

File Number: **DRAFT-SAT-MOD-20260511-00194**

Call Sign: **S3175**

## S1. Satellite Information

| a. Space Station or Satellite Network Name | b. Orbit Type            | c. Estimated Operational Lifetime of Space Station(s) From Date of Launch (yrs) | d. Will the space station(s) operate on a Common Carrier basis? | e. Application Description                                                                                                                 |
|--------------------------------------------|--------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| USASAT-30V                                 | Non-Geostationary (NGSO) | 5                                                                               | No                                                              | Sidus seeks to modify its authorization to conduct space-to-space operations between LS-4 and LS-5 and the Iridium network. See narrative. |

## S2. Operating Frequency Bands

| a. Type of Service             | b. If a. is Other, provide a service description | c. Satellite Frequency Band (MHz) | d. Satellite Frequency (Lower Band Edge) (MHz) | e. Satellite Frequency (Upper Band Edge) (MHz) | f. Direction of Transmission | g. Non Conforming Indicator |
|--------------------------------|--------------------------------------------------|-----------------------------------|------------------------------------------------|------------------------------------------------|------------------------------|-----------------------------|
| EESS                           |                                                  | 8025 - 8400                       | 8025                                           | 8400                                           | Space-to-Earth (Transmit)    | No                          |
| EESS                           |                                                  | 2025 - 2110                       | 2025                                           | 2110                                           | Earth-to-Space (Receive)     | No                          |
| EESS                           |                                                  | 2200 - 2290                       | 2200                                           | 2290                                           | Space-to-Earth (Transmit)    | No                          |
| OTHER: Other Satellite Service | Inter-Satellite Service                          | Other                             | 1618.725                                       | 1626.5                                         | Space-to-Space (Receive)     | Yes                         |
| OTHER: Other Satellite Service | Inter-Satellite Service                          | Other                             | 1618.725                                       | 1626.5                                         | Space-to-Space (Transmit)    | Yes                         |
| OTHER: Other Satellite Service | ISL (Placeholder due to Schedule S bug)          | Other                             | 1618.725                                       | 1626.5                                         | Space-to-Earth (Transmit)    | Yes                         |
| OTHER: Other Satellite Service | ISS (Placehold due to Schedule S bug)            | Other                             | 1618.725                                       | 1626.5                                         | Earth-to-Space (Receive)     | Yes                         |

## S3. NGSO Orbital Information

| a. Total Number of Simultaneously Operating Satellites in Constellation | b. Total Number of Satellites Deployed During the License Term | c. Orbit Epoch Date | d. Celestial Reference Body | e. If d. is "Other", provide the name of celestial body being referenced | f. Total Number of Orbital Planes |
|-------------------------------------------------------------------------|----------------------------------------------------------------|---------------------|-----------------------------|--------------------------------------------------------------------------|-----------------------------------|
| 6                                                                       | 6                                                              | 2024-01-01          | Earth                       |                                                                          | 3                                 |

### g. Orbital Plane Information

| (i) Orbital Plane No. | (ii) Number of Satellites in Plane | (iii) Inclination Angle (°) | (iv) Inclination Angle Tolerance (+/- °) | (v) Orbital Period (seconds) | (vi) Apogee (km) | (vii) Apogee Tolerance (+/- km) | (viii) Perigee (km) | (ix) Perigee Tolerance (+/- km) | (x) Argument of Perigee (°) | (xi) Right Ascension of Ascending Node (°) | (xii) Right Ascension of Ascending Node Tolerance (+/- °) | (xiii) Active Service Arc Begin Angle with Respect to Ascending Node (°) | (xiv) Active Service Arc End Angle with Respect to Ascending Node (°) | (xv) Is additional info on the active service arc provided in the applicatio | (xvi) Satellite Spacing | (xvii) Phase Angle Spacing (°) | (xviii) First Satellite Initial Phase Angle (°) | (xix) Maximum Orbital Eccentricity |
|-----------------------|------------------------------------|-----------------------------|------------------------------------------|------------------------------|------------------|---------------------------------|---------------------|---------------------------------|-----------------------------|--------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
|-----------------------|------------------------------------|-----------------------------|------------------------------------------|------------------------------|------------------|---------------------------------|---------------------|---------------------------------|-----------------------------|--------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------------|--------------------------------|-------------------------------------------------|------------------------------------|

