

Exhibit B - National Telecommunications and Information Administration Space Record Data Form

To facilitate the FCC's coordination efforts, provided in this exhibit is additional information regarding the transmit and receive parameters, as described in Section 9.8.2 of the NTIA Manual, for satellite to ground transmissions.

Satellite to Ground

Satellite Transmitter Data

Transmit Frequency: 8.260 GHz		
Satellite Name: GNOMES-3		
Data Field		Data Answer
Polarization (XAP)		XAP = R
Orientation (XAZ)		XAZ = EC
Antenna Dimension (XAD)		ANTENNA GAIN 5.0 dBi BEAMWIDTH 360 degrees XAD = 5G360B
Type of Satellite		Type = Nongeostationary
For Geostationary		Longitude = N/A
For Nongeostationary (Orbital Data)	Injection Orbit	INCLINATION ANGLE 97.5 degrees, APOGEE IN KILOMETERS 525 km, PERIGEE IN KILOMETERS 525 km, ORBITAL PERIOD IN HOURS 1 AND FRACTIONS OF HOURS IN DECIMAL 66, THE NUMBER OF SATELLITES IN THE SYSTEM 1, ORB = 98.4IN00750AP00750PE001.66H01NRT01
	Nominal Operational Orbit	INCLINATION ANGLE 98.0 degrees, APOGEE IN KILOMETERS 650 km, PERIGEE IN KILOMETERS 650 km, ORBITAL PERIOD IN HOURS 1 AND FRACTIONS OF HOURS IN DECIMAL 63, THE NUMBER OF SATELLITES IN THE SYSTEM 1, ORB = 98.0IN00650AP00650PE001.63H01NRT01

Notes on GNOMES-3 Satellite Receiver Data:

- The GNOMES satellites have no 'dependencies' on foreign signals of opportunity, however the system would see a significant reduction in science data if all GNSS signals are measured.
 - This scenario would result in a need for additional satellites to obtain the same amount of data.
- The GNOMES-3 payload "Pyxis" Receiver* performs on-board scheduling and orbit determination by a navigation engine using GPS observations (Galileo, if needed).
- For science data products, the Pyxis is designed to detect dual-frequency signals from the four major GNSS constellations: GPS, GLONASS, Galileo, and BeiDou.
- Because of the necessary post-processing of the GNSS orbits and blocks to derive the atmospheric characteristics, any deliberate falsification or spoofing of the foreign GNSS signals will be detected by GNOMES-3 and known well before PlanetiQ releases any weather data products.

*[Same "Pyxis" GNSS Receiver as GNOMES-1 (WK2XIU) and GNOMES-2 (WL2XES)]

Earth Station Receiver Data

Svalbard, Norway – SG42	
Data Field	Data Answer
State (RSC)	RSC = Norway
City Name (RAL)	RAL = Svalbard
Latitude (DDMMSS)	Lat = 781354N
Longitude (DDMMSS)	Lon = 0152238E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 484 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters RAD = 37G001B000-360A00484H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Svalbard, Norway – SG43	
Data Field	Data Answer
State (RSC)	RSC = Norway
City Name (RAL)	RAL = Svalbard
Latitude (DDMMSS)	Lat = 781355N
Longitude (DDMMSS)	Lon = 0152231E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 479 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters RAD = 37G001B000-360A00479H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Svalbard, Norway – SG71	
Data Field	Data Answer
State (RSC)	RSC = Norway
City Name (RAL)	RAL = Svalbard
Latitude (DDMMSS)	Lat = 781336N
Longitude (DDMMSS)	Lon = 0152506E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 488 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters RAD = 37G001B000-360A00488H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Svalbard, Norway – SG180	
Data Field	Data Answer
State (RSC)	RSC = Norway
City Name (RAL)	RAL = Svalbard
Latitude (DDMMSS)	Lat = 781340N
Longitude (DDMMSS)	Lon = 0152255E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 491 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters RAD = 37G001B000-360A00491H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Troll, Antarctica – TR4	
Data Field	Data Answer
State (RSC)	RSC = Antarctica
City Name (RAL)	RAL = Troll
Latitude (DDMMSS)	Lat = 720040S
Longitude (DDMMSS)	Lon = 0023313E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 1366 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters RAD = 37G001B000-360A01366H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Troll, Antarctica – TR6	
Data Field	Data Answer
State (RSC)	RSC = Antarctica
City Name (RAL)	RAL = Troll
Latitude (DDMMSS)	Lat = 720037S
Longitude (DDMMSS)	Lon = 0023314E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 1354 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters RAD = 37G001B000-360A01354H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Troll, Antarctica – TR8	
Data Field	Data Answer
State (RSC)	RSC = Antarctica
City Name (RAL)	RAL = Troll
Latitude (DDMMSS)	Lat = 720041S
Longitude (DDMMSS)	Lon = 0023317E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 1379 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters RAD = 37G001B000-360A01379H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Harmon, Guam – 3.7 Meter Dish	
Data Field	Data Answer
State (RSC)	RSC = Guam
City Name (RAL)	RAL = Harmon
Latitude (DDMMSS)	Lat = 133045N
Longitude (DDMMSS)	Lon = 1444929E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 46.5 dBi BEAMWIDTH 0.7 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 45 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 4.5 meters RAD = 47G001B000-360A00045H005
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	

Dubai, UAE – 7.6 Meter Dish	
Data Field	Data Answer
State (RSC)	RSC = United Arab Emirates
City Name (RAL)	RAL = Dubai
Latitude (DDMMSS)	Lat = 245632N
Longitude (DDMMSS)	Lon = 0552052E
Antenna Polarization (RAP)	RAP = R
Antenna Azimuth (RAZ)	RAZ = V05
Antenna Dimensions (RAD)	ANTENNA GAIN 53.4 dBi BEAMWIDTH 0.32 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 64.5 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 11.9 meters RAD = 53G001B000-360A00065H012
FCC notes: 1. Use S-Note S945 2. REM01 *AGN, Cubesat, GNOMES-3	