink 32238	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	302	53.16	In Earth orbit
2154	2152	S61662	2024-193B	Starlink 32310	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	301	53.16	In Earth orbit
2155	2153	S61663	2024-193C	Starlink 32308	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	301	53.16	In Earth orbit
2156	2154	S61664	2024-193D	Starlink 32301	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	301	53.16	In Earth orbit
2157	2155	S61665	2024-193E	Starlink 32439	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	301	53.16	In Earth orbit
2158	2156	S61666	2024-193F	Starlink 32428	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	301	53.16	In Earth orbit
2159	2157	S61667	2024-193G	Starlink 32414	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	301	53.16	In Earth orbit
2160	2158	S61668	2024-193H	Starlink 32441	2024 Oct 26 2147:00	2024 Oct 26 2250:23	SPXS	US	290	301	53.16	In Earth orbit

2161	S61669	2024-1931	Starlink 32400	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2162	S61670	2024-193K	Starlink 32449	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2163	S61671	2024-193L	Starlink 32453	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2164	S61672	2024-193M	Starlink 32443	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2165	S61673	2024-193N	Starlink 32417	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2166	S61674	2024-193P	Starlink 32426	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2167	S61675	2024-193Q	Starlink 32294	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2168	S61676	2024-193R	Starlink 32309	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2169	S61677	2024-193S	Starlink 32323	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2170	S61678	2024-193T	Starlink 32363	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2171	S61679	2024-193U	Starlink 32395	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2172	S61680	2024-193V	Starlink 32412	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2173	S61681	2024-193W	Starlink 32426	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	290	301	53.16	In Earth orbit
2174	S61682	2024-193X	Starlink 32429	2024 Oct 26 21:47:00	2024 Oct 26 22:50:23	SPXS	US	289	299	53.16	In Earth orbit
2175	S61683	2024-194A	Shenzhou 19	2024 Oct 29 20:37:10	2024 Oct 29 20:37:10	CMISEO	CN	382	392	41.47	Attached to CZ-2F Y19 Stage 2
2176	S61687	2024-195A	Starlink 11335	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	286	295	53.17	In Earth orbit
2177	S61688	2024-195B	Starlink 11344	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	286	295	53.17	In Earth orbit
2178	S61689	2024-195C	Starlink 11312	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	286	295	53.17	In Earth orbit
2179	S61690	2024-195D	Starlink 11340	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	286	295	53.17	In Earth orbit
2180	S61691	2024-195E	Starlink 11339	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2181	S61692	2024-195F	Starlink 11315	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2182	S61693	2024-195G	Starlink 11366	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2183	S61694	2024-195H	Starlink 11348	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2184	S61695	2024-195I	Starlink 11327	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2185	S61696	2024-195K	Starlink 11341	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2186	S61697	2024-195L	Starlink 11346	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2187	S61698	2024-195M	Starlink 11336	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2188	S61699	2024-195N	Starlink 11296	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2189	S61700	2024-195P	Starlink 32349	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2190	S61701	2024-195Q	Starlink 32461	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2191	S61702	2024-195R	Starlink 32299	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2192	S61703	2024-195S	Starlink 32335	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2193	S61704	2024-195T	Starlink 32387	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2194	S61705	2024-195U	Starlink 32515	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2195	S61706	2024-195V	Starlink 32533	2024 Oct 30 12:07:00	2024 Oct 30 13:07:50	SPXS	US	285	295	53.17	In Earth orbit
2196	S61707	2024-196A	Starlink 32376	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2197	S61708	2024-196B	Starlink 32402	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2198	S61709	2024-196C	Starlink 32314	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2199	S61710	2024-196D	Starlink 32404	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2200	S61711	2024-196E	Starlink 32312	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2201	S61712	2024-196F	Starlink 32343	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2202	S61713	2024-196G	Starlink 32467	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2203	S61714	2024-196H	Starlink 32440	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2204	S61715	2024-196I	Starlink 32459	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2205	S61716	2024-196K	Starlink 32465	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2206	S61717	2024-196L	Starlink 32457	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	279	53.16	In Earth orbit
2207	S61718	2024-196M	Starlink 32591	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2208	S61719	2024-196N	Starlink 32344	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2209	S61720	2024-196P	Starlink 32322	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2210	S61721	2024-196Q	Starlink 32469	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2211	S61722	2024-196R	Starlink 32438	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2212	S61723	2024-196S	Starlink 32540	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2213	S61724	2024-196T	Starlink 32528	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2214	S61725	2024-196U	Starlink 32573	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2215	S61726	2024-196V	Starlink 32478	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2216	S61727	2024-196W	Starlink 32511	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2217	S61728	2024-196X	Starlink 32475	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2218	S61729	2024-196Y	Starlink 32442	2024 Oct 30 21:10	2024 Oct 30 22:13:51	SPXS	US	269	278	53.16	In Earth orbit
2219	S61730	2024-197A	Kosmos-2579	2024 Oct 31 07:51:31	2024 Oct 31 08:01:17	VVKOV	RU	338	497	97.57	In Earth orbit
2220	S61733	2024-198A	Kirameki 3	2024 Nov 4 06:48	2024 Nov 4 08:18	VVKOV	RU	35424	35797	0.02	In Earth orbit
2221	S61735	2024-199A	Ionosfera-M No. 1	2024 Nov 4 23:18:40	2024 Nov 5 00:14:55	VNIIEMI	RU	815	816	98.79	In Earth orbit
2222	S61736	2024-199B	Ionosfera-M No. 2	2024 Nov 4 23:18:40	2024 Nov 5 00:14:55	VNIIEMI	RU	820	822	98.79	In Earth orbit
2223	S61737	2024-199C	SITRO-AIS-16	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	594	97.38	In Earth orbit
2224	S61738	2024-199D	SITRO-AIS-15	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	603	97.38	In Earth orbit
2225	S61739	2024-199E	SITRO-AIS-21	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	477	499	97.38	In Earth orbit
2226	S61740	2024-199F	SITRO-AIS-22	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	593	97.38	In Earth orbit

2227	2225	S61741	2024-199G	SITRO-AIS-24	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	479	497	97.38	In Earth orbit
2228	2226	S61742	2024-199H	SITRO-AIS-23	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	593	97.38	In Earth orbit