|   |   |      |    |       |     |    |     |    |   |     |     |     |    | n? |               |     |   |  |
|---|---|------|----|-------|-----|----|-----|----|---|-----|-----|-----|----|----|---------------|-----|---|--|
| 1 | 2 | 45   | 10 | 5,708 | 525 | 75 | 525 | 75 | 0 | 0   | 180 | -55 | 55 | No | Evenly-Spaced | 180 | 0 |  |
| 2 | 2 | 97.5 | 2  | 5,708 | 525 | 75 | 525 | 75 | 0 | 195 | 180 | -90 | 90 | No | Evenly-Spaced | 180 | 0 |  |
| 3 | 2 | 97.5 | 2  | 5,708 | 525 | 75 | 525 | 75 | 0 | 195 | 180 | -90 | 90 | No | Evenly-Spaced | 180 | 0 |  |

#### h. Initial Phase Angle Information

| (i) Orbital Plane No. | (i) Satellite No. | (ii) Initial Phase Angle (°) |
|-----------------------|-------------------|------------------------------|
| 1                     | 1                 | 0                            |
| 1                     | 2                 | 180                          |
| 2                     | 1                 | 0                            |
| 2                     | 2                 | 180                          |
| 3                     | 1                 | 0                            |
| 3                     | 2                 | 180                          |

### S4. Earth-to-Space (Receive) Beams

|                                                                                |                              |                                                                                 |                                                |                                               |                   |                              |
|--------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|-------------------|------------------------------|
| a. Beam ID:                                                                    | SUP                          | n. Beam Peak Flux Density at Command Threshold (dBW/m²):                        |                                                |                                               |                   |                              |
| b. Beam Frequency (Lower Band Edge) (MHz):                                     | 2025                         | o. Peak Isotropic Antenna Gain (dBi):                                           | 6.5                                            |                                               |                   |                              |
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | 2071.2                       | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              |                                                |                                               |                   |                              |
| d. Polarization:                                                               | RHCP                         | q. Antenna Pointing Error (°):                                                  | 1                                              |                                               |                   |                              |
| e. Can the space station vary the channel bandwidth with on-board processing?: | Yes                          | r. Antenna Rotational Error (°):                                                | 1                                              |                                               |                   |                              |
| f. Is this a command beam? (Check box if Yes):                                 | No                           | s. Will a GIMS container file containing all antenna contour data be provided?: | No                                             |                                               |                   |                              |
| g. Is the beam shapeable? (Check box if Yes):                                  | No                           | t. Under what rules will the associated antenna contours be submitted?:         | 25.114(c)(4)(vi)(D) (NGSO)                     |                                               |                   |                              |
| h. Is the beam steerable? (Check box if Yes):                                  | Yes                          | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                                |                                               |                   |                              |
| i. Is the beam fed into transponders? (Check box if Yes):                      | No                           | v. Are all space stations in the NGSO constellation identical?:                 | Yes                                            |                                               |                   |                              |
| j. Maximum G/T (dB/K):                                                         | -21.1                        | w. What information will be provided with the predicted antenna gain contours?: |                                                |                                               |                   |                              |
| k. Minimum G/T (dB/K):                                                         |                              |                                                                                 |                                                |                                               |                   |                              |
| l. Maximum Saturation Flux Density (dBW/m²):                                   | -68.3                        |                                                                                 |                                                |                                               |                   |                              |
| m. Minimum Saturation Flux Density (dBW/m²):                                   | -105.3                       |                                                                                 |                                                |                                               |                   |                              |
| x. Receive Channels                                                            |                              |                                                                                 |                                                |                                               |                   |                              |
| (i) Channel ID                                                                 | (ii) Channel Bandwidth (MHz) | (iii) Center Frequency (MHz)                                                    | (iv) Channel Frequency (Lower Band Edge) (MHz) | (v) Channel Frequency (Upper Band Edge) (MHz) | (vi) Channel Type | (vii) Point of Communication |
| SU3                                                                            | 0.7                          | 2070.85                                                                         | 2070.5                                         | 2071.2                                        | TT&C              |                              |
| SU2                                                                            | 0.7                          | 2027.65                                                                         | 2027.3                                         | 2028                                          | TT&C              |                              |
| SU1                                                                            | 0.7                          | 2025.35                                                                         | 2025                                           | 2025.7                                        | TT&C              |                              |

