

Instrument for Lunar Seismic Activity (ILSA) Lander Payload, Chandrayaan 3

Signal Picking Up and suggested method for defining an "Event Identification Number"

ILSA was continuously operated during the mission and the data is available for most of the time. The signals recorded by ILSA could be from (i) known origin (ii) unknown origin. Known sources for signal are:

- 1) Rover Navigation
- 2) Operation of APXS payload located in the rover
- 3) Operation of ChaSTE payload lunar regolith drilling operation
- 4) LP payload deployment

The signals from these sources are defined as 'Correlated signals' and are to be confirmed with the event list and telecommand history of the mission. There are some records which could not be correlated to any known operation and are defined as 'Uncorrelated events'.

While picking up signals from ILSA data, we are suggesting a convention for defining the event identification number. The number is generated based on the UTC associated with the beginning of the signal and an alphabet to indicate if the signal is correlated or uncorrelated. Number will carry a suffix 'C' for correlated events and 'U' for uncorrelated events. Two examples are given below:

Example 1:

Event Id	20230825185842_C
UTC time of the record (approximate)	2023-08-25-18:58:42
Nature of the event	Rover navigation beginning, hence suffix 'C'

Example 2:

Event Id	20230825203358_U
UTC time of the record (approximate)	2023-08-25:20:33:58
Nature of the event	Uncorrelated, hence suffix 'U'

Note to data users: For future discussions, the users of the data are requested to follow this convention. Any new signal identified may also be given the identification number following this convention.

A list of signals and known events is given in the Table below. This is for reference only. The users

are advised to verify the data and mission command history. *Payload team is not responsible for any inaccuracy or errors in the list.*

Date	Event Identification Number	Comments
24-08-2023	20230824115936_C	LP deployment (only in coarse sensor)
25-08-2023	20230825130016_C	APXS
	20230825132926_C	APXS
	20230825134654_U	Uncorrelated
	20230825135407_U	Uncorrelated
	20230825141523_C	APXS
	20230825153341_C	Chaste operation
	20230825153428_C	Chaste operation
	20230825153514_C	Chaste operation
	20230825153541_C	Chaste operation
	20230825162836_U	Uncorrelated
	20230825170645_U	Uncorrelated
	20230825171342_U	Uncorrelated
	20230825172305_U	Uncorrelated
	20230825182610_U	Uncorrelated
	20230825185842_C	Rover Mobility
	20230825190847_C	APXS
	20230825203358_U	Uncorrelated
	20230825233049_U	Uncorrelated
	20230825235047_U	Uncorrelated
26-08-2023	20230826001250_U	Uncorrelated
	20230826022125_U	Uncorrelated
	20230826025512_U	Uncorrelated
	20230826031004_U	Uncorrelated
	20230826040030_U	Uncorrelated
	20230826040708_U	Uncorrelated
	20230826042955_U	Uncorrelated
	20230826045245_U	Uncorrelated
	20230826050523_U	Uncorrelated
	20230826051814_U	Uncorrelated
	20230826053832_U	Uncorrelated
	20230826055708_U	Uncorrelated
	20230826061658_U	Uncorrelated
	20230826073955_U	Uncorrelated
	20230826074702_U	Uncorrelated
	20230826080206_U	Uncorrelated
	20230826092551_U	Uncorrelated