2229	2227	S61743	2024-199I	SITRO-AIS-13	2024 Nov 4 23:18:40	2024 Nov 5	SPBP	RU	583	594	97.38	In Earth orbit
2230	2228	S61744	2024-199K	Polytech Universe-5	2024 Nov 4 23:18:40	2024 Nov 5	SPBP	RU	478	500	97.38	In Earth orbit
2231	2229	S61745	2024-199M	CSTP-2.11	2024 Nov 4 23:18:40	2024 Nov 5	STIS	RU	481	499	97.38	In Earth orbit
2232	2230	S61746	2024-199N	Kolibri-S	2024 Nov 4 23:18:40	2024 Nov 5	SNIU	RU	481	506	97.38	In Earth orbit
2233	2231	S61748	2024-199P	SITRO-AIS-44	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	480	495	97.38	In Earth orbit
2234	2232	S61749	2024-199Q	Norbi-3	2024 Nov 4 23:18:40	2024 Nov 5	NOVSU	RU	480	503	97.38	In Earth orbit
2235	2233	S61750	2024-199R	Druzhba-ATURK	2024 Nov 4 23:18:40	2024 Nov 5	AMGU/HARB	RU	480	501	97.38	In Earth orbit
2236	2234	S61751	2024-199S	CSTP-2.1	2024 Nov 4 23:18:40	2024 Nov 5	STIS	RU	482	501	97.38	In Earth orbit
2237	2235	S61752	2024-199T	SITRO-AIS-14	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	594	97.38	In Earth orbit
2238	2236	S61753	2024-199U	Khorsk No. 3	2024 Nov 4 23:18:40	2024 Nov 5	BAUM	RU	480	503	97.38	In Earth orbit
2239	2237	S61754	2024-199V	Khorsk No. 4	2024 Nov 4 23:18:40	2024 Nov 5	BAUM	RU	480	503	97.38	In Earth orbit
2240	2238	S61755	2024-199W	SITRO-AIS-43	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	474	495	97.38	In Earth orbit
2241	2239	S61756	2024-199X	SITRO-AIS-42	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	475	496	97.38	In Earth orbit
2242	2240	S61757	2024-199Y	Gorizont	2024 Nov 4 23:18:40	2024 Nov 5	BGTU	RU	480	504	97.38	In Earth orbit
2243	2241	S61758	2024-199Z	SITRO-AIS-20	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	593	97.38	In Earth orbit
2244	2242	S61759	2024-199AA	SITRO-AIS-19	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	603	97.38	In Earth orbit
2245	2243	S61760	2024-199AB	SITRO-AIS-41	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	475	496	97.38	In Earth orbit
2246	2244	S61761	2024-199AC	CSTP-2.2	2024 Nov 4 23:18:40	2024 Nov 5	NARFU	RU	479	499	97.38	In Earth orbit
2247	2245	S61762	2024-199AD	ArcticSat-1	2024 Nov 4 23:18:40	2024 Nov 5	STIS	RU	479	496	97.38	In Earth orbit
2248	2246	S61763	2024-199AE	SIT-HSE	2024 Nov 4 23:18:40	2024 Nov 5	SPBGUT	RU	480	503	97.38	In Earth orbit
2249	2247	S61764	2024-199AF	SIT-2086	2024 Nov 4 23:18:40	2024 Nov 5	S2086/SITRO	RU	480	503	97.38	In Earth orbit
2250	2248	S61765	2024-199AG	Mordovia-IOT	2024 Nov 4 23:18:40	2024 Nov 5	SARPT	RU	481	507	97.38	In Earth orbit
2251	2249	S61766	2024-199AH	Ruzavka-390	2024 Nov 4 23:18:40	2024 Nov 5	SARPT	RU	479	506	97.38	In Earth orbit
2252	2250	S61767	2024-199AJ	Vladivostok-1	2024 Nov 4 23:18:40	2024 Nov 5	STIS	RU	479	497	97.38	In Earth orbit
2253	2251	S61768	2024-199AK	Polytech Universe-4	2024 Nov 4 23:18:40	2024 Nov 5	SPBP	RU	479	497	97.38	In Earth orbit
2254	2252	S61769	2024-199AL	Kowstar	2024 Nov 4 23:18:40	2024 Nov 5	OMID/ISRC	IR	479	494	97.38	In Earth orbit
2255	2253	S61770	2024-199AM	Vizard-ion	2024 Nov 4 23:18:40	2024 Nov 5	MGUS	RU	480	504	97.38	In Earth orbit
2256	2254	S61771	2024-199AN	SITRO-AIS-48	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	593	97.38	In Earth orbit
2257	2255	S61772	2024-199AP	Hyperview-IG	2024 Nov 4 23:18:40	2024 Nov 5	SNIU	RU	478	504	97.38	In Earth orbit
2258	2256	S61773	2024-199AQ	SITRO-AIS-47	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	593	97.38	In Earth orbit
2259	2257	S61774	2024-199AR	SITRO-AIS-46	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	458	484	97.36	In Earth orbit
2260	2258	S61775	2024-199AS	MTUSI-1	2024 Nov 4 23:18:40	2024 Nov 5	MTUSI	RU	481	506	97.38	In Earth orbit
2261	2259	S61776	2024-199AT	SITRO-AIS-40	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	478	499	97.38	In Earth orbit
2262	2260	S61777	2024-199AU	Hodhod	2024 Nov 4 23:18:40	2024 Nov 5	OMID/ISRC	IR	479	500	97.38	In Earth orbit
2263	2261	S61778	2024-199AV	SITRO-AIS-39	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	479	496	97.38	In Earth orbit
2264	2262	S61779	2024-199AW	Al'tair	2024 Nov 4 23:18:40	2024 Nov 5	MGU	RU	481	506	97.38	In Earth orbit
2265	2263	S61780	2024-199AX	SITRO-AIS-37	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	479	497	97.38	In Earth orbit
2266	2264	S61781	2024-199AY	Nokheho	2024 Nov 4 23:18:40	2024 Nov 5	CHGU	RU	479	506	97.38	In Earth orbit
2267	2265	S61782	2024-199AZ	TUSUR GO	2024 Nov 4 23:18:40	2024 Nov 5	TUSUR	RU	479	506	97.38	In Earth orbit
2268	2266	S61783	2024-199BA	ZIMSAT-2	2024 Nov 4 23:18:40	2024 Nov 5	ZINGSAYUZGU	ZW	477	505	97.38	In Earth orbit
2269	2267	S61784	2024-199BB	SamSat-Ion 2	2024 Nov 4 23:18:40	2024 Nov 5	SNIU	RU	480	504	97.38	In Earth orbit
2270	2268	S61785	2024-199BC	RTU MIREA1	2024 Nov 4 23:18:40	2024 Nov 5	MIREA	RU	479	497	97.38	In Earth orbit
2271	2269	S61786	2024-199BD	SITRO-AIS-38	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	476	498	97.38	In Earth orbit
2272	2270	S61787	2024-199BE	YUZGU-60	2024 Nov 4 23:18:40	2024 Nov 5	YUZGU	RU	481	507	97.38	In Earth orbit
2273	2271	S61788	2024-199BF	SITRO-AIS-45	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	479	498	97.38	In Earth orbit
2274	2272	S61789	2024-199BG	SITRO-AIS-17	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	603	97.38	In Earth orbit
2275	2273	S61790	2024-199BH	SITRO-AIS-18	2024 Nov 4 23:18:40	2024 Nov 5	SITRO	RU	583	603	97.38	In Earth orbit
2276	2274	S61791	2024-200A	Dragon CRS-31	2024 Nov 5 02:29:30	2024 Nov 5 02:38:55	SPX	US	193	210	51.65	Landed
2277	2275	S62295	1998-067XB	Yodaka	2024 Nov 5 02:29:30	2024 Dec 9 08:15:57	ARKE	J	405	418	51.64	In Earth orbit
2278	2276	S62296	1998-067XC	DENDEN-01	2024 Nov 5 02:29:30	2024 Dec 9 11:15:57	KANSAI	J	404	419	51.64	In Earth orbit
2279	2277	S62297	1998-067XD	LignoSat	2024 Nov 5 02:29:30	2024 Dec 9 11:15:57	KYO	J	404	419	51.64	In Earth orbit
2280	2278	S62298	1998-067XE	Yomogi	2024 Nov 5 02:29:30	2024 Dec 9 11:15:57	CHIBA	J	404	419	51.64	In Earth orbit
2281	2279	S62299	1998-067XF	OnglatSat	2024 Nov 5 02:29:30	2024 Dec 9 14:17:7	TASA/TOK	TW	406	418	51.64	In Earth orbit
2282	2280	S61793	2024-201B	Protosat-1	2024 Nov 5 10:54	2024 Nov 5 11:50:7	ESPRW	RW	635	651	97.92	In Earth orbit
2283	2281	S61845	2024-202A	Starlink 32362	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	283	291	43.01	In Earth orbit
2284	2282	S61846	2024-202B	Starlink 32472	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2285	2283	S61847	2024-202C	Starlink 32352	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2286	2284	S61848	2024-202D	Starlink 32427	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2287	2285	S61849	2024-202E	Starlink 32346	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2288	2286	S61850	2024-202F	Starlink 32330	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2289	2287	S61851	2024-202G	Starlink 32379	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2290	2288	S61852	2024-202H	Starlink 32433	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2291	2289	S61853	2024-202I	Starlink 32394	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	291	43.01	In Earth orbit
2292	2290	S61854	2024-202K	Starlink 32486	2024 Nov 7 20:19:00	2024 Nov 7 21:24:18	SPXS	US	282	290	43.01	In Earth orbit