|                                            |             |                                                          |          |
|--------------------------------------------|-------------|----------------------------------------------------------|----------|
| a. Beam ID:                                | <b>SUP2</b> | n. Beam Peak Flux Density at Command Threshold (dBW/m²): |          |
| b. Beam Frequency (Lower Band Edge) (MHz): | <b>2025</b> | o. Peak Isotropic Antenna Gain (dBi):                    | <b>5</b> |

|                                                                                |               |                                                                                 |                                   |
|--------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------|-----------------------------------|
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | <b>2071.2</b> | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              |                                   |
| d. Polarization:                                                               | <b>RHCP</b>   | q. Antenna Pointing Error (°):                                                  | <b>1</b>                          |
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b>    | r. Antenna Rotational Error (°):                                                | <b>1</b>                          |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>     | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>     | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(D) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>Yes</b>    | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>     | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum G/T (dB/K):                                                         | <b>-22.6</b>  | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Minimum G/T (dB/K):                                                         |               |                                                                                 |                                   |
| l. Maximum Saturation Flux Density (dBW/m²):                                   | <b>-68.3</b>  |                                                                                 |                                   |
| m. Minimum Saturation Flux Density (dBW/m²):                                   | <b>-105.3</b> |                                                                                 |                                   |

| <b>x. Receive Channels</b> |                                     |                                     |                                                       |                                                      |                          |                                     |
|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------------------------|------------------------------------------------------|--------------------------|-------------------------------------|
| <b>(i) Channel ID</b>      | <b>(ii) Channel Bandwidth (MHz)</b> | <b>(iii) Center Frequency (MHz)</b> | <b>(iv) Channel Frequency (Lower Band Edge) (MHz)</b> | <b>(v) Channel Frequency (Upper Band Edge) (MHz)</b> | <b>(vi) Channel Type</b> | <b>(vii) Point of Communication</b> |
| SU1                        | 0.7                                 | 2025.35                             | 2025                                                  | 2025.7                                               | TT&C                     |                                     |
| SU2                        | 0.7                                 | 2027.65                             | 2027.3                                                | 2028                                                 | TT&C                     |                                     |
| SU3                        | 0.7                                 | 2070.85                             | 2070.5                                                | 2071.2                                               | TT&C                     |                                     |

|                                                                                |                 |                                                                                 |                                   |
|--------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------|-----------------------------------|
| a. Beam ID:                                                                    | <b>IRDR</b>     | n. Beam Peak Flux Density at Command Threshold (dBW/m²):                        |                                   |
| b. Beam Frequency (Lower Band Edge) (MHz):                                     | <b>1618.725</b> | o. Peak Isotropic Antenna Gain (dBi):                                           | <b>4.5</b>                        |
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | <b>1626.5</b>   | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              |                                   |
| d. Polarization:                                                               | <b>RHCP</b>     | q. Antenna Pointing Error (°):                                                  | <b>0.1</b>                        |
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b>      | r. Antenna Rotational Error (°):                                                | <b>0.1</b>                        |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>       | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>       | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(B) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>No</b>       | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>       | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum G/T (dB/K):                                                         | <b>-17.3</b>    | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Minimum G/T (dB/K):                                                         |                 |                                                                                 |                                   |
| l. Maximum Saturation Flux Density (dBW/m²):                                   | <b>-998</b>     |                                                                                 |                                   |
| m. Minimum Saturation Flux Density (dBW/m²):                                   | <b>-999</b>     |                                                                                 |                                   |

