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

Note verbale dated 3 August 2023 from the Permanent Mission of New Zealand to the United Nations (Vienna) addressed to the Secretary-General

The Permanent Mission of New Zealand 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 herewith information concerning objects launched into outer space from New Zealand during the period from January to April 2023 (see annex I) and May to July 2023 (see annex II).¹

¹ The data on the space objects referenced in the annex were entered into the Register of Objects Launched into Outer Space on 17 August 2023.



Annex I

Information on space objects launched by New Zealand, including from New Zealand territory, as well as from outside New Zealand territory on the basis of overseas payload permits authorized by New Zealand, during the period from 1 January to 30 April 2023^{*,}**

I. Objects registered by New Zealand

A. Objects launched by New Zealand during the period from 1 January to 30 April 2023

International designator	National designator	Name	Date and time of the launch (New Zealand time)	Other launching States	Basic orbital parameters				General function of the space object	Additional voluntary information		
					Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		Payload owner or operator	Launch vehicle	Website
2023-041D	NZ-2023-04	Electron Rocket Body	24 March 2023, 2114 hours	United States of America	88.19	41.96	205	164	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com
2023-041E	NZ-2023-05	Electron Kick Stage Rocket Body	24 March 2023, 2114 hours	United States	88.31	42.01	239	143	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com

B. Objects launched outside New Zealand territory, on the basis of overseas payload permits authorized by New Zealand, during the period from 1 January to 30 April 2023

International designator	National designator	Name	Date and time of the launch (UTC)	State of registry	Other launching States	Basic orbital parameters				General function of the space object	Additional voluntary information		
						Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		Payload owner or operator	Launch vehicle	Website
None													

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

** As identified on www.space-track.org.

C. Objects no longer in orbit

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date and time of the launch (New Zealand time)</i>	<i>General function of the space object</i>	<i>Date of re-entry (UTC)</i>
2020-085AG	NZ-2020-33	SpaceBEENZ-1	20 November 2020, 1520 hours	Technology demonstration/ communications	7 March 2023
2020-085AE	NZ-2020-34	SpaceBEENZ-2	20 November 2020, 1520 hours	Technology demonstration/ communications	15 March 2023
2020-085K	NZ-2020-35	SpaceBEENZ-3	20 November 2020, 1520 hours	Technology demonstration/ communications	22 March 2023
2020-085L	NZ-2020-36	SpaceBEENZ-4	20 November 2020, 1520 hours	Technology demonstration/ communications	28 March 2023
2020-085N	NZ-2020-37	SpaceBEENZ-5	20 November 2020, 1520 hours	Technology demonstration /communications	5 April 2023
2020-085P	NZ-2020-38	SpaceBEENZ-6	20 November 2020, 1520 hours	Technology demonstration/ communications	12 April 2023
2022-127C	NZ-2022-68	Electron Rocket Body	8 October 2022, 0609 hours	Rocket body	27 February 2023
2023-041D	NZ-2023-04	Electron Rocket Body	24 March 2023, 2114 hours	Rocket body	8 April 2023
2023-041E	NZ-2023-05	Electron Kick Stage Rocket Body	24 March 2023, 2114 hours	Rocket body	1 April 2023

D. Objects identified in a previous report that remain in orbit but are no longer operational

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date of the launch (UTC)</i>	<i>General function of the space object</i>	<i>Date when space object was no longer functional (UTC)</i>
None					

E. Objects identified in a previous report that have been moved to a disposal orbit

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date of the launch (UTC)</i>	<i>General function of the space object</i>	<i>Geostationary position (degrees East)</i>	<i>Date when space object was moved to a disposal orbit</i>	<i>Physical conditions when space object was moved to a disposal orbit (change in orbit, passivation and other measures recommended in space debris mitigation guidelines)</i>
None							

F. Objects the registration or ownership of which has been transferred from New Zealand to another country

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date of change in supervision (UTC)</i>	<i>Identity of the new owner or operator</i>	<i>Identity of the previous owner or operator</i>	<i>Previous orbital position</i>	<i>New orbital position</i>	<i>Change of function of the space object</i>
None								

G. Objects the registration or ownership of which has been transferred to New Zealand

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date of change in supervision (UTC)</i>	<i>Identity of the new owner or operator</i>	<i>Identity of the previous owner or operator</i>	<i>Previous orbital position</i>	<i>New orbital position</i>	<i>Change of function of the space object</i>
None								

H. Objects the registration or ownership of which has been transferred from one country to another, excluding New Zealand

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date of change in supervision (UTC)</i>	<i>Identity of the new owner or operator</i>	<i>Identity of the previous owner or operator</i>	<i>Previous orbital position</i>	<i>New orbital position</i>	<i>Change of function of the space object</i>
None								

II. Revisions to previously reported information

No revisions.