2293	S61855	2024-202L	Starlink 32391	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2294	S61856	2024-202M	Starlink 32483	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2295	S61857	2024-202N	Starlink 32451	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2296	S61858	2024-202P	Starlink 32556	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2297	S61859	2024-202Q	Starlink 32466	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2298	S61860	2024-202R	Starlink 32316	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2299	S61861	2024-202S	Starlink 32415	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2300	S61862	2024-202T	Starlink 32393	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2301	S61863	2024-202U	Starlink 32324	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2302	S61864	2024-202V	Starlink 32318	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2303	S61865	2024-202W	Starlink 32401	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2304	S61866	2024-202X	Starlink 32588	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2305	S61867	2024-202Y	Starlink 32569	2024 Nov 7 2019:00	2024 Nov 7 2124:18	SPXS	US	282	290	43.01	In Earth orbit
2306	S61869	2024-203A	Zhongyuan-2	2024 Nov 9 0339	2024 Nov 9 0351?	PIESAT	CN	512	535	97.50	In Earth orbit
2307	S61870	2024-203B	Hebi-4	2024 Nov 9 0339	2024 Nov 9 0351?	PIESAT	CN	516	537	97.49	In Earth orbit
2308	S61871	2024-203C	Hebi-5	2024 Nov 9 0339	2024 Nov 9 0351?	PIESAT	CN	514	535	97.50	In Earth orbit
2309	S61872	2024-203D	Hebi-6	2024 Nov 9 0339	2024 Nov 9 0351?	PIESAT	CN	512	535	97.50	In Earth orbit
2310	S61874	2024-204A	Starlink 11402	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	295	53.17	In Earth orbit
2311	S61875	2024-204B	Starlink 11316	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	295	53.17	In Earth orbit
2312	S61876	2024-204C	Starlink 11401	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	295	53.17	In Earth orbit
2313	S61877	2024-204D	Starlink 11321	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2314	S61878	2024-204E	Starlink 11314	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2315	S61879	2024-204F	Starlink 11324	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2316	S61880	2024-204G	Starlink 11328	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2317	S61881	2024-204H	Starlink 11329	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2318	S61882	2024-204J	Starlink 11398	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2319	S61883	2024-204K	Starlink 11383	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2320	S61884	2024-204L	Starlink 11359	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2321	S61885	2024-204M	Starlink 11301	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2322	S61886	2024-204N	Starlink 11351	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2323	S61887	2024-204P	Starlink 32410	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2324	S61888	2024-204Q	Starlink 32377	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2325	S61889	2024-204R	Starlink 32292	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2326	S61890	2024-204S	Starlink 32501	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2327	S61891	2024-204T	Starlink 32383	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2328	S61892	2024-204U	Starlink 32239	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2329	S61893	2024-204V	Starlink 32489	2024 Nov 9 0614:00	2024 Nov 9 0714:25	SPXS	US	284	294	53.17	In Earth orbit
2330	S61894	2024-205A	Shiyan 26A	2024 Nov 11 0403	2024 Nov 11 0415?	CASC	CN	513	532	97.48	In Earth orbit
2331	S61895	2024-205B	Shiyan 26B	2024 Nov 11 0403	2024 Nov 11 0415?	CASC	CN	514	532	97.48	In Earth orbit
2332	S61896	2024-205C	Shiyan 26C	2024 Nov 11 0403	2024 Nov 11 0415?	CASC	CN	513	532	97.48	In Earth orbit
2333	S61897	2024-205D	Jilin-1 Gaofen 05B	2024 Nov 11 0403	2024 Nov 11 0415?	CGSTL	CN	513	532	97.47	In Earth orbit
2334	S61898	2024-205E	Tianzhi-2C	2024 Nov 11 0403	2024 Nov 11 0415?	CGSTL/JSCAS	CN	513	532	97.48	In Earth orbit
2335	S61899	2024-205F	Yunyao-1 31	2024 Nov 11 0403	2024 Nov 11 0415?	YYAO	CN	513	531	97.47	In Earth orbit
2336	S61900	2024-205G	Yunyao-1 32	2024 Nov 11 0403	2024 Nov 11 0415?	YYAO	CN	513	531	97.47	In Earth orbit
2337	S61901	2024-205H	Yunyao-1 33	2024 Nov 11 0403	2024 Nov 11 0415?	YYAO	CN	513	531	97.47	In Earth orbit
2338	S61902	2024-205I	Yunyao-1 34	2024 Nov 11 0403	2024 Nov 11 0415?	YYAO	CN	513	531	97.48	In Earth orbit
2339	S61903	2024-205K	Yunyao-1 35	2024 Nov 11 0403	2024 Nov 11 0415?	YYAO	CN	513	531	97.47	In Earth orbit
2340	S61904	2024-205L	Yunyao-1 36	2024 Nov 11 0403	2024 Nov 11 0415?	YYAO	CN	512	531	97.48	In Earth orbit
2341	S61905	2024-205M	Xiguang 1-04	2024 Nov 11 0403	2024 Nov 11 0415?	ZHWK/ZXHK	CN	512	531	97.48	In Earth orbit
2342	S61906	2024-205N	Xiguang 1-05	2024 Nov 11 0403	2024 Nov 11 0415?	ZXHK	CN	512	530	97.48	In Earth orbit
2343	S61907	2024-205P	Juntian-1 03	2024 Nov 11 0403	2024 Nov 11 0415?	TLC/JUNT	CN	512	531	97.48	In Earth orbit
2344	S61908	2024-205Q	Aman Zheneng Yaogan-1	2024 Nov 11 0403	2024 Nov 11 0415?	SQU/STARV	OM	511	531	97.48	In Earth orbit
2345	S61910	2024-206A	Mingungwa 6A	2024 Nov 11 1722	2024 Nov 11	KTSAT	KR	27109	35718	1.50	In Earth orbit
2346	S61912	2024-207A	Starlink 32303	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	282	289	43.01	In Earth orbit
2347	S61913	2024-207B	Starlink 32434	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2348	S61914	2024-207C	Starlink 32460	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2349	S61915	2024-207D	Starlink 32559	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2350	S61916	2024-207E	Starlink 32541	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2351	S61917	2024-207F	Starlink 32544	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2352	S61918	2024-207G	Starlink 32555	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2353	S61919	2024-207H	Starlink 32547	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2354	S61920	2024-207I	Starlink 32616	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2355	S61921	2024-207K	Starlink 32605	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2356	S61922	2024-207L	Starlink 32579	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.01	In Earth orbit
2357	S61923	2024-207M	Starlink 32537	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.00	In Earth orbit
2358	S61924	2024-207N	Starlink 32564	2024 Nov 11 2128:00	2024 Nov 11 2233:15	SPXS	US	281	289	43.00	In Earth orbit

2359	S61925	2024-207P	Starlink 32536	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2360	S61926	2024-207Q	Starlink 32624	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2361	S61927	2024-207R	Starlink 32622	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2362	S61928	2024-207S	Starlink 32620	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2363	S61929	2024-207T	Starlink 32609	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2364	S61930	2024-207U	Starlink 32567	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2365	S61931	2024-207V	Starlink 32420	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2366	S61932	2024-207W	Starlink 32354	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2367	S61933	2024-207X	Starlink 32361	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2368	S61934	2024-207Y	Starlink 32563	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2369	S61935	2024-207Z	Starlink 32500	2024 Nov 11 21:28:00	2024 Nov 11 22:33:15	SPXS	US	281	289	43.00	In Earth orbit
2370	S61936	2024-208A	Hai Yang 4-01	2024 Nov 13 22:42	2024 Nov 13 22:54	GYZCASC	CN	632	645	98.01	In Earth orbit
2371	S61939	2024-209A	Starlink 11407	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	290	290	53.17	In Earth orbit