	20230826123040_U	Uncorrelated
	20230826123440_U	Uncorrelated
	20230826144003_C	APXS
	20230826144057_U	Uncorrelated
	20230826153411_C	APXS
	20230826155437_U	Uncorrelated
	20230826212117_U	Uncorrelated
	20230826213507_U	Uncorrelated
	20230826232929_U	Uncorrelated
27-08-2023	20230827003355_U	Uncorrelated
	20230827005854_U	Uncorrelated
	20230827034107_C	Rover Mobility
	20230827035132_C	Rover Mobility
	20230827075037_U	Uncorrelated
	20230827104013_U	Uncorrelated
	20230827111259_U	Uncorrelated
	20230827121916_U	Uncorrelated
	20230827124536_U	Uncorrelated
	20230827130305_U	Uncorrelated
	20230827133616_U	Uncorrelated
	20230827133638_U	Uncorrelated
	20230827133958_U	Uncorrelated
	20230827134132_U	Uncorrelated
	20230827144353_U	Uncorrelated
	20230827151246_U	Uncorrelated
	20230827152834_U	Uncorrelated
	20230827153138_U	Uncorrelated
	20230827153205_U	Uncorrelated
	20230827160331_C	Rover Mobility
	20230827162033_C	Rover Mobility
	20230827162129_C	Rover Mobility
	20230827171738_U	Uncorrelated
	20230827182145_C	APXS
	20230827192757_C	APXS
	20230827195030_U	Uncorrelated
	20230827210132_U	Uncorrelated
	20230827210355_C	Rover Mobility
	20230827215821_U	Uncorrelated
	20230827215907_U	Uncorrelated
	20230827222146_C	APXS
	20230827222218_C	APXS

	20230827232751_C	APXS
	20230827233343_U	Uncorrelated
	20230827233407_U	Uncorrelated
	20230827233519_U	Uncorrelated
28-08-2023	20230828022350_U	Uncorrelated
	20230828030656_U	Uncorrelated
	20230828040249_U	Uncorrelated
	20230828042316_U	Uncorrelated
	20230828042455_U	Uncorrelated
	20230828044927_U	Uncorrelated
	20230828051533_U	Uncorrelated
	20230828054152_U	Uncorrelated
	20230828054503_C	Rover Mobility
	20230828160502_U	Uncorrelated
	20230828201951_C	Rover Mobility
	20230828204622_U	Uncorrelated
	20230828204855_C	APXS
29-08-2023	20230829105828_U	Uncorrelated
	20230829133755_U	Uncorrelated
	20230829142926_U	Uncorrelated
	20230829142936_U	Uncorrelated
	20230829144424_U	Uncorrelated
	20230829154326_C	Rover Mobility
	20230829155801_C	APXS
	20230829163725_C	Rover Mobility
	20230829164515_C	Rover Mobility
	20230829165848_C	Rover Mobility
	20230829160107_C	APXS
	20230829172601_C	APXS
	20230829175933_C	APXS
	20230829184613_C	Rover Mobility
	20230829185514_C	Rover Mobility
	20230829193657_C	APXS
	20230829205745_U	Uncorrelated
	20230829205815_C	APXS
	20230829211642_U	Uncorrelated
	20230829212434_U	Uncorrelated
	20230829215104_C	Rover Mobility
	20230829231823_C	Rover Mobility
	20230829232813_C	Rover Mobility

	20230829235626_C	APXS
30-08-2023	20230830002644_U	Uncorrelated
	20230830002618_U	Uncorrelated
	20230830003612_U	Uncorrelated
	20230830004823_U	Uncorrelated
	20230830005721_U	Uncorrelated
	20230830012110_C	APXS
	20230830014955_U	Uncorrelated
	20230830015931_C	Rover Mobility
	20230830020501_C	Rover Mobility
	20230830055319_C	APXS
	20230830064201_C	Rover Mobility
	20230830064929_C	Rover Mobility
	20230830065359_C	Rover Mobility
	20230830065715_C	Rover Mobility
	20230830070907_U	Uncorrelated
	20230830081214_C	APXS
	20230830104232_C	Rover Mobility
	20230830113804_C	Rover Mobility
	20230830114651_C	Rover Mobility
	20230830121012_C	APXS
	20230830133102_U	Uncorrelated
	20230830140908_C	Rover Mobility
	20230830143718_C	Rover Mobility
	20230830144607_C	Rover Mobility
	20230830145441_U	Uncorrelated
	20230830151328_C	APXS
	20230830173716_U	Uncorrelated
	20230830183448_C	Rover Mobility
	20230830192237_C	Rover Mobility
	20230830193228_C	Rover Mobility
	20230830195332_C	APXS
	20230830203901_U	Uncorrelated
	20230830234426_U	Uncorrelated
31-08-2023	20230831005232_C	Rover mobility
	20230831024034_U	Uncorrelated
	20230831040614_C	APXS
	20230831084712_U	Uncorrelated
	20230831080727_C	Rover Mobility
	20230831122019_C	Rover Mobility
	20230831132320_C	APXS

