



Information furnished in conformity with the Convention on Registration of Objects Launched into Outer Space

Note verbale dated 3 January 2023 from the Permanent Mission of the United States of America to the United Nations (Vienna) addressed to the Secretary-General

The Permanent Mission of the United States of America to the United Nations (Vienna), in accordance with article IV of the Convention on Registration of Objects Launched into Outer Space (General Assembly resolution [3235 \(XXIX\)](#), annex), has the honour to transmit registration data on objects launched into outer space by the United States for October 2022 (see annex).¹

The United States requests that the space objects contained in the annex to the present document be placed on the Register of Objects Launched into Outer Space maintained by the United Nations. In submitting this request, the United States notes that, consistent with its long-standing registration practice, the United States is not necessarily a launching State for each of the space objects it registers. The United States makes this request in the spirit of contributing to the practical effectiveness of the treaties and is providing information to the greatest extent practicable.

¹ The data on space objects referenced in the annex were entered into the Register of Objects Launched into Outer Space on 10 January 2023.



Annex

Registration data on space launches by the United States of America for October 2022*

The following report supplements the registration data on United States space launches as at 31 October 2022.

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object	Date of decay
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		
The following objects were launched after the last report and remained in orbit as at 2359Z on 31 October 2022:									
2022-123A	SES 20	4 October 2022	AFETR	1 436.07	0.04	35 799	35 773	C	-
2022-123B	SES 21	4 October 2022	AFETR	1 436.05	0.04	35 786	35 785	C	-
2022-123C	Atlas 5 Centaur R/B	4 October 2022	AFETR	1 338.36	1.9	35 018	32 684	D	-
2022-124A	Dragon Endurance 2	5 October 2022	AFETR	92.9	51.64	421	412	E	-
2022-125A	Starlink-4633	5 October 2022	AFWTR	95.44	53.22	541	539	C	-
2022-125B	Starlink-4578	5 October 2022	AFWTR	95.44	53.22	541	539	C	-
2022-125C	Starlink-4635	5 October 2022	AFWTR	95.44	53.22	541	539	C	-
2022-125D	Starlink-4634	5 October 2022	AFWTR	95.44	53.21	541	539	C	-
2022-125E	Starlink-4629	5 October 2022	AFWTR	95.44	53.21	541	539	C	-
2022-125F	Starlink-4468	5 October 2022	AFWTR	95.44	53.21	541	539	C	-
2022-125G	Starlink-4567	5 October 2022	AFWTR	94.73	53.22	506	505	C	-
2022-125H	Starlink-4639	5 October 2022	AFWTR	95.44	53.21	541	539	C	-
2022-125J	Starlink-5157	5 October 2022	AFWTR	94.61	53.22	500	499	C	-
2022-125K	Starlink-5156	5 October 2022	AFWTR	95.44	53.21	541	539	C	-
2022-125L	Starlink-5159	5 October 2022	AFWTR	91.54	53.21	351	349	C	-
2022-125M	Starlink-5137	5 October 2022	AFWTR	94.67	53.22	504	501	C	-
2022-125N	Starlink-5134	5 October 2022	AFWTR	91.54	53.22	351	349	C	-
2022-125P	Starlink-5094	5 October 2022	AFWTR	94.57	53.22	499	496	C	-
2022-125Q	Starlink-5148	5 October 2022	AFWTR	94.47	53.22	494	492	C	-
2022-125R	Starlink-5123	5 October 2022	AFWTR	94.51	53.22	496	494	C	-
2022-125S	Starlink-5133	5 October 2022	AFWTR	94.41	53.22	491	489	C	-
2022-125T	Starlink-5149	5 October 2022	AFWTR	91.54	53.22	351	349	C	-
2022-125U	Starlink-5120	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125V	Starlink-5103	5 October 2022	AFWTR	91.53	53.21	352	348	C	-

* The registration data are reproduced in the form in which they were received.