2372	S61940	2024-209B	Starlink 11337	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2373	S61941	2024-209C	Starlink 11353	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2374	S61942	2024-209D	Starlink 11320	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2375	S61943	2024-209E	Starlink 11425	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2376	S61944	2024-209F	Starlink 11422	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2377	S61945	2024-209G	Starlink 11421	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2378	S61946	2024-209H	Starlink 11410	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2379	S61947	2024-209I	Starlink 11390	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2380	S61948	2024-209K	Starlink 11414	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2381	S61949	2024-209L	Starlink 11424	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2382	S61950	2024-209M	Starlink 11423	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	281	290	53.17	In Earth orbit
2383	S61951	2024-209N	Starlink 11395	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	280	290	53.17	In Earth orbit
2384	S61952	2024-209P	Starlink 32572	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	282	292	53.17	In Earth orbit
2385	S61953	2024-209Q	Starlink 32585	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	282	292	53.17	In Earth orbit
2386	S61954	2024-209R	Starlink 32574	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	282	292	53.17	In Earth orbit
2387	S61955	2024-209S	Starlink 32583	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	282	292	53.17	In Earth orbit
2388	S61956	2024-209T	Starlink 32273	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	282	292	53.17	In Earth orbit
2389	S61957	2024-209U	Starlink 32359	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	282	292	53.17	In Earth orbit
2390	S61958	2024-209V	Starlink 32566	2024 Nov 14 05:23:00	2024 Nov 14 06:23:20	SPXS	US	282	292	53.17	In Earth orbit
2391	S61959	2024-210A	Starlink 32499	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2392	S61960	2024-210B	Starlink 32372	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2393	S61961	2024-210C	Starlink 32452	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2394	S61962	2024-210D	Starlink 32458	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2395	S61963	2024-210E	Starlink 32487	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2396	S61964	2024-210F	Starlink 32513	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2397	S61965	2024-210G	Starlink 32514	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2398	S61966	2024-210H	Starlink 32498	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2399	S61967	2024-210I	Starlink 32518	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2400	S61968	2024-210K	Starlink 32471	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2401	S61969	2024-210L	Starlink 32450	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2402	S61970	2024-210M	Starlink 32613	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2403	S61971	2024-210N	Starlink 32610	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2404	S61972	2024-210P	Starlink 32612	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2405	S61973	2024-210Q	Starlink 32601	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	285	43.01	In Earth orbit
2406	S61974	2024-210R	Starlink 32593	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.01	In Earth orbit
2407	S61975	2024-210S	Starlink 32586	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.01	In Earth orbit
2408	S61976	2024-210T	Starlink 32611	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.01	In Earth orbit
2409	S61977	2024-210U	Starlink 32616	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.00	In Earth orbit
2410	S61978	2024-210V	Starlink 32606	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.00	In Earth orbit
2411	S61979	2024-210W	Starlink 32578	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.00	In Earth orbit
2412	S61980	2024-210X	Starlink 32517	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.00	In Earth orbit
2413	S61981	2024-210Y	Starlink 32522	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.01	In Earth orbit
2414	S61982	2024-210Z	Starlink 32560	2024 Nov 14 13:21:00	2024 Nov 14 14:26:15	SPXS	US	277	284	43.01	In Earth orbit
2415	S61983	2024-211A	Tianzhou-8	2024 Nov 15 15:13:18	2024 Nov 15 15:23:13	CMISEO	CN	374	385	41.47	Attached to CZ-7 Y9 Stage 2
2416	S62006	2024-212A	Optus X	2024 Nov 17 22:28	2024 Nov 17 23:02	OPTS	AU	35891	49666	0.78	In Earth orbit
2417	S62008	2024-213A	Starlink 11433	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	290	53.17	In Earth orbit
2418	S62009	2024-213B	Starlink 11262	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	290	53.17	In Earth orbit
2419	S62010	2024-213C	Starlink 11326	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	290	53.17	In Earth orbit
2420	S62011	2024-213D	Starlink 11330	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	290	53.17	In Earth orbit
2421	S62012	2024-213E	Starlink 11363	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	290	53.17	In Earth orbit
2422	S62013	2024-213F	Starlink 11377	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	290	53.17	In Earth orbit
2423	S62014	2024-213G	Starlink 11385	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	289	53.17	In Earth orbit
2424	S62015	2024-213H	Starlink 11396	2024 Nov 18 05:53:00	2024 Nov 18 06:54:58	SPXS	US	280	289	53.17	In Earth orbit

2425	S62016	2024-2131	Starlink 11393	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2426	S62017	2024-213K	Starlink 11343	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2427	S62018	2024-213L	Starlink 11411	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2428	S62019	2024-213M	Starlink 11404	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2429	S62020	2024-213N	Starlink 11378	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2430	S62021	2024-213P	Starlink 32520	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2431	S62022	2024-213Q	Starlink 32539	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2432	S62023	2024-213R	Starlink 32334	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2433	S62024	2024-213S	Starlink 32504	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2434	S62025	2024-213T	Starlink 32493	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2435	S62026	2024-213U	Starlink 32561	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2436	S62027	2024-213V	Starlink 32512	2024 Nov 18 0553:00	2024 Nov 18 0654:58	SPXS	US	280	289	53.17	In Earth orbit
2437	S62028	2024-214A	GSAT-20	2024 Nov 18 1831	2024 Nov 18 1904:58 ⁷	NSIL	IN	35786	35813	0.08	In Earth orbit
2438	A11359	2024-106	Starship FT-6	2024 Nov 19 2200:00	2024 Nov 19 2202	SPX	US	8	190	26.80	Orbit insertion
2439	S62030	2024-215A	Progress MS-29	2024 Nov 21 1222:24	2024 Nov 21 1231:13	RKKE	RU	394	400	51.59	Attached to Soyuz-2-1a No. 074 Blok-I
2440	S62032	2024-216A	Starlink 32637	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2441	S62033	2024-216B	Starlink 32582	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2442	S62034	2024-216C	Starlink 32615	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2443	S62035	2024-216D	Starlink 32592	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2444	S62036	2024-216E	Starlink 32225	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2445	S62037	2024-216F	Starlink 32595	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2446	S62038	2024-216G	Starlink 32477	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2447	S62039	2024-216H	Starlink 32480	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2448	S62040	2024-216I	Starlink 32510	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2449	S62041	2024-216K	Starlink 32456	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	293	43.01	In Earth orbit
