

## **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 transmitter and receiver parameters, as described in Section 9.8.2 of the NTIA Manual, for both space and Earth stations.

## Satellite to Ground

### Satellite Transmitter Data

<b>Transmit Frequency: 8.260 GHz</b>		
<b>Satellite Name: GNOMES-1</b>		
<b>Data Field</b>	<b>Data Answer</b>	
<b>Polarization (XAP)</b>	XAP = R	
<b>Orientation (XAZ)</b>	XAZ = EC	
<b>Antenna Dimension (XAD)</b>	ANTENNA GAIN 5.0 dBi BEAMWIDTH 360 degrees XAD = 5G360B	
<b>Type of Satellite</b>	Type = Nongeostationary	
<b>For Geostationary</b>	Longitude = N/A	
<b>For Nongeostationary (Orbital Data)</b>	C50-Possible Injection Orbit	INCLINATION ANGLE 97.6 degrees, APOGEE IN KILOMETERS 530 km, PERIGEE IN KILOMETERS 530 km, ORBITAL PERIOD IN HOURS 1 AND FRACTIONS OF HOURS IN DECIMAL 59, THE NUMBER OF SATELLITES IN THE SYSTEM 1,  ORB = 97.6IN00530AP00530PE001.59H01NRT01
	C49-Possible Injection Orbit	INCLINATION ANGLE 37.0 degrees, APOGEE IN KILOMETERS 555 km, PERIGEE IN KILOMETERS 555 km, ORBITAL PERIOD IN HOURS 1 AND FRACTIONS OF HOURS IN DECIMAL 60, THE NUMBER OF SATELLITES IN THE SYSTEM 1,  ORB = 37.0IN00555AP00555PE001.60H01NRT01
	C53-Possible Injection Orbit	INCLINATION ANGLE 98.4 degrees, APOGEE IN KILOMETERS 730 km, PERIGEE IN KILOMETERS 730 km, ORBITAL PERIOD IN HOURS 1 AND FRACTIONS OF HOURS IN DECIMAL 66, THE NUMBER OF SATELLITES IN THE SYSTEM 1,  ORB = 98.4IN00730AP00730PE001.66H01NRT01
	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

**Earth Station Receiver Data**

<b>Svalbard, Norway – SG42</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Norway
<b>City Name (RAL)</b>	RAL = Svalbard
<b>Latitude (DDMMSS)</b>	Lat = 781354 N
<b>Longitude (DDMMSS)</b>	Lon = 0152238 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Svalbard, Norway – SG43</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Norway
<b>City Name (RAL)</b>	RAL = Svalbard
<b>Latitude (DDMMSS)</b>	Lat = 781355 N
<b>Longitude (DDMMSS)</b>	Lon = 0152231 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Svalbard, Norway – SG71</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Norway
<b>City Name (RAL)</b>	RAL = Svalbard
<b>Latitude (DDMMSS)</b>	Lat = 781336 N
<b>Longitude (DDMMSS)</b>	Lon = 0152506 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Svalbard, Norway – SG180</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Norway
<b>City Name (RAL)</b>	RAL = Svalbard
<b>Latitude (DDMMSS)</b>	Lat = 781340 N
<b>Longitude (DDMMSS)</b>	Lon = 0152255 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Troll, Antarctica – TR4</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Antarctica
<b>City Name (RAL)</b>	RAL = Troll
<b>Latitude (DDMMSS)</b>	Lat = 720040 S
<b>Longitude (DDMMSS)</b>	Lon = 0023313 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Troll, Antarctica – TR6</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Antarctica
<b>City Name (RAL)</b>	RAL = Troll
<b>Latitude (DDMMSS)</b>	Lat = 720037 S
<b>Longitude (DDMMSS)</b>	Lon = 0023314 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Troll, Antarctica – TR8</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Antarctica
<b>City Name (RAL)</b>	RAL = Troll
<b>Latitude (DDMMSS)</b>	Lat = 720041 S
<b>Longitude (DDMMSS)</b>	Lon = 0023317 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Hartebeesthoek, South Africa – HA2</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = South Africa
<b>City Name (RAL)</b>	RAL = Hartebeesthoek
<b>Latitude (DDMMSS)</b>	Lat = 255308 S
<b>Longitude (DDMMSS)</b>	Lon = 0274220 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 1543 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters  RAD = 37G001B000-360A01543H005
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Punta Arenas, Chile – PA50</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Chile
<b>City Name (RAL)</b>	RAL = Punta Arenas
<b>Latitude (DDMMSS)</b>	Lat = 525606 S
<b>Longitude (DDMMSS)</b>	Lon = 0705214 W
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	ANTENNA GAIN 36.78 dBi BEAMWIDTH 1.4 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 22 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 5 meters  RAD = 37G001B000-360A00022H005
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Fairbanks, Alaska – UAF2</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Alaska
<b>City Name (RAL)</b>	RAL = Fairbanks
<b>Latitude (DDMMSS)</b>	Lat = 644737 N
<b>Longitude (DDMMSS)</b>	Lon = 1473210 W
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	ANTENNA GAIN 55.0 dBi BEAMWIDTH 1.1 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 144 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 9 meters  RAD = 55G001B000-360A00144H009
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Chitose, Japan – 3.4 Meter Dish</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Japan
<b>City Name (RAL)</b>	RAL = Chitose
<b>Latitude (DDMMSS)</b>	Lat = 36.532 N
<b>Longitude (DDMMSS)</b>	Lon = 140.373 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	ANTENNA GAIN 47.5 dBi BEAMWIDTH 0.73 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 55 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 2 meters  RAD = 48G001B000-360A00055H002
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Harmon, Guam – 3.7 Meter Dish</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Guam
<b>City Name (RAL)</b>	RAL = Harmon
<b>Latitude (DDMMSS)</b>	Lat = 13.5125 N
<b>Longitude (DDMMSS)</b>	Lon = 144.8247 E
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	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
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	



<b>Tahiti, French Polynesia – 3.7 Meter Dish</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Tahiti
<b>City Name (RAL)</b>	RAL = French Polynesia
<b>Latitude (DDMMSS)</b>	Lat = 17.635643 S
<b>Longitude (DDMMSS)</b>	Lon = 149.609625 W
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	ANTENNA GAIN 46.5 dBi BEAMWIDTH 0.7 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 12 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 10.4 meters  RAD = 47G001B000-360A00012H010
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	

<b>Longovilo, Chile – 7.6 Meter Dish</b>	
<b>Data Field</b>	<b>Data Answer</b>
<b>State (RSC)</b>	RSC = Chile
<b>City Name (RAL)</b>	RAL = Longovilo
<b>Latitude (DDMMSS)</b>	Lat = 33.955217 S
<b>Longitude (DDMMSS)</b>	Lon = 71.4 W
<b>Antenna Polarization (RAP)</b>	RAP = R
<b>Antenna Azimuth (RAZ)</b>	RAZ = V05
<b>Antenna Dimensions (RAD)</b>	ANTENNA GAIN 54 dBi BEAMWIDTH 0.32 degrees AZIMUTHAL RANGE 0-360 degrees THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 168 meters, THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 11.9 meters  RAD = 54G001B000-360A00168H012
<b>FCC notes:</b>	
<ol style="list-style-type: none"> <li>1. Use S-Note S945</li> <li>2. REM01 *AGN, Cubesat, GNOMES-1</li> </ol>	