| <b>x. Receive Channels</b> |                                     |                                     |                                                       |                                                      |                          |                                     |
|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------------------------|------------------------------------------------------|--------------------------|-------------------------------------|
| <b>(i) Channel ID</b>      | <b>(ii) Channel Bandwidth (MHz)</b> | <b>(iii) Center Frequency (MHz)</b> | <b>(iv) Channel Frequency (Lower Band Edge) (MHz)</b> | <b>(v) Channel Frequency (Upper Band Edge) (MHz)</b> | <b>(vi) Channel Type</b> | <b>(vii) Point of Communication</b> |
| IR01                       | 0.042                               | 1622.6125                           | 1622.5915                                             | 1622.6335                                            | TT&C                     |                                     |

## S5. Space-to-Earth (Transmit) Beams

|                                            |               |                                                          |          |
|--------------------------------------------|---------------|----------------------------------------------------------|----------|
| a. Beam ID:                                | <b>SDW2</b>   | n. Beam Peak Flux Density at Command Threshold (dBW/m²): |          |
| b. Beam Frequency (Lower Band Edge) (MHz): | <b>2200</b>   | o. Peak Isotropic Antenna Gain (dBi):                    | <b>5</b> |
| c. Beam Frequency (Upper Band Edge) (MHz): | <b>2284.5</b> | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):       |          |
| d. Polarization:                           | <b>RHCP</b>   | q. Antenna Pointing Error (°):                           | <b>1</b> |

|                                                                                |            |                                                                                 |                                   |
|--------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------|-----------------------------------|
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b> | r. Antenna Rotational Error (°):                                                | <b>1</b>                          |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>  | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>  | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(D) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>Yes</b> | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>  | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum Transmit EIRP Density (dBW/Ref BW):                                 | <b>-59</b> | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Maximum Transmit EIRP (dBW):                                                | <b>5</b>   |                                                                                 |                                   |

| x. Transmit Channels                           |                                                 |                                |                              |                      |                                                |                          |                                               |                         |                                     |                                      |                                  |                                 |                                        |
|------------------------------------------------|-------------------------------------------------|--------------------------------|------------------------------|----------------------|------------------------------------------------|--------------------------|-----------------------------------------------|-------------------------|-------------------------------------|--------------------------------------|----------------------------------|---------------------------------|----------------------------------------|
| (i) Channel ID                                 |                                                 | (ii) Channel Bandwidth (MHz)   | (iii) Center Frequency (MHz) |                      | (iv) Channel Frequency (Lower Band Edge) (MHz) |                          | (v) Channel Frequency (Upper Band Edge) (MHz) |                         | (vi) Channel Type                   |                                      | (vii) Point of Communication     |                                 |                                        |
| SDW3                                           |                                                 | 2.5                            | 2283.25                      |                      | 2282                                           |                          | 2284.5                                        |                         | TT&C                                |                                      |                                  |                                 |                                        |
| SDW1                                           |                                                 | 2.5                            | 2201.25                      |                      | 2200                                           |                          | 2202.5                                        |                         | TT&C                                |                                      |                                  |                                 |                                        |
| SDW2                                           |                                                 | 2.5                            | 2262.25                      |                      | 2261                                           |                          | 2263.5                                        |                         | TT&C                                |                                      |                                  |                                 |                                        |
| y. Max. Power-Flux Densities                   |                                                 |                                |                              |                      |                                                |                          |                                               |                         |                                     |                                      |                                  |                                 |                                        |
|                                                |                                                 |                                | Angles of Arrival PFD        |                      |                                                |                          |                                               |                         | Geographic Region PFD               |                                      |                                  |                                 |                                        |
| (i) Beam Sub-Frequency (Lower Band Edge) (MHz) | (ii) Beam Sub-Frequency (Upper Band Edge) (MHz) | (iii) Reference Bandwidth (BW) | (iv) 0-2° (dBW/m²/BW)        | (v) 2-5° (dBW/m²/BW) | (vi) 5-15° (dBW/m²/BW)                         | (vii) 15-20° (dBW/m²/BW) | (viii) 20-25° (dBW/m²/BW)                     | (ix) 25-90° (dBW/m²/BW) | (x) Southeastern Region (dBW/m²/BW) | (xi) Northeastern Region (dBW/m²/BW) | (xii) Western Region (dBW/m²/BW) | (xiii) Other Region (dBW/m²/BW) | (xiv) Energy Dispersal Bandwidth (kHz) |
|                                                |                                                 | 4 kHz                          | -157.9                       | -157.9               | -153.9                                         | -152.2                   | -150.8                                        | -144.2                  |                                     |                                      |                                  |                                 |                                        |