2450	S62042	2024-216L	Starlink 32509	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2451	S62043	2024-216M	Starlink 32491	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2452	S62044	2024-216N	Starlink 32577	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	294	43.01	In Earth orbit
2453	S62045	2024-216P	Starlink 32618	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2454	S62046	2024-216Q	Starlink 32598	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	287	293	43.01	In Earth orbit
2455	S62047	2024-216R	Starlink 32630	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2456	S62048	2024-216S	Starlink 32599	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2457	S62049	2024-216T	Starlink 32473	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2458	S62050	2024-216U	Starlink 32492	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2459	S62051	2024-216V	Starlink 32496	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2460	S62052	2024-216W	Starlink 32495	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2461	S62053	2024-216X	Starlink 32494	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2462	S62054	2024-216Y	Starlink 32408	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2463	S62055	2024-217A	Starlink 32571	2024 Nov 21 1607:50	2024 Nov 21 1713:10	SPXS	US	286	293	43.01	In Earth orbit
2464	S62057	2024-217B	Starlink 11465	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	280	290	53.17	In Earth orbit
2465	S62058	2024-217C	Starlink 11426	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	280	290	53.17	In Earth orbit
2466	S62059	2024-217D	Starlink 11454	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2467	S62060	2024-217E	Starlink 11473	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2468	S62061	2024-217F	Starlink 11429	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2469	S62062	2024-217G	Starlink 11470	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2470	S62063	2024-217H	Starlink 11427	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2471	S62064	2024-217I	Starlink 11456	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2472	S62065	2024-217J	Starlink 11474	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2473	S62066	2024-217K	Starlink 11463	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2474	S62067	2024-217L	Starlink 11472	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2475	S62068	2024-217M	Starlink 11467	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2476	S62069	2024-217N	Starlink 11460	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2477	S62070	2024-217P	Starlink 32604	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2478	S62071	2024-217Q	Starlink 32553	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2479	S62072	2024-217R	Starlink 32603	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2480	S62073	2024-217S	Starlink 32444	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	278	288	53.17	In Earth orbit
2481	S62074	2024-217T	Starlink 32619	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	278	289	53.17	In Earth orbit
2482	S62075	2024-217U	Starlink 32580	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2483	S62076	2024-217V	Starlink 32617	2024 Nov 24 0525:30	2024 Nov 24 0625:58	SPXS	US	279	289	53.17	In Earth orbit
2484	S62079	2024-218B	Starlink 32480	2024 Nov 24 2339	2024 Nov 24 2354 ⁷	SIWEI	CN	494	519	97.44	In Earth orbit
2485	S62080	2024-218C	Starlink 32603	2024 Nov 24 2339	2024 Nov 24 2354 ⁷	SIWEI	CN	494	519	97.44	In Earth orbit
2486	S62081	2024-219A	Starlink 32644	2024 Nov 25 0335	2024 Nov 25 0440	KINEIS	F	637	640	97.95	In Earth orbit
2487	S62082	2024-219B	Starlink 32619	2024 Nov 25 0335	2024 Nov 25 0440	KINEIS	F	637	640	97.95	In Earth orbit
2488	S62083	2024-219C	Starlink 32580	2024 Nov 25 0335	2024 Nov 25 0440	KINEIS	F	637	639	97.95	In Earth orbit
2489	S62084	2024-219D	Starlink 32617	2024 Nov 25 0335	2024 Nov 25 0440	KINEIS	F	637	638	97.95	In Earth orbit
2490	S62085	2024-219E	Starlink 32617	2024 Nov 25 0335	2024 Nov 25 0441	KINEIS	F	636	637	97.95	In Earth orbit

2557	S62155	2024-2248	Startlink 32635	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	282	290	43.01	In Earth orbit
2558	S62156	2024-2241	Startlink 32532	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	282	290	43.01	In Earth orbit
2559	S62157	2024-2240	Startlink 32503	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	282	290	43.01	In Earth orbit
2560	S62158	2024-2240	Startlink 32508	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	282	290	43.01	In Earth orbit
2561	S62159	2024-224V	Startlink 32524	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	282	290	43.01	In Earth orbit
2562	S62160	2024-224X	Startlink 32484	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	282	290	43.01	In Earth orbit
2563	S62161	2024-224Y	Startlink 32497	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	282	290	43.01	In Earth orbit
2564	S62162	2024-224Z	Startlink 32526	2024 Nov 30 0500:00	2024 Nov 30 0605:21	SPXS	US	280	287	43.00	In Earth orbit
2565	S62163	2024-225A	USA 438	2024 Nov 30 0810:00	2024 Nov 30 0911:49	NROC	US	305	315	70.01	In Earth orbit
2566	S62164	2024-225B	USA 439	2024 Nov 30 0810:00	2024 Nov 30 0911:49	NROC	US	305	315	70.01	In Earth orbit
2567	S62165	2024-225C	Startlink 32523	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	306	316	70.01	In Earth orbit
2568	S62166	2024-225D	Startlink 32551	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2569	S62167	2024-225E	Startlink 32506	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2570	S62168	2024-225F	Startlink 32562	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2571	S62169	2024-225G	Startlink 32558	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2572	S62170	2024-225H	Startlink 32538	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2573	S62171	2024-225I	Startlink 32257	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2574	S62172	2024-225K	Startlink 32407	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2575	S62173	2024-225L	Startlink 32575	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2576	S62174	2024-225M	Startlink 32552	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2577	S62175	2024-225N	Startlink 32534	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2578	S62176	2024-225P	Startlink 32516	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2579	S62177	2024-225Q	Startlink 32542	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2580	S62178	2024-225R	Startlink 32600	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2581	S62179	2024-225S	Startlink 32584	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2582	S62180	2024-225T	Startlink 32587	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2583	S62181	2024-225U	Startlink 32602	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2584	S62182	2024-225V	Startlink 32565	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2585	S62183	2024-225W	Startlink 32589	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2586	S62184	2024-225X	Startlink 32581	2024 Nov 30 0810:00	2024 Nov 30 0911:49	SPXS	US	305	315	70.01	In Earth orbit
2587	S62185	2024-226A	Huilanwang Jishu Shiyuan W.	2024 Nov 30 1425	2024 Nov 30 1445?	CASC	CN	993	1078	50.00	In Earth orbit
2588	S62186	2024-226B	JSW-03	2024 Nov 30 1425	2024 Nov 30 1445?	CAST	CN	993	1075	50.00	In Earth orbit
2589	S62188	2024-227A	Tongxin Jishu Shiyuan 13	2024 Dec 3 0556	2024 Dec 3 0621?	CASC	CN	1688	38677	63.42	In Earth orbit
