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**Committee on the Peaceful
Uses of Outer Space****Information furnished in conformity with the Convention
on Registration of Objects Launched into Outer Space****Note verbale dated 6 February 2020 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 the period from August to November 2019 (see annexes I–IV).¹

The United States requests that the space objects contained in the annexes 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 annexes were entered into the Register of Objects Launched into Outer Space on 20 February 2020.



Registration data on space launches by the United States of America for August 2019*

The following report supplements the registration data on United States space launches as at 31 August 2019.

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
The following objects were launched since the last report and remain in orbit:								
2019-050B	Falcon 9 R/B	6 August 2019	AFETR	630.9	26	35 757	222	Spent boosters, spent manoeuvring stage, shrouds and other non-functional objects
2019-051A	AEHF 5 (USA 292)	8 August 2019	AFETR	914.4	10	35 288	14 369	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-051B	TDO Spacecraft	8 August 2019	AFETR	621.2	26.4	35 281	208	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-051C	Atlas 5 Centaur R/B	8 August 2019	AFETR	903.3	9.8	35 281	13 871	Spent boosters, spent manoeuvring stage, shrouds and other non-functional objects
2019-054C	Pearl White 1	19 August 2019	RLLC	95.5	45	562	545	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-054D	Pearl White 2	19 August 2019	RLLC	95.5	45	562	545	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-054E	Global-4	19 August 2019	RLLC	95.5	45	562	545	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-056A	Navstar 78	22 August 2019	AFETR	369.8	55	20 191	1 213	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
The following objects not previously reported have been identified since the last report:								
2019-022E	ORCA-1	25 July 2019	WLPIS	94.2	51.6	485	469	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-022G	RFTSat	25 July 2019	WLPIS	94.1	51.6	485	468	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-022C	Aerocube 10B (DougSat)	17 April 2019	WLPIS	94.2	51.6	485	471	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-022D	Aerocube 10A (JimSat)	17 April 2019	WLPIS	94.2	51.6	485	470	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-022J	AC 10 Probe (Venturini)	17 April 2019	WLPIS	93.9	51.7	467	463	Spacecraft engaged in practical applications and uses of space technology such as weather or communications

* 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
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
The following objects not previously reported have been identified since the last report but were no longer in orbit as at 2359Z on 31 August 2019:								
None.								
The following objects achieved orbit since the last report but were no longer in orbit as at 2359Z on 31 August 2019:								
None.								
The following objects identified in a previous report were no longer in orbit as at 2359Z on 31 August 2019:								
2008-012B, 2019-036AA, 2019-044A								
The following objects were launched since the last report but did not achieve orbit:								
None.								
Revisions that should be made to previously reported data:								
None.								

Abbreviations: AFETR, United States Air Force Eastern Test Range; RLLC, Rocket Lab Launch Complex, New Zealand; WLPIS, Wallops Island, United States.

Annex II

Registration data on space launches by the United States of America for September 2019*

The following report supplements the registration data on United States space launches as at 30 September 2019.

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
The following objects were launched since the last report and remain in orbit:								
None.								
The following objects not previously reported have been identified since the last report:								
2019-022K	Seeker	17 April 2019		94.1	51.6	482	468	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-036H	TEPCE	25 June 2019	AFETR	96.15	28.52	842	306	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-036J	FalconSat-7	25 June 2019	AFETR	95.86	28.53	815	305	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
The following objects not previously reported have been identified since the last report but were no longer in orbit as at 2359Z on 30 September 2019:								
None.								
The following objects achieved orbit since the last report but were no longer in orbit as at 2359Z on 30 September 2019:								
None.								
The following objects identified in a previous report were no longer in orbit as at 2359Z on 30 September 2019:								
2018-010A								
The following objects were launched since the last report but did not achieve orbit:								
None.								
Revisions that should be made to previously reported data:								
None.								

Abbreviations: AFETR, United States Air Force Eastern Test Range.

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Annex III

Registration data on space launches by the United States of America for October 2019*

The following report supplements the registration data on United States space launches as at 31 October 2019.