|                                                                                |               |                                                                                 |                                   |
|--------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------|-----------------------------------|
| a. Beam ID:                                                                    | <b>SDW</b>    | n. Beam Peak Flux Density at Command Threshold (dBW/m²):                        |                                   |
| b. Beam Frequency (Lower Band Edge) (MHz):                                     | <b>2200</b>   | o. Peak Isotropic Antenna Gain (dBi):                                           | <b>6.5</b>                        |
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | <b>2284.5</b> | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              |                                   |
| d. Polarization:                                                               | <b>RHCP</b>   | q. Antenna Pointing Error (°):                                                  | <b>1</b>                          |
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b>    | r. Antenna Rotational Error (°):                                                | <b>1</b>                          |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>     | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>     | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(D) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>Yes</b>    | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>     | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum Transmit EIRP Density (dBW/Ref BW):                                 | <b>-57.5</b>  | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Maximum Transmit EIRP (dBW):                                                | <b>6.5</b>    |                                                                                 |                                   |

| x. Transmit Channels                           |                                                 |                                |                              |                      |                                                |                          |                                               |                         |                                     |                                      |                                  |                                 |                                        |
|------------------------------------------------|-------------------------------------------------|--------------------------------|------------------------------|----------------------|------------------------------------------------|--------------------------|-----------------------------------------------|-------------------------|-------------------------------------|--------------------------------------|----------------------------------|---------------------------------|----------------------------------------|
| (i) Channel ID                                 |                                                 | (ii) Channel Bandwidth (MHz)   | (iii) Center Frequency (MHz) |                      | (iv) Channel Frequency (Lower Band Edge) (MHz) |                          | (v) Channel Frequency (Upper Band Edge) (MHz) |                         | (vi) Channel Type                   |                                      | (vii) Point of Communication     |                                 |                                        |
| SDW2                                           |                                                 | 2.5                            | 2262.25                      |                      | 2261                                           |                          | 2263.5                                        |                         | TT&C                                |                                      |                                  |                                 |                                        |
| SDW1                                           |                                                 | 2.5                            | 2201.25                      |                      | 2200                                           |                          | 2202.5                                        |                         | TT&C                                |                                      |                                  |                                 |                                        |
| SDW3                                           |                                                 | 2.5                            | 2283.25                      |                      | 2282                                           |                          | 2284.5                                        |                         | TT&C                                |                                      |                                  |                                 |                                        |
| y. Max. Power-Flux Densities                   |                                                 |                                |                              |                      |                                                |                          |                                               |                         |                                     |                                      |                                  |                                 |                                        |
|                                                |                                                 |                                | Angles of Arrival PFD        |                      |                                                |                          |                                               |                         | Geographic Region PFD               |                                      |                                  |                                 |                                        |
| (i) Beam Sub-Frequency (Lower Band Edge) (MHz) | (ii) Beam Sub-Frequency (Upper Band Edge) (MHz) | (iii) Reference Bandwidth (BW) | (iv) 0-2° (dBW/m²/BW)        | (v) 2-5° (dBW/m²/BW) | (vi) 5-15° (dBW/m²/BW)                         | (vii) 15-20° (dBW/m²/BW) | (viii) 20-25° (dBW/m²/BW)                     | (ix) 25-90° (dBW/m²/BW) | (x) Southeastern Region (dBW/m²/BW) | (xi) Northeastern Region (dBW/m²/BW) | (xii) Western Region (dBW/m²/BW) | (xiii) Other Region (dBW/m²/BW) | (xiv) Energy Dispersal Bandwidth (kHz) |