2590	S62190	2024-228A	HaiShao-1	2024 Dec 4 0446	2024 Dec 4 0500?	XXYYW	CN	355	511	42.99	In Earth orbit
2591	S62192	2024-229A	Startlink 32686	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2592	S62193	2024-229B	Startlink 32688	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2593	S62194	2024-229C	Startlink 32684	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2594	S62195	2024-229D	Startlink 32672	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2595	S62196	2024-229E	Startlink 32682	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2596	S62197	2024-229F	Startlink 32663	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2597	S62198	2024-229G	Startlink 32640	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2598	S62199	2024-229H	Startlink 32653	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2599	S62200	2024-229I	Startlink 32647	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2600	S62201	2024-229K	Startlink 32667	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2601	S62202	2024-229L	Startlink 32655	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2602	S62203	2024-229M	Startlink 32665	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2603	S62204	2024-229N	Startlink 32664	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2604	S62205	2024-229Q	Startlink 32660	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2605	S62206	2024-229Q	Startlink 32448	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	278	284	43.01	In Earth orbit
2606	S62207	2024-229R	Startlink 32430	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2607	S62208	2024-229S	Startlink 32675	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2608	S62209	2024-229T	Startlink 32671	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2609	S62210	2024-229U	Startlink 32670	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2610	S62211	2024-229V	Startlink 32642	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2611	S62212	2024-229W	Startlink 32668	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2612	S62213	2024-229X	Startlink 32669	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2613	S62214	2024-229Y	Startlink 32666	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2614	S62215	2024-229Z	Startlink 32662	2024 Dec 4 1013:10	2024 Dec 4 1118:27	SPXS	US	277	284	43.01	In Earth orbit
2615	S62216	2024-230A	Kosmos-2580	2024 Dec 4 1803:13	2024 Dec 4 1812	VVKOV	RU	239	899	67.14	In Earth orbit
2616	S62218	2024-231A	Startlink 11394	2024 Dec 5 0305:00	2024 Dec 5 0405:53	SPXS	US	272	283	53.17	In Earth orbit
2617	S62219	2024-231B	Startlink 11490	2024 Dec 5 0305:00	2024 Dec 5 0405:53	SPXS	US	272	283	53.17	In Earth orbit
2618	S62220	2024-231C	Startlink 11466	2024 Dec 5 0305:00	2024 Dec 5 0405:53	SPXS	US	272	283	53.17	In Earth orbit
2619	S62221	2024-231D	Startlink 11468	2024 Dec 5 0305:00	2024 Dec 5 0405:53	SPXS	US	272	283	53.17	In Earth orbit
2620	S62222	2024-231E	Startlink 11488	2024 Dec 5 0305:00	2024 Dec 5 0405:53	SPXS	US	272	283	53.17	In Earth orbit
2621	S62223	2024-231F	Startlink 11483	2024 Dec 5 0305:00	2024 Dec 5 0405:53	SPXS	US	272	283	53.17	In Earth orbit
2622	S62224	2024-231G	Startlink 11492	2024 Dec 5 0305:00	2024 Dec 5 0405:53	SPXS	US	272	283	53.17	In Earth orbit

2689	2686	S62301	2024-239A	Starlink 32648	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2690	2687	S62302	2024-239B	Starlink 32594	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2691	2688	S62303	2024-239C	Starlink 32621	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2692	2689	S62304	2024-239D	Starlink 32597	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2693	2690	S62305	2024-239E	Starlink 32649	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2694	2691	S62306	2024-239F	Starlink 32633	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2695	2692	S62307	2024-239G	Starlink 32646	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2696	2693	S62308	2024-239H	Starlink 32706	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2697	2694	S62309	2024-239I	Starlink 32678	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2698	2695	S62310	2024-239K	Starlink 32696	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2699	2696	S62311	2024-239L	Starlink 32700	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2700	2697	S62312	2024-239M	Starlink 32698	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2701	2698	S62313	2024-239N	Starlink 32654	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2702	2699	S62314	2024-239P	Starlink 32654	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2703	2700	S62315	2024-239Q	Starlink 32627	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2704	2701	S62316	2024-239R	Starlink 32596	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2705	2702	S62317	2024-239S	Starlink 32519	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2706	2703	S62318	2024-239T	Starlink 32576	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2707	2704	S62319	2024-239U	Starlink 32527	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2708	2705	S62320	2024-239V	Starlink 32481	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2709	2706	S62321	2024-239W	Starlink 32645	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2710	2707	S62322	2024-239X	Starlink 32654	2024 Dec 13 21:55:40	2024 Dec 13 22:55:57	SPXS	US	270	280	53.17	In Earth orbit
2711	2708	S62323	2024-240A	Huianwang W. Digu 01-01	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1096	1114	86.51	In Earth orbit
2712	2709	S62324	2024-240B	Huianwang W. Digu 01-02	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1056	1143	86.54	In Earth orbit
2713	2710	S62325	2024-240C	Huianwang W. Digu 01-03	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1096	1113	86.50	In Earth orbit
2714	2711	S62326	2024-240D	Huianwang W. Digu 01-04	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1097	1112	86.50	In Earth orbit
2715	2712	S62327	2024-240E	Huianwang W. Digu 01-05	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1067	1110	86.50	In Earth orbit
2716	2713	S62328	2024-240F	Huianwang W. Digu 01-06	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1061	1110	86.49	In Earth orbit
2717	2714	S62329	2024-240G	Huianwang W. Digu 01-07	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1095	1112	86.50	In Earth orbit
2718	2715	S62330	2024-240H	Huianwang W. Digu 01-08	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1064	1110	86.49	In Earth orbit
2719	2716	S62331	2024-240I	Huianwang W. Digu 01-09	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1095	1111	86.50	In Earth orbit
2720	2717	S62332	2024-240K	Huianwang W. Digu 01-10	2024 Dec 16 10:00	2024 Dec 16 11:07	CASC	CN	1095	1110	86.50	In Earth orbit
2721	2718	S62333	2024-241A	PIESAT-2 09	2024 Dec 16 18:50	2024 Dec 16 19:05	PIESAT	CN	519	534	97.49	In Earth orbit
2722	2719	S62334	2024-241B	PIESAT-2 10	2024 Dec 16 18:50	2024 Dec 16 19:05	PIESAT	CN	518	533	97.49	In Earth orbit
2723	2720	S62335	2024-241C	PIESAT-2 11	2024 Dec 16 18:50	2024 Dec 16 19:05	PIESAT	CN	517	533	97.49	In Earth orbit
2724	2721	S62336	2024-241D	PIESAT-2 12	2024 Dec 16 18:50	2024 Dec 16 19:05	PIESAT	CN	516	532	97.49	In Earth orbit
2725	2722	S62339	2024-242A	GPS III SV07	2024 Dec 17 00:21.21	2024 Dec 17 00:21.21	SFSSAT	US	403	20189	55.02	In Earth orbit
2726	2723	S62340	2024-243A	USA 441	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	297	319	69.92	In Earth orbit
2727	2724	S62341	2024-243B	USA 442	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	297	324	69.91	In Earth orbit
2728	2725	S62342	2024-243C	USA 443	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	302	303	69.99	In Earth orbit
