

NSL Ground Station
Description of Research Project License Modification
Exhibit for License Modification Application 0019-EX-CM-2021

The existing ground station license 0211-EX-CM-2020, is requested to be modified to change the list of the satellites supported. All else remains the same.

Added Satellites	License / Application File Number
TAGSAT-2	0124-EX-CN-2021
CAPSAT-1	0079-EX-CN-2021
Sherpa-Fx2 Tag	SAT-STA-20210205-00017
WVSAT	0703-EX-ST-2021

The following satellites were supported under the previous license, and will continue to be supported under the proposed modification.

Satellites Supported by Previous License, and Continuing	License File Number
GEARRS-3	0028-EX-CM-2021
TagSat-1	0657-EX-CN-2020
BroncoSat-1	0746-EX-CN-2020
BSS1	0605-EX-ST-2021
UNITE	0182-EX-CN-2021

The following satellites were supported under the existing license, but are no longer operating.

Satellites No Longer Operating
ThinSat-2
Sherpa-Fx1 Tag
MakerSat-1

Purpose:

The NSL Ground Station (NSLGS) will provide basic telecommands to experimental satellites, supporting positive control of the transmitters on those satellites.

Location and Description:

The ground station is located near Upland, Indiana, about 2 miles south of Taylor University, in a rural area with a mix of forests and fields. It is a 1.5 meter diameter dish antenna, beam width 5.3 degrees, 30 dBi gain, and will operate on 2467 MHz. The elevation will be constrained to 60 degrees or above at all times, to hold Doppler shift within acceptable limits.

Future:

In the longer term, it is expected that development of Globalstar supported receivers for the educational satellites will support this function, and supplant the use of the NSL ground station.