|  |  |       |        |        |        |        |      |        |  |  |  |  |  |
|--|--|-------|--------|--------|--------|--------|------|--------|--|--|--|--|--|
|  |  | 4 kHz | -157.6 | -157.6 | -153.9 | -152.3 | -151 | -144.5 |  |  |  |  |  |
|--|--|-------|--------|--------|--------|--------|------|--------|--|--|--|--|--|

|                                                                                |              |                                                                                 |                                   |
|--------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------|-----------------------------------|
| a. Beam ID:                                                                    | <b>XDW</b>   | n. Beam Peak Flux Density at Command Threshold (dBW/m²):                        |                                   |
| b. Beam Frequency (Lower Band Edge) (MHz):                                     | <b>8025</b>  | o. Peak Isotropic Antenna Gain (dBi):                                           | <b>12</b>                         |
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | <b>8400</b>  | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              |                                   |
| d. Polarization:                                                               | <b>RHCP</b>  | q. Antenna Pointing Error (°):                                                  | <b>1</b>                          |
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b>   | r. Antenna Rotational Error (°):                                                | <b>1</b>                          |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>    | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>    | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(D) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>Yes</b>   | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>    | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum Transmit EIRP Density (dBW/Ref BW):                                 | <b>-61.2</b> | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Maximum Transmit EIRP (dBW):                                                | <b>15</b>    |                                                                                 |                                   |

| x. Transmit Channels |                              |                              |                                                |                                               |                   |                              |
|----------------------|------------------------------|------------------------------|------------------------------------------------|-----------------------------------------------|-------------------|------------------------------|
| (i) Channel ID       | (ii) Channel Bandwidth (MHz) | (iii) Center Frequency (MHz) | (iv) Channel Frequency (Lower Band Edge) (MHz) | (v) Channel Frequency (Upper Band Edge) (MHz) | (vi) Channel Type | (vii) Point of Communication |
| XDW1                 | 42                           | 8046                         | 8025                                           | 8067                                          | Service Link      |                              |
| XDW2                 | 42                           | 8379                         | 8358                                           | 8400                                          | Service Link      |                              |

| y. Max. Power-Flux Densities                   |                                                 |                                |                       |                      |                        |                          |                           |                         |                                     |                                      |                                  |                                 |                                        |
|------------------------------------------------|-------------------------------------------------|--------------------------------|-----------------------|----------------------|------------------------|--------------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------------|----------------------------------|---------------------------------|----------------------------------------|
|                                                |                                                 |                                | Angles of Arrival PFD |                      |                        |                          |                           |                         | Geographic Region PFD               |                                      |                                  |                                 |                                        |
| (i) Beam Sub-Frequency (Lower Band Edge) (MHz) | (ii) Beam Sub-Frequency (Upper Band Edge) (MHz) | (iii) Reference Bandwidth (BW) | (iv) 0-2° (dBW/m²/BW) | (v) 2-5° (dBW/m²/BW) | (vi) 5-15° (dBW/m²/BW) | (vii) 15-20° (dBW/m²/BW) | (viii) 20-25° (dBW/m²/BW) | (ix) 25-90° (dBW/m²/BW) | (x) Southeastern Region (dBW/m²/BW) | (xi) Northeastern Region (dBW/m²/BW) | (xii) Western Region (dBW/m²/BW) | (xiii) Other Region (dBW/m²/BW) | (xiv) Energy Dispersal Bandwidth (kHz) |
|                                                |                                                 | 4 kHz                          | -159.7                | -159.7               | -155.5                 | -153.9                   | -152.4                    | -145.7                  |                                     |                                      |                                  |                                 |                                        |