2729	2726	S62343	2024-243D	USA 444	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	298	315	69.94	In Earth orbit
2730	2727	S62344	2024-243E	USA 445	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	297	313	69.95	In Earth orbit
2731	2728	S62345	2024-243F	USA 446	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	301	322	69.91	In Earth orbit
2732	2729	S62346	2024-243G	USA 447	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	303	306	69.96	In Earth orbit
2733	2730	S62347	2024-243H	USA 448	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	294	321	69.93	In Earth orbit
2734	2731	S62348	2024-243J	USA 449	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	302	304	69.99	In Earth orbit
2735	2732	S62349	2024-243K	USA 450	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	306	320	69.91	In Earth orbit
2736	2733	S62350	2024-243L	USA 451	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	305	309	69.95	In Earth orbit
2737	2734	S62351	2024-243M	USA 452	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	302	306	69.98	In Earth orbit
2738	2735	S62352	2024-243N	USA 453	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	294	329	69.91	In Earth orbit
2739	2736	S62353	2024-243P	USA 454	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	303	306	69.98	In Earth orbit
2740	2737	S62354	2024-243Q	USA 455	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	294	328	69.91	In Earth orbit
2741	2738	S62355	2024-243R	USA 456	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	294	317	69.95	In Earth orbit
2742	2739	S62356	2024-243S	USA 457	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	296	317	69.94	In Earth orbit
2743	2740	S62357	2024-243T	USA 458	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	300	310	69.94	In Earth orbit
2744	2741	S62358	2024-243U	USA 459	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	295	323	69.94	In Earth orbit
2745	2742	S62359	2024-243V	USA 460	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	298	312	69.96	In Earth orbit
2746	2743	S62360	2024-243W	USA 461	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	289	332	69.91	In Earth orbit
2747	2744	S62361	2024-243X	USA 462	2024 Dec 17 13:19	2024 Dec 17 14:20	NROC	US	301	316	69.92	In Earth orbit
2748	2745	S62362	2024-244A	O3b mPOWER F7	2024 Dec 17 22:26	2024 Dec 17 22:52	O3BS	UK	2674	7002	8.84	In Earth orbit
2749	2746	S62363	2024-244B	O3b mPOWER F8	2024 Dec 17 22:26	2024 Dec 17 22:52	O3BS	UK	2670	7003	8.85	In Earth orbit
2750	2747	S62365	2024-245A	Tianqi Xingzuo 33	2024 Dec 19 10:18	2024 Dec 19 10:28	GUOG	CN	836	852	44.98	In Earth orbit
2751	2748	S62366	2024-245B	Tianqi Xingzuo 34	2024 Dec 19 10:18	2024 Dec 19 10:28	GUOG	CN	836	852	44.98	In Earth orbit
2752	2749	S62367	2024-245C	Tianqi Xingzuo 35	2024 Dec 19 10:18	2024 Dec 19 10:28	GUOG	CN	836	851	44.98	In Earth orbit
2753	2750	S62368	2024-245D	Tianqi Xingzuo 36	2024 Dec 19 10:18	2024 Dec 19 10:28	GUOG	CN	835	852	44.99	In Earth orbit
2754	2751	S62374	2024-246A	Tongxin Jishu Shiyuan 12	2024 Dec 20 15:12	2024 Dec 20 15:42	ZLZB	CN	192	35788	28.45	In Earth orbit

2755	S62377	2024-247A	ADD-425-2	2024 Dec 21 1134:24	2024 Dec 21 1226	DAPA	KR	570	574	45.41	In Earth orbit
2756	S62378	2024-247B	LiznieSat-2	2024 Dec 21 1134:24	2024 Dec 21 1316	SIDUS	US	509	512	45.01	In Earth orbit
2757	S62379	2024-247C	TANSTAAFL-002	2024 Dec 21 1134:24	2024 Dec 21 1317	TANOM	US	511	515	45.00	In Earth orbit
2758	S62380	2024-247D	ICEYE-X47	2024 Dec 21 1134:24	2024 Dec 21 1316	ICEYE	FI	512	515	45.00	In Earth orbit
2759	S62381	2024-247E	ICEYE-X49	2024 Dec 21 1134:24	2024 Dec 21 1317	ICEYE	FI	511	514	45.00	In Earth orbit
2760	S62382	2024-247F	Hawk 11A	2024 Dec 21 1134:24	2024 Apr 8 1318	HE360	US	511	516	45.00	In Earth orbit
2761	S62383	2024-247G	Hawk 11B	2024 Dec 21 1134:24	2024 Apr 8 1318	HE360	US	512	515	45.00	In Earth orbit
2762	S62384	2024-247H	Hawk 11C	2024 Dec 21 1134:24	2024 Apr 8 1316	HE360	US	511	514	45.00	In Earth orbit
2763	S62385	2024-247I	GITAI SCl	2024 Dec 21 1134:24	2024 Dec 21 1315	GITAI	US	512	515	45.00	In Earth orbit
2764	S62386	2024-247K	CTC-0	2024 Dec 21 1134:24	2024 Dec 21 1314	SPOCIN	US	508	513	45.00	In Earth orbit
2765	S62387	2024-247L	Pleiades-Omphus	2024 Dec 21 1134:24	2024 Dec 21 1314	BRONC	US	508	513	45.00	In Earth orbit
2766	S62388	2024-247M	Tomorrow-S3	2024 Dec 21 1134:24	2024 Dec 21 1314	TOMIO	US	519	519	45.00	In Earth orbit
2767	S62389	2024-247N	Tomorrow-S4	2024 Dec 21 1134:24	2024 Dec 21 1314	TOMIO	US	512	519	45.00	In Earth orbit
2768	S62390	2024-247P	XCUBE-1	2024 Dec 21 1134:24	2024 Dec 21 1315	XPL	CA	509	513	45.00	In Earth orbit
2769	S62391	2024-247Q	CrocCube	2024 Dec 21 1134:24	2024 Dec 21 1315	CRO	HR	511	515	45.00	In Earth orbit
2770	S62392	2024-247R	LasarSat-1	2024 Dec 21 1134:24	2024 Dec 21 1315	LASAR	CZ	511	515	45.00	In Earth orbit
2771	S62393	2024-247S	Dribout-1B	2024 Dec 21 1134:24	2024 Dec 21 1315	CERD/MONTP	DJ	511	515	45.00	In Earth orbit
2772	S62394	2024-247T	ONDOSAT-OWL-3	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MN	509	512	45.00	In Earth orbit
2773	S62395	2024-247U	ONDOSAT-OWL-4	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MN	509	512	45.00	In Earth orbit
2774	S62396	2024-247V	ONDOSAT-OWL-5	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MN	509	512	45.00	In Earth orbit
2775	S62397	2024-247W	ONDOSAT-OWL-6	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MIN	509	512	45.00	In Earth orbit
2776	S62398	2024-247X	ONDOSAT-OWL-7	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MIN	509	512	45.00	In Earth orbit
2777	S62399	2024-247Y	ONDOSAT-OWL-8	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MN	509	512	45.00	In Earth orbit
2778	S62400	2024-247Z	ONDOSAT-OWL-9	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MN	509	512	45.00	In Earth orbit
2779	S62401	2024-247AA	ONDOSAT-OWL-10	2024 Dec 21 1134:24	2024 Dec 21 1313	ONDO	MN	509	512	45.00	In Earth orbit
2780	S62402	2024-247AB	ONDOSAT-OWL-11	2024 Dec 21 1134:24	2024 Dec 21 1315	ONDO	MIN	511	518	45.00	In Earth orbit
2781	S62403	2024-247AC	ONDOSAT-OWL-12	2024 Dec 21 1134:24	2024 Dec 21 1315	ONDO	MIN	511	518	45.00	In Earth orbit
2782	S62404	2024-247AD	Think Orbital F2	2024 Dec 21 1134:24	2024 Dec 21 1317	THINK	US	511	514	45.00	In Earth orbit
2783	S62406	2024-248A	SriX-2	2024 Dec 21 1417	2024 Dec 21	SYNSP	J	554	581	97.56	In Earth orbit
2784	S62409	2024-249A	Starlink 11444	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2785	S62410	2024-249B	Starlink 11493	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2786	S62411	2024-249C	Starlink 11453	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2787	S62412	2024-249D	Starlink 11462	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2788	S62413	2024-249E	Starlink 11434	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2789	S62414	2024-249F	Starlink 11441	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2790	S62415	2024-249G	Starlink 11445	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2791	S62416	2024-249H	Starlink 11355	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2792	S62417	2024-249I	Starlink 11446	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2793	S62418	2024-249K	Starlink 11428	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2794	S62419	2024-249L	Starlink 11447	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2795	S62420	2024-249M	Starlink 11439	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2796	S62421	2024-249N	Starlink 11434	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2797	S62422	2024-249P	Starlink 11461	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	281	288	43.01	In Earth orbit
