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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****Notes verbales dated 28 February 2020 from the Permanent
Mission of Hungary to the United Nations (Vienna) addressed to
the Secretary-General**

The Permanent Mission of Hungary 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 information concerning the Hungarian space objects ATL-1 and SMOG-P (see annex).¹

¹ The data on the space objects referenced in the annex were entered into the Register of Objects Launched into Outer Space on 3 March 2020.



Annex

Registration data on space objects launched by Hungary*

ATL-1

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

Committee on Space Research international designator	2019-084G
Name of the space object	ATL-1
North American Aerospace Defense Command Catalogue Number (NORAD ID)	44830
State of registry/launching State	Hungary
Date and territory or location of the launch	6 December 2019 at 0818 hours UTC; Mahia Peninsula, New Zealand
Basic orbital parameters	
Epoch	1 January 2020, 1306 hours 35 seconds UTC
Orbit number at epoch	409
Inclination	96.9997 degrees
Right ascension of the ascending node	230.5769 degrees
Eccentricity	0.0040542
Argument of perigee	154.9570 degrees
Mean anomaly	205.3561 degrees
Mean motion	15.65724031 revolutions/day
First derivative of mean motion	2.30910×10^{-4} revolutions/day ²
Second derivative of mean motion	0.00000×10^0 revolutions/day ³
BSTAR drag term	$2.1986 \times 10^{-4} \text{ R}_E^{-1}$
Two-line element	1 44830U 19084G 20001.58791442 .00023091 00000-0 21986-3 0 9998 2 44830 96.9997 230.5769 0040542 154.9570 205.3561 15.65724031 4097
General function of the space object	Testing thin-layer thermal insulator materials of the on-board batteries in the space environment

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	ATL Kft., 2011 Budakalász, Csapás u. 12, Hungary
Website	https://gnd.bme.hu ; www.atl-fo.eu/hu/nyitolap/

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

Launch vehicle	Electron “Running out of Fingers” (Rocket Lab, United States of America)
Two-line element	1 44830U 19084G 20008.04239903 .00025173 00000-0 23530-3 0 9995 2 44830 96.9991 237.0000 0042916 129.4587 231.0812 15.66030837 5106
Detailed function of space object	The primary mission of the ATL-1 satellite is the on-board thermal isolation demonstration in vacuum and microgravity conditions of three different and special thermal insulator materials to regulate the temperature of the batteries
Other information	OSCAR designator: MO-106

SMOG-P

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

Committee on Space Research international designator	2019-084J
Name of the space object	SMOG-P
North American Aerospace Defense Command Catalogue Number (NORAD ID)	44832
State of registry/launching State	Hungary
Date and territory or location of the launch	6 December 2019 at 0818 hours UTC; Mahia Peninsula, New Zealand
Basic orbital parameters	
Epoch	1 January 2020, 0655 hours 04 seconds UTC
Orbit number at epoch	405
Inclination	96.9996 degrees
Right ascension of the ascending node	230.3313 degrees
Eccentricity	0.0040008
Argument of perigee	154.4120 degrees
Mean anomaly	205.9133 degrees
Mean motion	15.65878100 revolutions/day
First derivative of mean motion	2.08150e^{-4} revolutions/day ²
Second derivative of mean motion	0.00000e^0 revolutions/day ³
BSTAR drag term	1.97340e^{-04} R _E ⁻¹
Two-line element	1 44832U 19084J 19340.88883282 -.00000116 00000-0 00000+0 0 9995 2 44832 97.0011 205.0411 0039352 253.4121 124.3709 15.64625184 79
General function of the space object	Digital video broadcasting – terrestrial (DVB-T) band spectrum monitoring

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Department of Broadband Infocommunications and Electromagnetic Theory, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics
Website	https://gnd.bme.hu
Launch vehicle	Electron “Running out of Fingers” (Rocket Lab, United States)
Two-line element	1 44832U 19084J 20008.16699615 .00027046 00000-0 25191-3 0 9996 2 44832 96.9994 237.1335 0040338 129.0488 231.4374 15.66248488 5127
Detailed function of space object	The SMOG-P satellite is a spectrum monitoring system in the DVB-T frequency band in low Earth orbit. This human-made radio frequency radiation, known as electromagnetic smog (hence the name of the satellite) can cause interference in low Earth orbit satellite communications. The secondary mission of the SMOG-P satellite is the measurement of total ionizing dosage with suitable on-board field-effect transistors. This makes it possible to estimate the operational lifetime of the satellite
Other information	OSCAR designator: MO-105