III. Notification of space objects launched from New Zealand during the period from 1 January to 30 April 2023

The following space objects are not registered by New Zealand.

Objects launched by New Zealand

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date and time of the launch (New Zealand time)</i>	<i>Other launching States</i>	<i>Basic orbital parameters</i>				<i>General function of the space object</i>	<i>Additional voluntary information</i>		
					<i>Nodal period (minutes)</i>	<i>Inclination (degrees)</i>	<i>Apogee (km)</i>	<i>Perigee (km)</i>		<i>Payload owner or operator</i>	<i>Launch vehicle</i>	<i>Website</i>
2023-041B	NZ-2023-02	GLOBAL-19	24 March 2023	United States of America	93.52	42.02	452	442	Satellite imaging	BlackSky Global LLC	Electron	www.blacksky.com
2023-041C	NZ-2023-03	GLOBAL-5	24 March 2023	United States	93.49	42.02	451	439	Satellite imaging	BlackSky Global LLC	Electron	www.blacksky.com

Note: Orbital parameters identified as at 2 May 2023 (source: www.space-track.org).

IV. Objects launched by New Zealand that are no longer in orbit

The following space objects are not registered by New Zealand.

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date and time of the launch (New Zealand time)</i>	<i>Other launching States</i>	<i>General function of the space object</i>	<i>Date of re-entry (UTC)</i>
2018-088D	NZ-2018-010	Irvne-01	11 November 2018, 1650 hours	United States of America	Education	3 February 2023
2018-104J	NZ-2018-019	DaVinci	16 December 2018, 1933 hours	United States	Education	9 February 2023
2019-037A	NZ-2019-017	PAINANI-1	29 June 2019, 1630 hours	United States	Education	14 January 2023
2020-060B	NZ-2020-13	CAPELLA-2	31 August 2020, 1605 hours	United States	Remote sensing	28 February 2023
2021-023H	NZ-2021-10	PHOTON-02	23 March 2021, 1030 hours	United States	Technology demonstration and commercial satellite operations	14 March 2023

Note: Orbital parameters identified as at 2 May 2023 (source: www.space-track.org).

Annex II

Information on space objects launched by New Zealand, including from New Zealand territory, as well as from outside New Zealand territory on the basis of overseas payload permits authorized by New Zealand, during the period from 1 May to 31 July 2023^{*,}**

I. Objects registered by New Zealand

A. Objects launched by New Zealand during the period from 1 May to 31 July 2023

International designator	National designator	Name	Date and time of the launch (New Zealand time)	Other launching States	Basic orbital parameters				General function of the space object	Additional voluntary information		
					Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		Payload owner or operator	Launch vehicle	Website
2023-062B	NZ-2023-07	Electron Rocket Body	8 May 2023, 1300 hours	United States of America	95.43	32.73	548	531	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com
2023-062D	NZ-2023-09	Electron Rocket Body	8 May 2023, 1300 hours	United States	95.57	35.48	554	538	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com
2023-073A	NZ-2023-10	Electron Kick Stage Rocket Body	26 May 2023, 1546 hours	United States	95.51	32.73	551	535	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com
2023-073D	NZ-2023-13	Electron Booster	26 May 2023, 1546 hours	United States	95.42	35.46	555	523	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com
2023-100J	NZ-2023-14	Electron Booster Rocket Body	18 July 2023, 1327 hours	United States	91.5	99.44	500	195	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com
2023-100H	NZ-2023-15	Electron Kick Stage Rocket Body	18 July 2023, 1327 hours	United States	99.55	99.34	1 012	462	Rocket body	Rocket Lab USA	Electron	www.rocketlabusa.com

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

** As identified on www.space-track.org.

B. Objects launched outside New Zealand territory, on the basis of overseas payload permits authorized by New Zealand, during the period from 1 May to 31 July 2023

International designator	National designator	Name	Date and time of the launch (UTC)	State of registry	Other launching States	Basic orbital parameters					Additional voluntary information		
						Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of the space object	Payload owner or operator	Launch vehicle	Website
None													

C. Objects no longer in orbit

International designator	National designator	Name	Date and time of the launch (UTC)	General function of the space object	Date of re-entry (UTC)
2023-041A	NZ-2023-01	Electron Debris	24 March 2023, 0914 hours	Rocket body debris	31 May 2023

D. Objects identified in a previous report that remain in orbit but are no longer operational

International designator	National designator	Name	Date of the launch (UTC)	General function of the space object	Date when space object was no longer functional (UTC)
None					

E. Objects identified in a previous report that have been moved to a disposal orbit

International designator	National designator	Name	Date of the launch (UTC)	General function of the space object	Geostationary position (degrees East)	Date when space object was moved to a disposal orbit	Physical conditions when space object was moved to a disposal orbit (change in orbit, passivation and other measures recommended in space debris mitigation guidelines)
None							