|                                                                                |                 |                                                                                 |                                   |
|--------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------|-----------------------------------|
| a. Beam ID:                                                                    | <b>IRDT</b>     | n. Beam Peak Flux Density at Command Threshold (dBW/m²):                        |                                   |
| b. Beam Frequency (Lower Band Edge) (MHz):                                     | <b>1618.725</b> | o. Peak Isotropic Antenna Gain (dBi):                                           | <b>4.5</b>                        |
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | <b>1626.5</b>   | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              |                                   |
| d. Polarization:                                                               | <b>RHCP</b>     | q. Antenna Pointing Error (°):                                                  | <b>1</b>                          |
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b>      | r. Antenna Rotational Error (°):                                                | <b>1</b>                          |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>       | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>       | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(B) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>No</b>       | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>       | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum Transmit EIRP Density (dBW/Ref BW):                                 | <b>-40.7</b>    | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Maximum Transmit EIRP (dBW):                                                | <b>5.5</b>      |                                                                                 |                                   |

| x. Transmit Channels |                              |                              |                                                |                                               |                   |                              |
|----------------------|------------------------------|------------------------------|------------------------------------------------|-----------------------------------------------|-------------------|------------------------------|
| (i) Channel ID       | (ii) Channel Bandwidth (MHz) | (iii) Center Frequency (MHz) | (iv) Channel Frequency (Lower Band Edge) (MHz) | (v) Channel Frequency (Upper Band Edge) (MHz) | (vi) Channel Type | (vii) Point of Communication |
| IT01                 | 0.042                        | 1622.6125                    | 1622.5915                                      | 1622.6335                                     | TT&C              |                              |

| y. Max. Power-Flux Densities |                |                 |                       |          |            |              |               |             |                       |      |               |              |              |
|------------------------------|----------------|-----------------|-----------------------|----------|------------|--------------|---------------|-------------|-----------------------|------|---------------|--------------|--------------|
|                              |                |                 | Angles of Arrival PFD |          |            |              |               |             | Geographic Region PFD |      |               |              |              |
| (i) Beam Sub-                | (ii) Beam Sub- | (iii) Reference | (iv) 0-2°             | (v) 2-5° | (vi) 5-15° | (vii) 15-20° | (viii) 20-25° | (ix) 25-90° | (x)                   | (xi) | (xii) Western | (xiii) Other | (xiv) Energy |

| Frequency (Lower Band Edge) (MHz) | Frequency (Upper Band Edge) (MHz) | Bandwidth (BW) | (dBW/m <sup>2</sup> /BW) | (dBW/m <sup>2</sup> /BW) | (dBW/m <sup>2</sup> /BW) | (dBW/m <sup>2</sup> /BW) | (dBW/m <sup>2</sup> /BW) | (dBW/m <sup>2</sup> /BW) | Southeastern Region (dBW/m <sup>2</sup> /BW) | Northeastern Region (dBW/m <sup>2</sup> /BW) | Region (dBW/m <sup>2</sup> /BW) | Region (dBW/m <sup>2</sup> /BW) | Dispersal Bandwidth (kHz) |
|-----------------------------------|-----------------------------------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------------------------|----------------------------------------------|---------------------------------|---------------------------------|---------------------------|
|                                   |                                   | 4 kHz          | -142.7                   | -142.7                   | -139.6                   | -138.2                   | -137                     | -130.8                   |                                              |                                              |                                 |                                 |                           |

## S6. Space-to-Space (Receive) Beams

|                                                                                |                 |                                                                                 |                                   |
|--------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------|-----------------------------------|
| a. Beam ID:                                                                    | <b>IRDR</b>     | n. Beam Peak Flux Density at Command Threshold (dBW/m <sup>2</sup> ):           |                                   |
| b. Beam Frequency (Lower Band Edge) (MHz):                                     | <b>1618.725</b> | o. Peak Isotropic Antenna Gain (dBi):                                           | <b>4.5</b>                        |
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | <b>1626.5</b>   | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              |                                   |
| d. Polarization:                                                               | <b>RHCP</b>     | q. Antenna Pointing Error (°):                                                  | <b>1</b>                          |
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b>      | r. Antenna Rotational Error (°):                                                | <b>1</b>                          |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>       | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>       | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(B) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>No</b>       | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>       | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum G/T (dB/K):                                                         | <b>-17.3</b>    | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Minimum G/T (dB/K):                                                         |                 |                                                                                 |                                   |
| l. Maximum Saturation Flux Density (dBW/m <sup>2</sup> ):                      |                 |                                                                                 |                                   |
| m. Minimum Saturation Flux Density (dBW/m <sup>2</sup> ):                      |                 |                                                                                 |                                   |