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object	Date of decay
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		
2022-125W	Starlink-5142	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125X	Starlink-5147	5 October 2022	AFWTR	92.9	53.22	417	416	C	-
2022-125Y	Starlink-5119	5 October 2022	AFWTR	91.54	53.21	351	349	C	-
2022-125Z	Starlink-5112	5 October 2022	AFWTR	92.9	53.22	417	416	C	-
2022-125AA	Starlink-5113	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AB	Starlink-5115	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AC	Starlink-5075	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AD	Starlink-5118	5 October 2022	AFWTR	91.54	53.22	351	349	C	-
2022-125AE	Starlink-5108	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AF	Starlink-5121	5 October 2022	AFWTR	91.77	53.22	362	360	C	-
2022-125AG	Starlink-5125	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AH	Starlink-5097	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AJ	Starlink-5131	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AK	Starlink-5130	5 October 2022	AFWTR	91.54	53.21	352	348	C	-
2022-125AL	Starlink-5128	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AM	Starlink-5079	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AN	Starlink-5088	5 October 2022	AFWTR	91.54	53.22	351	349	C	-
2022-125AP	Starlink-5105	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AQ	Starlink-5109	5 October 2022	AFWTR	91.53	53.22	351	348	C	-
2022-125AR	Starlink-5114	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AS	Starlink-5129	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AT	Starlink-5135	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AU	Starlink-5096	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AV	Starlink-5132	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AW	Starlink-5145	5 October 2022	AFWTR	91.53	53.21	350	349	C	-
2022-125AX	Starlink-5099	5 October 2022	AFWTR	92.91	53.22	418	416	C	-
2022-125AY	Starlink-5127	5 October 2022	AFWTR	91.54	53.22	351	349	C	-
2022-125AZ	Starlink-5124	5 October 2022	AFWTR	91.54	53.22	351	349	C	-
2022-125BA	Starlink-5126	5 October 2022	AFWTR	91.53	53.22	351	348	C	-
2022-125BB	Starlink-5098	5 October 2022	AFWTR	91.54	53.22	351	348	C	-
2022-125BC	Starlink-5116	5 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-125BD	Starlink-5055	5 October 2022	AFWTR	91.53	53.22	351	348	C	-

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object	Date of decay
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		
2022-127A	OTB-3-GAzelle	7 October 2022	RLLC	99.89	98.31	763	743	C	-
2022-128A	Galaxy 33	8 October 2022	AFETR	1 436.11	0.04	35 796	35 778	C	-
2022-128B	Galaxy 34	8 October 2022	AFETR	1 436.08	0.01	35 790	35 782	C	-
2022-128C	Falcon 9 R/B	8 October 2022	AFETR	349.29	26.86	19 807	295	D	-
2022-136A	Starlink-5195	20 October 2022	AFETR	93.24	53.22	434	432	C	-
2022-136B	Starlink-5189	20 October 2022	AFETR	91.54	53.22	352	348	C	-
2022-136C	Starlink-5176	20 October 2022	AFETR	93.22	53.22	433	431	C	-
2022-136D	Starlink-5163	20 October 2022	AFETR	93.18	53.22	431	429	C	-
2022-136E	Starlink-5158	20 October 2022	AFETR	93.2	53.22	432	430	C	-
2022-136F	Starlink-5226	20 October 2022	AFETR	93.16	53.22	431	428	C	-
2022-136G	Starlink-5216	20 October 2022	AFETR	92.03	53.22	376	372	C	-
2022-136H	Starlink-5167	20 October 2022	AFETR	93.12	53.22	429	426	C	-
2022-136J	Starlink-5173	20 October 2022	AFETR	93.15	53.22	431	426	C	-
2022-136K	Starlink-5169	20 October 2022	AFETR	91.53	53.21	352	347	C	-
2022-136L	Starlink-5209	20 October 2022	AFETR	91.13	53.22	331	329	C	-
2022-136M	Starlink-5170	20 October 2022	AFETR	93.1	53.22	427	426	C	-
2022-136N	Starlink-5225	20 October 2022	AFETR	93.09	53.22	427	424	C	-
2022-136P	Starlink-5172	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136Q	Starlink-5187	20 October 2022	AFETR	93.05	53.22	425	423	C	-
2022-136R	Starlink-5151	20 October 2022	AFETR	93.06	53.22	426	423	C	-
2022-136S	Starlink-5174	20 October 2022	AFETR	93.01	53.22	423	421	C	-
2022-136T	Starlink-5222	20 October 2022	AFETR	93.04	53.22	424	422	C	-
2022-136U	Starlink-5223	20 October 2022	AFETR	92.96	53.22	421	418	C	-
2022-136V	Starlink-5181	20 October 2022	AFETR	93	53.22	423	420	C	-
2022-136W	Starlink-5168	20 October 2022	AFETR	92.98	53.22	422	419	C	-
2022-136X	Starlink-5144	20 October 2022	AFETR	93.16	53.22	430	428	C	-
2022-136Y	Starlink-5146	20 October 2022	AFETR	92.04	53.22	375	373	C	-
2022-136Z	Starlink-5192	20 October 2022	AFETR	92.95	53.22	420	418	C	-
2022-136AA	Starlink-5212	20 October 2022	AFETR	92.03	53.22	375	373	C	-
2022-136AB	Starlink-5201	20 October 2022	AFETR	92.93	53.22	419	417	C	-
2022-136AC	Starlink-5171	20 October 2022	AFETR	91.54	53.21	353	347	C	-
2022-136AD	Starlink-5138	20 October 2022	AFETR	91.54	53.21	353	347	C	-

