

NSL Ground Station
Description of Research Project License Modification
Exhibit for License Modification Application 0211-EX-CM-2020

The existing ground station license 0537-EX-CR-2020 is requested to be modified to include transmitting to the following cubesats. All else remains the same.

Added Cubesats	License File Number
BeaverCube	2280-EX-ST-2019
GEARRS-3	0312-EX-CN-2019
TagSat-1	0657-EX-CN-2020
BroncoSat-1	0746-EX-CN-2020
ThinSat-2	1478-EX-ST-2020
Sherpa-Fx1 Tag	SAT STA2020-0728-00089

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

Cubesats Supported by Existing License	License File Number
MakerSat-1	0048-EX-CM-2019 to 8/1/21
BSS1	0500-EX-ST-2020 to 12/15/20 1519-EX-ST-2020 Pending

Note that RFTSat, and Weissat, previously supported, has been retired from service.

Purpose:

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

Location and Operation:

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.