

NSL Ground Station Description of Research Project

Note: Updated February 19, 2019 to include RFTSat.

Purpose:

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

The satellite missions / schools currently identified for supported are listed in Table 1. The purposes of research for those missions, which therefore is the research that NSL Ground Station supports, are described in the associated applications.

Mission	School	FCC License / Application Number
MakerSat-1	Northwest Nazarene University	0743-EX-CN-2017
Weissat	The Weiss School	0469-EX-CN-2018
RFTSat	Northwest Nazarene University	1007-EX-CN-2018

Table 1 List of Educational Satellite Missions Supported by NSL Ground Station

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 NSLGS on future educational missions.