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
The following objects were launched since the last report and remain in orbit:								
2019-067B	MEV-1	9 October 2019	TTMTR	1 639.09	6.95	61 402	18 302	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-068A	ICON	11 October 2019	ERAS	96.54	26.99	606	580	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-068B	Pegasus R/B	11 October 2019	ERAS	96.49	27	601	579	Spent boosters, spent manoeuvring stage, shrouds and other non-functional objects
The following objects not previously reported have been identified since the last report:								
2018-092G	KickSat 2	11 November 2018	WLPIS	87.74	51.63	168	157	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
The following objects not previously reported have been identified since the last report but were no longer in orbit as at 2359Z on 31 October 2019:								
None.								
The following objects achieved orbit since the last report but were no longer in orbit as at 2359Z on 31 October 2019:								
None.								
The following objects identified in a previous report were no longer in orbit as at 2359Z on 31 October 2019:								
2013-064N								
The following objects were launched since the last report but did not achieve orbit:								
None.								
Revisions that should be made to previously reported data:								
None.								

Abbreviations: TTMTR, Baikonur Cosmodrome, Kazakhstan; ERAS, United States Eastern Range Air Space; WLPIS, Wallops Island, United States.

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

Annex IV

Registration data on space launches by the United States of America for November 2019*

The following report supplements the registration data on United States space launches as at 30 November 2019.

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
The following objects were launched since the last report and remain in orbit:								
2019-071A	Cygnus NG-12	2 November 2019	WLPIS	92.9	51.65	421	413	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074A	Starlink-1007	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AA	Starlink-1032	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AB	Starlink-1033	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AC	Starlink-1034	11 November 2019	AFETR	91.55	53.01	354	346	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AD	Starlink-1035	11 November 2019	AFETR	91.53	53.01	352	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AE	Starlink-1036	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AF	Starlink-1037	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AG	Starlink-1038	11 November 2019	AFETR	94.2	53.01	481	479	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AH	Starlink-1039	11 November 2019	AFETR	94.21	53.01	481	479	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AJ	Starlink-1040	11 November 2019	AFETR	91.54	53.01	352	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AK	Starlink-1041	11 November 2019	AFETR	94.19	53.01	480	479	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AL	Starlink-1042	11 November 2019	AFETR	94.11	53.01	476	475	Spacecraft engaged in practical applications and uses of space technology such as weather or communications

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International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
2019-074AM	Starlink-1043	11 November 2019	AFETR	94.16	53.01	479	477	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AN	Starlink-1044	11 November 2019	AFETR	91.43	53.01	348	341	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AP	Starlink-1045	11 November 2019	AFETR	94.22	53.01	482	480	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AQ	Starlink-1046	11 November 2019	AFETR	94.2	53.01	481	479	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AR	Starlink-1047	11 November 2019	AFETR	91.53	53.01	352	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AS	Starlink-1048	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AT	Starlink-1049	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AU	Starlink-1050	11 November 2019	AFETR	94.09	53.01	475	474	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AV	Starlink-1051	11 November 2019	AFETR	91.53	53.01	352	347	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AW	Starlink-1052	11 November 2019	AFETR	91.53	53.01	351	349	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AX	Starlink-1053	11 November 2019	AFETR	94.14	53.01	478	476	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AY	Starlink-1054	11 November 2019	AFETR	94.12	53.01	477	475	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074AZ	Starlink-1055	11 November 2019	AFETR	94.1	53.01	476	474	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074B	Starlink-1008	11 November 2019	AFETR	91.53	53.01	351	349	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BA	Starlink-1056	11 November 2019	AFETR	94.12	53.01	477	475	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BB	Starlink-1057	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BC	Starlink-1058	11 November 2019	AFETR	94.16	53.01	479	477	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BD	Starlink-1059	11 November 2019	AFETR	91.53	53.01	352	347	Spacecraft engaged in practical applications and uses of space technology such as weather or communications