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object	Date of decay
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		
2022-136AE	Starlink-5175	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AF	Starlink-5160	20 October 2022	AFETR	92.03	53.22	375	373	C	-
2022-136AG	Starlink-5165	20 October 2022	AFETR	91.53	53.21	352	347	C	-
2022-136AH	Starlink-5210	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AJ	Starlink-5178	20 October 2022	AFETR	91.54	53.21	353	347	C	-
2022-136AK	Starlink-5183	20 October 2022	AFETR	91.54	53.21	353	347	C	-
2022-136AL	Starlink-5166	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AM	Starlink-5211	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AN	Starlink-5184	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AP	Starlink-5153	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AQ	Starlink-5143	20 October 2022	AFETR	91.54	53.21	353	347	C	-
2022-136AR	Starlink-5177	20 October 2022	AFETR	91.53	53.21	352	347	C	-
2022-136AS	Starlink-5221	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AT	Starlink-5190	20 October 2022	AFETR	91.53	53.22	353	347	C	-
2022-136AU	Starlink-5213	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AV	Starlink-5219	20 October 2022	AFETR	91.53	53.22	352	347	C	-
2022-136AW	Starlink-5193	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AX	Starlink-5188	20 October 2022	AFETR	91.53	53.21	352	347	C	-
2022-136AY	Starlink-5197	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136AZ	Starlink-5217	20 October 2022	AFETR	91.53	53.22	352	347	C	-
2022-136BA	Starlink-5198	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136BB	Starlink-5185	20 October 2022	AFETR	91.54	53.21	352	348	C	-
2022-136BC	Starlink-5204	20 October 2022	AFETR	91.53	53.21	353	347	C	-
2022-136BD	Starlink-5179	20 October 2022	AFETR	91.54	53.21	353	347	C	-
2022-136BE	Starlink-5200	20 October 2022	AFETR	91.53	53.21	352	347	C	-
2022-136BF	Starlink-5203	20 October 2022	AFETR	91.53	53.21	352	347	C	-
2022-141A	Starlink-5290	28 October 2022	AFWTR	92.48	53.22	397	395	C	-
2022-141B	Starlink-5297	28 October 2022	AFWTR	92.49	53.22	397	396	C	-
2022-141C	Starlink-5294	28 October 2022	AFWTR	92.49	53.22	397	396	C	-
2022-141D	Starlink-5233	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141E	Starlink-5269	28 October 2022	AFWTR	92.49	53.22	397	395	C	-
2022-141F	Starlink-5273	28 October 2022	AFWTR	92.48	53.22	397	395	C	-

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object	Date of decay
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		
2022-141G	Starlink-5161	28 October 2022	AFWTR	91.54	53.22	352	347	C	-
2022-141H	Starlink-5278	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141J	Starlink-5279	28 October 2022	AFWTR	92.48	53.22	397	395	C	-
2022-141K	Starlink-5280	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141L	Starlink-5243	28 October 2022	AFWTR	92.48	53.22	397	395	C	-
2022-141M	Starlink-5245	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141N	Starlink-5282	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141P	Starlink-5155	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141Q	Starlink-5229	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141R	Starlink-5117	28 October 2022	AFWTR	91.54	53.22	352	347	C	-
2022-141S	Starlink-5242	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141T	Starlink-5248	28 October 2022	AFWTR	91.53	53.22	351	348	C	-
2022-141U	Starlink-5256	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141V	Starlink-5154	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141W	Starlink-5186	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141X	Starlink-5164	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141Y	Starlink-5122	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141Z	Starlink-5228	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141AA	Starlink-5227	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AB	Starlink-5231	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AC	Starlink-5239	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AD	Starlink-5162	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AE	Starlink-5235	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AF	Starlink-5194	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AG	Starlink-5240	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141AH	Starlink-5238	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AJ	Starlink-5182	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AK	Starlink-5281	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AL	Starlink-4619	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AM	Starlink-5268	28 October 2022	AFWTR	91.54	53.22	352	347	C	-
2022-141AN	Starlink-5263	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AP	Starlink-5271	28 October 2022	AFWTR	91.53	53.22	352	347	C	-

