

MICROSOFT INFRASTRUCTURE GROUP

Modification of Call Sign E202212

Microsoft Infrastructure requests the addition of a new point of communication to its earth station at Quincy, Washington (call sign E202212): MuSat-1 (call sign WN2XEC), which is the subject of an experimental license application pending before the Commission.¹

This amendment does not reflect any change to the facilities of the Microsoft earth station referenced above. Characteristics such as antenna model, transmit EIRP, and coordinated frequencies/arc remain unchanged. To the extent necessary, attachments and other materials associated with that authorization are incorporated by reference hereto.

Detailed information relating to the MuSat-1 spacecraft is included in the materials submitted in support of that space station application. However, pertinent information from the MuSat-1 space-station application, as well as consolidated technical details relating to earth station operations, are included below for ease of reference.

Uplink Beams:

Antenna size	6.1 m
Antenna Manufacturer/Model	Comtech Ground Systems T355
Center Frequency	2062.5 MHz (primary), 2067.5 MHz (secondary)
Bandwidth	3.5 MHz
Emission Designator	3M5G1D
Polarization	RHCP/LHCP
Transmit Gain	36.5 dBi (at 2.025GHz)
Maximum Total EIRP (All Carriers)	53.5 dBW
Maximum EIRP per Carrier	25.4 dBW
Maximum EIRP Density per Carrier	10.2 dBW/4kHz
Location (NAD83)	Lat. 47° 14' 22.0"N Lon. 119° 53' 5.5"W
Site Elevation (AMSL)	406.05 m

Downlink Beams:

Center Frequency	8385 MHz (primary), 8390 MHz (secondary)
Bandwidth	3.5 MHz
Emission Designator	3M50G1D
Polarization	RHCP/LHCP
Transmit Gain	2 dBi
Maximum EIRP per Carrier	-5.2 dBm

¹ See Application of Muon Space Inc, ELS File No. 1334-EX-CN-2022 (filed November 21, 2022). For the avoidance of doubt, no communications will occur unless and until MuSat-1 is licensed by the Commission.

Maximum EIRP Density per Carrier	-70.6 dBW/Hz
Site Elevation (AMSL)	406.05 m
Rx Location (NAD83)	Lat. 47 ° 14' 22.0 "N Lon. 119 ° 53' 5.5 "W
Rx Site Elevation (AMSL)	406.05 m
Rx Antenna Gain	52.9 dBi (at 8.2125 GHz)

Point(s) of Communication:

Satellite	MuSat-1
Call Sign	WN2XEC
Orbit Type	NGSO
Orbital Parameters	Apogee: 525-575 km Perigee: 525-575 km Inclination: 97-98 degrees LTAN: 13:30 degrees Orbital Period: 95 minutes Argument of Perigee: 0.0 degrees