## S7. Space-to-Space (Transmit) Beams

|                                                                                |                 |                                                                                 |                                   |
|--------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------|-----------------------------------|
| a. Beam ID:                                                                    | <b>IRDT</b>     | m. Beam Peak Flux Density at Command Threshold (dBW/m <sup>2</sup> ):           |                                   |
| b. Beam Frequency (Lower Band Edge) (MHz):                                     | <b>1618.725</b> | o. Peak Isotropic Antenna Gain (dBi):                                           | <b>4.5</b>                        |
| c. Beam Frequency (Upper Band Edge) (MHz):                                     | <b>1626.5</b>   | p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):                              | <b>1.5</b>                        |
| d. Polarization:                                                               | <b>RHCP</b>     | q. Antenna Pointing Error (°):                                                  | <b>1</b>                          |
| e. Can the space station vary the channel bandwidth with on-board processing?: | <b>Yes</b>      | r. Antenna Rotational Error (°):                                                | <b>1</b>                          |
| f. Is this a command beam? (Check box if Yes):                                 | <b>No</b>       | s. Will a GIMS container file containing all antenna contour data be provided?: | <b>No</b>                         |
| g. Is the beam shapeable? (Check box if Yes):                                  | <b>No</b>       | t. Under what rules will the associated antenna contours be submitted?:         | <b>25.114(c)(4)(vi)(B) (NGSO)</b> |
| h. Is the beam steerable? (Check box if Yes):                                  | <b>No</b>       | u. Provide a list of each orbital plane in which this antenna beam is used.:    |                                   |
| i. Is the beam fed into transponders? (Check box if Yes):                      | <b>No</b>       | v. Are all space stations in the NGSO constellation identical?:                 | <b>Yes</b>                        |
| j. Maximum Transmit EIRP Density (dBW/Ref BW):                                 | <b>-40.7</b>    | w. What information will be provided with the predicted antenna gain contours?: |                                   |
| k. Maximum Transmit EIRP (dBW):                                                | <b>5.5</b>      |                                                                                 |                                   |

## S8. Attachments

| Beam ID | Direction of Transmission | (i) Document Type | (ii) If Document Type is "Other", provide short description | (iii) File Name |
|---------|---------------------------|-------------------|-------------------------------------------------------------|-----------------|
| IRDR    | Space-to-Space (Receive)  | Other             | ISL Beam Peak Gain and 3 dB Beamwidth                       | IRDR.txt        |

|      |                           |                                       |                                       |          |
|------|---------------------------|---------------------------------------|---------------------------------------|----------|
| IRDT | Space-to-Space (Transmit) | Other                                 | ISL Beam Peak Gain and 3 dB Beamwidth | IRDT.txt |
| SDW  | Space-to-Earth (Transmit) | Transmit Antenna Gain Contour Diagram |                                       | SDW.zip  |
| SDW  | Space-to-Earth (Transmit) | Service Area Description              |                                       | SDW.txt  |
| SDW2 | Space-to-Earth (Transmit) | Transmit Antenna Gain Contour Diagram |                                       | SDW2.zip |
| SDW2 | Space-to-Earth (Transmit) | Service Area Description              |                                       | SDW2.txt |
| SUP  | Earth-to-Space (Receive)  | Receive Antenna Gain Contour Diagram  |                                       | SUP.zip  |
| SUP  | Earth-to-Space (Receive)  | Service Area Description              |                                       | SUP.txt  |
| SUP2 | Earth-to-Space (Receive)  | Service Area Description              |                                       | SDW2.txt |
| SUP2 | Earth-to-Space (Receive)  | Receive Antenna Gain Contour Diagram  |                                       | SUP2.zip |
| XDW  | Space-to-Earth (Transmit) | Service Area Description              |                                       | XDW.txt  |
| XDW  | Space-to-Earth (Transmit) | Transmit Antenna Gain Contour Diagram |                                       | XDW.zip  |