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
2019-074BE	Starlink-1060	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BF	Starlink-1061	11 November 2019	AFETR	94.14	53.01	478	476	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BG	Starlink-1062	11 November 2019	AFETR	94.13	53.01	477	476	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BH	Starlink-1063	11 November 2019	AFETR	94.18	53.01	480	478	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BJ	Starlink-1064	11 November 2019	AFETR	94.18	53.01	480	478	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BK	Starlink-1065	11 November 2019	AFETR	94.17	53.01	479	478	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BL	Starlink-1067	11 November 2019	AFETR	94.15	53.01	478	477	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074BM	Starlink-1068	11 November 2019	AFETR	91.53	53.01	352	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074C	Starlink-1009	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074D	Starlink-1010	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074E	Starlink-1011	11 November 2019	AFETR	91.53	53.01	356	344	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074F	Starlink-1012	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074G	Starlink-1013	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074H	Starlink-1014	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074J	Starlink-1015	11 November 2019	AFETR	91.53	53.01	352	347	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074K	Starlink-1016	11 November 2019	AFETR	91.53	53.01	352	347	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074L	Starlink-1017	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074M	Starlink-1019	11 November 2019	AFETR	91.53	53.01	356	343	Spacecraft engaged in practical applications and uses of space technology such as weather or communications

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
2019-074N	Starlink-1020	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074P	Starlink-1021	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074Q	Starlink-1022	11 November 2019	AFETR	94.11	53.01	476	475	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074R	Starlink-1023	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074S	Starlink-1024	11 November 2019	AFETR	91.53	53.01	356	344	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074T	Starlink-1025	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074U	Starlink-1026	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074V	Starlink-1027	11 November 2019	AFETR	91.53	53.01	352	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074W	Starlink-1028	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074X	Starlink-1029	11 November 2019	AFETR	91.53	53.01	351	348	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074Y	Starlink-1030	11 November 2019	AFETR	91.53	53.01	356	344	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-074Z	Starlink-1031	11 November 2019	AFETR	91.53	53.01	351	356	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081C	Meshbed	27 November 2019	SRI	94.79	97.52	519	498	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081D	Flock 4P 9	27 November 2019	SRI	94.79	97.52	518	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081E	Flock 4P 10	27 November 2019	SRI	94.79	97.52	518	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081F	Flock 4P 11	27 November 2019	SRI	94.78	97.52	518	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081G	Flock 4P 12	27 November 2019	SRI	94.78	97.52	517	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081H	Flock 4P 4	27 November 2019	SRI	94.77	97.52	516	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications

International designation	Name of the space object	Date of the launch	Location of the launch	Basic orbital characteristics				General function of the space object
				Nodal period (min)	Inclination (degrees)	Apogee (km)	Perigee (km)	
2019-081J	Flock 4P 3	27 November 2019	SRI	94.77	97.52	516	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081K	Flock 4P 2	27 November 2019	SRI	94.76	97.52	516	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081L	Flock 4P 1	27 November 2019	SRI	94.76	97.52	516	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081M	Flock 4P 8	27 November 2019	SRI	94.76	97.52	515	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081N	Flock 4P 7	27 November 2019	SRI	94.76	97.52	515	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081P	Flock 4P 6	27 November 2019	SRI	94.75	97.52	515	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
2019-081Q	Flock 4P 5	27 November 2019	SRI	94.75	97.52	514	499	Spacecraft engaged in practical applications and uses of space technology such as weather or communications
The following objects not previously reported have been identified since the last report:								
None.								
The following objects not previously reported have been identified since the last report but were no longer in orbit as at 2359Z on 30 November 2019:								
None.								
The following objects achieved orbit since the last report but were no longer in orbit as at 2359Z on 30 November 2019:								
2019-071B	Antares R/B	2 November 2019	WLPIS	87.54	51.61	160	145	Spent boosters, spent manoeuvring stage, shrouds and other non-functional objects
The following objects identified in a previous report were no longer in orbit as at 2359Z on 30 November 2019:								
2017-004B								
The following objects were launched since the last report but did not achieve orbit:								
None.								
Revisions that should be made to previously reported data:								
None.								

Abbreviations: AFETR, United States Air Force Eastern Test Range; SRI: Satish Dhawan Space Centre, India; WLPIS, Wallops Island, United States.