2798	S62423	2024-249Q	Starlink 32692	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2799	S62424	2024-249R	Starlink 32680	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2800	S62425	2024-249S	Starlink 32638	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2801	S62426	2024-249T	Starlink 32283	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2802	S62427	2024-249U	Starlink 32676	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2803	S62428	2024-249V	Starlink 32659	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2804	S62429	2024-249W	Starlink 32614	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2805	S62430	2024-250A	Starlink 32418	2024 Dec 23 0535:30	2024 Dec 23 0640:45	SPXS	US	282	289	43.01	In Earth orbit
2806	S62432	2024-251A	Resurs-P No. 5	2024 Dec 25 0745:42	2024 Dec 25 0755:02	TSSKBP?	RU	286	466	97.28	In Earth orbit
2807	S62433	2024-251B	Starlink 32702	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2808	S62434	2024-251C	Starlink 32712	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2809	S62435	2024-251D	Starlink 32674	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2810	S62436	2024-251E	Starlink 32711	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2811	S62437	2024-251F	Starlink 32697	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2812	S62438	2024-251G	Starlink 32693	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2813	S62439	2024-251H	Starlink 32721	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2814	S62440	2024-251I	Starlink 32709	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2815	S62441	2024-251J	Starlink 32689	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	272	280	53.17	In Earth orbit
2816	S62442	2024-251K	Starlink 32724	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	271	280	53.17	In Earth orbit
2817	S62443	2024-251L	Starlink 32291	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	270	278	53.17	In Earth orbit
2818	S62444	2024-251M	Starlink 32736	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	271	280	53.17	In Earth orbit
2819	S62445	2024-251N	Starlink 32757	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	271	280	53.17	In Earth orbit
2820	S62446	2024-251P	Starlink 32683	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	271	280	53.17	In Earth orbit
2821	S62446	2024-251Q	Starlink 32726	2024 Dec 29 0158:30	2024 Dec 29 0257:19	SPXS	US	271	280	53.17	In Earth orbit

2821	S62447	2024-251R	Starlink 32730	2024 Dec 29 01:58:30	2024 Dec 29 02:57:19	SPXS	US	271	280	53.17	In Earth orbit
2822	S62448	2024-251S	Starlink 32719	2024 Dec 29 01:58:30	2024 Dec 29 02:57:19	SPXS	US	271	280	53.17	In Earth orbit
2823	S62449	2024-251T	Starlink 32723	2024 Dec 29 01:58:30	2024 Dec 29 02:57:19	SPXS	US	271	280	53.17	In Earth orbit
2824	S62450	2024-251U	Starlink 32722	2024 Dec 29 01:58:30	2024 Dec 29 02:57:19	SPXS	US	271	280	53.17	In Earth orbit
2825	S62451	2024-251V	Starlink 32720	2024 Dec 29 01:58:30	2024 Dec 29 02:57:19	SPXS	US	271	280	53.17	In Earth orbit
2826	S62452	2024-251W	Starlink 32656	2024 Dec 29 01:58:30	2024 Dec 29 02:57:19	SPXS	US	271	280	53.17	In Earth orbit
2827	S62453	2024-251X	Starlink 32690	2024 Dec 29 01:58:30	2024 Dec 29 02:57:19	SPXS	US	271	280	53.17	In Earth orbit
2828	S62454	2024-252A	Utility-Sat	2024 Dec 29 05:00:00	2024 Dec 29 05:33	ASTRAN	US	250	48000	28.50	In Earth orbit
2829	S62455	2024-252B	NaView Bravo	2024 Dec 29 05:00:00	2024 Dec 29 05:33	ASTRAN/ANUV	US	250	48000	28.50	In Earth orbit
2830	S62456	2024-252C	NaView Alpha	2024 Dec 29 05:00:00	2024 Dec 29 05:33	ASTRAN/ANUV	US	250	48000	28.50	In Earth orbit
2831	S62457	2024-252D	AGLA	2024 Dec 29 05:00:00	2024 Dec 29 05:33	ASTRAN/ORPH	US	250	48000	28.50	In Earth orbit
2832	S62459	2024-253A	SPADEx-A	2024 Dec 30 16:30:15	2024 Dec 30 16:45:27	ISRO	IN	469	476	54.99	In Earth orbit
2833	S62460	2024-253B	SPADEx-B	2024 Dec 30 16:30:15	2024 Dec 30 16:45:24	ISRO	IN	469	476	54.99	In Earth orbit
2834	S62461	2024-253C	POEM-4	2024 Dec 30 16:30:15	-	ISRO	IN	349	360	55.22	Attached to PSLV-C60 PSA
2835	S62462	2024-254A	Starlink 11518	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	270	277	43.00	In Earth orbit
2836	S62463	2024-254B	Starlink 11455	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	270	277	43.00	In Earth orbit
2837	S62464	2024-254C	Starlink 11459	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	270	277	43.00	In Earth orbit
2838	S62465	2024-254D	Starlink 11178	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2839	S62466	2024-254E	Starlink 11506	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	270	277	43.00	In Earth orbit
2840	S62467	2024-254F	Starlink 11486	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2841	S62468	2024-254G	Starlink 11511	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2842	S62469	2024-254H	Starlink 11505	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2843	S62470	2024-254I	Starlink 11497	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2844	S62471	2024-254K	Starlink 11477	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2845	S62472	2024-254L	Starlink 11500	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2846	S62473	2024-254M	Starlink 11464	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2847	S62474	2024-254N	Starlink 11502	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2848	S62475	2024-254P	Starlink 32657	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2849	S62476	2024-254Q	Starlink 32734	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2850	S62477	2024-254R	Starlink 32733	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2851	S62478	2024-254S	Starlink 32707	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2852	S62479	2024-254T	Starlink 32705	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2853	S62480	2024-254U	Starlink 32743	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2854	S62481	2024-254V	Starlink 32753	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
2855	S62482	2024-254W	Starlink 32699	2024 Dec 31 05:39:10	2024 Dec 31 06:44:30	SPXS	US	269	277	43.00	In Earth orbit
Appendix 2(b): Payloads not included in annual statistics											
-	1	A10980	W-Series 1 Reentry Vehicle	2023 Jun 12 21:55:00	2024 Feb 21 21:08	VARDA	US	520	536	97.51	Landed
-	2	A11131	Celestis-22	2024 Jun 8 07:18	-	SSICE	US	740	-184090	27.04	Sun to Centaur V-001
-	3	A11132	Celestis-21	2024 Jun 8 07:18	-	SSICE	US	476	394339	30.06	Reentered Alt to Peregrine Mission One
-	4	A11161	VEP-4	2024 Feb 17 00:22:55	-	JAXA	J	663	670	98.13	Reentered Alt to H3 T12 Stage 2
-	5	A11185	Transporter-10	2024 Mar 4 22:05:00	-	SPX	US	589	601	97.74	Reentered Alt to Falcon 9-307 Stage 2
-	6	A11201	Bandwagon-1	2024 Apr 7 23:16	-	SPX	US	589	594	45.61	Reentered Alt to Falcon 9-321 Stage 2
-	7	A11202	Chang e-6 Zhuolu Qi	2024 May 3 09:27:29	2024 May 30	LDSE/CAST	CN	267	386843	24.51	Luna
-	8	A11203	Chang e-6 Shangsheng Qi	2024 May 3 09:27:29	2024 Jun 1 22:23:16	LDSE/CAST	CN	267	386843	24.51	Luna
-	9	A11226	Chang e-6 Fanhui Qi	2024 May 3 09:27:29	2024 Jun 25 05:22	LDSE/CAST	CN	267	386843	24.51	Luna
-	10	A11288	Jinchan	2024 May 3 09:27:29	2024 Jun 3	LDSE/CAST	CN	267	386843	24.51	Luna
-	11	A11325	Transporter-11	2024 Aug 16 18:56:00	-	SPX	US	592	595	97.75	Reentered Alt to Falcon 9-366 Stage 2
-	12	S61448	Celestis-24	2024 Oct 4 11:25:00	-	SSICE	US	509	518	97.44	Reentered Alt to Transporter-11
-	13	A11382	Vulcan CERT-2 Payload	2024 Dec 21 11:34:24	-	LULAL	US	735	-237885	26.70	Sun to Centaur V-002
-	14	A11382	Bandwagon-2	2024 Dec 21 11:34:24	-	SPX	US	511	515	45.00	Reentered Alt to Falcon 9-414 Stage 2