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object	Date of decay
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		
2022-141AQ	Starlink-5258	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141AR	Starlink-5237	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AS	Starlink-5234	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AT	Starlink-5246	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AU	Starlink-5244	28 October 2022	AFWTR	91.53	53.22	352	347	C	-
2022-141AV	Starlink-5250	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141AW	Starlink-5199	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141AX	Starlink-5205	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141AY	Starlink-5247	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141AZ	Starlink-5241	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141BA	Starlink-5249	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141BB	Starlink-5264	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141BC	Starlink-5262	28 October 2022	AFWTR	91.54	53.22	352	348	C	-
2022-141BD	Starlink-5255	28 October 2022	AFWTR	91.53	53.22	352	348	C	-
2022-141BE	Starlink-5259	28 October 2022	AFWTR	91.54	53.22	352	347	C	-
The following objects not previously reported were identified after the last report and remained in orbit as at 2359Z on 31 October 2022:									
2022-073E	USA 337	1 July 2022	AFETR	1 450.76	0.03	36 090	36 055	C	-
2022-057D	OP15 FLT2 (TYVAK-0821)	25 May 2022	AFETR	95.22	97.52	537	522	C	-
2022-057K	OP15 FLT1 (TYVAK-0820)	25 May 2022	AFETR	95.22	97.53	537	521	C	-
2022-057BA	CPOD FLT2	25 May 2022	AFETR	95.02	97.53	528	511	A	-
The following objects achieved orbit after the last report but were no longer in orbit as at 2359Z on 31 October 2022:									
2022-122E	Firefly Alpha R/B	1 October 2022	AFWTR	88.11	136.88	192	170	D	7 October 2022
The following objects were launched after the last report but did not achieve orbit:									
None.									
The following objects identified in a previous report were no longer in orbit as at 2359Z on 31 October 2022:									
2018-004AF	-	-	-	-	-	-	-	-	3 October 2022
1998-067QY	-	-	-	-	-	-	-	-	4 October 2022
2022-107AZ	-	-	-	-	-	-	-	-	7 October 2022
2022-114E	-	-	-	-	-	-	-	-	7 October 2022
1998-067SL	-	-	-	-	-	-	-	-	12 October 2022

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object	Date of decay
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		
2020-085E	-	-	-	-	-	-	-	-	12 October 2022
2008-017B	-	-	-	-	-	-	-	-	13 October 2022
2018-096AG	-	-	-	-	-	-	-	-	14 October 2022
2022-042A	-	-	-	-	-	-	-	-	14 October 2022
2020-012AH	-	-	-	-	-	-	-	-	15 October 2022
2002-011B	-	-	-	-	-	-	-	-	17 October 2022
2022-107AR	-	-	-	-	-	-	-	-	17 October 2022
2016-040K	-	-	-	-	-	-	-	-	20 October 2022
2018-096AH	-	-	-	-	-	-	-	-	22 October 2022
2020-085AA	-	-	-	-	-	-	-	-	22 October 2022
2020-085F	-	-	-	-	-	-	-	-	22 October 2022
2019-029T	-	-	-	-	-	-	-	-	23 October 2022
2020-012BF	-	-	-	-	-	-	-	-	23 October 2022
2019-029D	-	-	-	-	-	-	-	-	24 October 2022
2019-071P	-	-	-	-	-	-	-	-	24 October 2022
2022-107L	-	-	-	-	-	-	-	-	24 October 2022
2022-107T	-	-	-	-	-	-	-	-	24 October 2022
2022-119AM	-	-	-	-	-	-	-	-	25 October 2022
2020-085Y	-	-	-	-	-	-	-	-	27 October 2022
2017-008Y	-	-	-	-	-	-	-	-	28 October 2022
2020-085AH	-	-	-	-	-	-	-	-	28 October 2022
2018-096AF	-	-	-	-	-	-	-	-	29 October 2022
2019-071M	-	-	-	-	-	-	-	-	29 October 2022
2020-085G	-	-	-	-	-	-	-	-	29 October 2022
2022-107AB	-	-	-	-	-	-	-	-	30 October 2022

The following objects were not previously reported and were no longer in orbit as at 2359Z on 31 October 2022:

None.

Revisions that should be made to previously reported data:

None.

Abbreviations and key

Location of the launch: AFETR, United States Air Force Eastern Test Range; AFWTR, United States Air Force Western Test Range; and RLLC, Rocket Lab Launch Complex, New Zealand.

General function of the space object:

- A Spacecraft engaged in investigation of spaceflight techniques and technology
- B Spacecraft engaged in research and exploration of the upper atmosphere
- C Spacecraft engaged in practical applications and uses of space technology such as weather or communications
- D Spent boosters, spent manoeuvring stages, shrouds and other non-functional objects
- E Reusable space transportation systems