F. Objects the registration or ownership of which has been transferred from New Zealand to another country

International designator	National designator	Name	Date of change in supervision (UTC)	Identity of the new owner or operator	Identity of the previous owner or operator	Previous orbital position	New orbital position	Change of function of the space object
None								

G. Objects the registration or ownership of which has been transferred to New Zealand

International designator	National designator	Name	Date of change in supervision (UTC)	Identity of the new owner or operator	Identity of the previous owner or operator	Previous orbital position	New orbital position	Change of function of the space object
None								

H. Objects the registration or ownership of which has been transferred from one country to another, excluding New Zealand

International designator	National designator	Name	Date of change in supervision (UTC)	Identity of the new owner or operator	Identity of the previous owner or operator	Previous orbital position	New orbital position	Change of function of the space object
None								

II. Revisions to previously reported information

A. Revision to previous notification of space objects launched from New Zealand during the period from 1 May 2022 to 30 December 2022 (ST/SG/SER.E/1089, annex, table A)

The following space object is now registered by New Zealand:

International designator	National designator	Name	Date and time of the launch (New Zealand time)	State of registry	Other launching States	Basic orbital parameters				General function of the space object
						Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	
2022-091C	NZ-2022-72	Electron Kick Stage Rocket Body	4 August 2022, 1700 hours	New Zealand	United States of America	97.45	70.01	640	634	Rocket body

III. Notification of space objects launched from New Zealand during the period from 1 May to 31 July 2023

The following space objects are not registered by New Zealand.

Objects launched by New Zealand

International designator	National designator	Name	Date and time of the launch (New Zealand time)	Other launching States	Basic orbital parameters				General function of the space object	Additional voluntary information		
					Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)		Payload owner or operator	Launch vehicle	Website
2023-062A	NZ-2023-06	Tropics-5	8 May 2023, 1300 hours	United States of America	95.56	32.74	550	536	Scientific purposes	National Aeronautics and Space Administration (NASA)	Electron	-
2023-062C	NZ-2023-08	Tropics-6	8 May 2023, 1300 hours	United States	95.43	32.74	550	529	Scientific purposes	NASA	Electron	-
2023-073B	NZ-2023-11	Tropics-03	26 May 2023, 1546 hours	United States	95.53	32.73	551	537	Scientific purposes	NASA	Electron	-
2023-073C	NZ-2023-12	Tropics-07	26 May 2023, 1546 hours	United States	95.46	32.74	551	551	Scientific purposes	NASA	Electron	-
2023-100C	NZ-2023-16	Starling 1	18 July 2023, 1327 hours	United States	96.15	99.46	578	571	Technology demonstration	NASA	Electron	-
2023-100B	NZ-2023-17	Starling 2	18 July 2023, 1327 hours	United States	96.17	99.46	584	566	Technology demonstration	NASA	Electron	-
2023-100D	NZ-2023-18	Starling 3	18 July 2023, 1327 hours	United States	96.16	99.46	584	566	Technology demonstration	NASA	Electron	-
2023-100A	NZ-2023-19	Starling 4	18 July 2023, 1327 hours	United States	96.16	99.46	583	565	Technology demonstration	NASA	Electron	-
2023-100F	NZ-2023-20	LEMUR2 DEVERILL-MT	18 July 2023, 1327 hours	United States	96.1	99.46	582	562	Communications/ Internet-of-Things (IoT)	Spire Global Inc	Electron	-
2023-100E	NZ-2023-21	LEMUR2 MANO	18 July 2023, 1327 hours	United States	96.13	99.46	583	564	Communications/ IoT	Spire Global Inc	Electron	-
2023-100G	NZ-2023-22	LEO3	18 July 2023, 1327 hours	Canada	105.27	99.44	1 019	995	Technology demonstration	Telesat	Electron	-

Note: Orbital parameters identified as at 26 July 2023 (source: www.space-track.org).

IV. Objects launched by New Zealand that are no longer in orbit

The following space objects are not registered by New Zealand.

<i>International designator</i>	<i>National designator</i>	<i>Name</i>	<i>Date and time of the launch (New Zealand time)</i>	<i>Other launching States</i>	<i>General function of the space object</i>	<i>Date of re-entry (UTC)</i>
2019-026B	NZ-2019-008	SPARC-1	5 May 2019, 1800 hours	United States of America	Technology demonstration	26 June 2023
2019-037C	NZ-2019-011	Global-3	29 June 2019, 1630 hours	United States	Remote sensing	16 May 2023
2019-084A ^a	NZ-2019-28	ALE-2	6 December 2019, 2118 hours	Japan	Educational, entertainment and scientific purposes	19 April 2023

^a Object launched by New Zealand that is no longer in orbit that was not registered last quarter.

Note: Orbital parameters identified as at 26 July 2023 (source: www.space-track.org).