	20230831163852_C	Rover Mobility
	20230831165113_C	Rover Mobility
	20230831214446_U	Uncorrelated
	20230831215006_U	Rover Mobility
01-09-2023	20230901012317_C	Rover Mobility
	20230901013320_C	Rover Mobility
	20230901013839_C	Rover Mobility
	20230901043801_C	APXS
	20230901052533_C	Rover Mobility
	20230901054216_C	Rover Mobility
	20230901055410_C	Rover Mobility
	20230901055931_C	Rover Mobility
	20230901060452_C	Rover Mobility
	20230901064456_C	APXS
	20230901065715_U	Uncorrelated
	20230901072259_U	Uncorrelated
	20230901073921_U	Uncorrelated
	20230901080415_U	Uncorrelated
	20230901070623_C	APXS
	20230901081151_U	Uncorrelated
	20230901111803_U	Uncorrelated
	20230901125612_C	Rover Mobility
	20230901130455_C	Rover Mobility
	20230901143606_C	APXS
	20230901152646_C	APXS
	20230901153153_U	Uncorrelated
	20230901183030_C	Rover Mobility
	20230901183925_C	Rover Mobility
	20230901184447_C	Rover Mobility
	20230901190422_C	APXS
	20230901221317_C	Rover Mobility
	20230901223215_C	Rover Mobility
	20230901223636_C	Rover Mobility
	20230901225424_C	APXS
	20230901232446_C	APXS
02-09-2023	20230902014655_C	Rover Mobility
	20230902023100_C	APXS
	20230902030958_C	Chaste operation
	20230902032358_C	Chaste operation
	20230902030958_C	Chaste operation
	20230902032358_C	Chaste operation

	20230902054010_U	Uncorrelated
	20230902055127_C	Rover Mobility
	20230902060639_C	Rover Mobility
	20230902063535_C	APXS
	20230902071824_C	APXS
	20230902084151_C	Rover Mobility
	20230902085016_C	Rover Mobility
	20230902085639_C	Rover Mobility
	20230902090201_C	Rover Mobility
	20230902091908_U	Uncorrelated
	20230902235225_U	Uncorrelated
03-09-2023	20230903000556_C	Chaste operation
	20230903000607_C	Chaste operation
	20230903000622_C	Chaste operation
	20230903000638_C	Chaste operation
	20230903000653_C	Chaste operation
	20230903000709_C	Chaste operation
	20230903000724_C	Chaste operation
	20230903000752_C	Chaste operation
	20230903000804_C	Chaste operation
	20230903000824_C	Chaste operation
	20230903000841_C	Chaste operation
	20230903000900_C	Chaste operation
	20230903001018_C	Chaste operation
	20230903001034_C	Chaste operation
	20230903001056_C	Chaste operation
	20230903001825_U	Uncorrelated
	20230903061714_U	Uncorrelated
	20230903123600_U	Uncorrelated
04-09-2023	20230904000050_U	Uncorrelated
	20230904122304_U	Uncorrelated
	20230904153852_U	Uncorrelated
	20230904162617_U	Uncorrelated
	20230904165412_U	Uncorrelated
	20230904172238_U	Uncorrelated
	20230904184324_U	Uncorrelated
	20230904190136_U	Uncorrelated
	20230904190408_U	Uncorrelated