

## SPECIFIC INSTRUCTIONS FOR SCHEDULE S

**SCHEDULE S**, along with the FCC 312 Main Form, is to be completed when:

- Applying for a license for a new space station;
- Amending a pending space station application;
- Applying for a license for a replacement satellite;
- Applying for a modification of a space station authorization, other than modifications filed for fleet management purposes under Section 25.118(e) of the Commission's rules; or
- Filing a "letter of intent," Petition for Declaratory Ruling, or an earth station application requesting new authority to serve the United States with a non-U.S.-licensed space station.

### PURPOSE OF FILING

Schedule S is used for space station filings that do not involve Assignments of License or Transfers of Control. It collects most of the technical and operational information pertaining to the space station. Applicants must complete Schedule S and the Main Form when filing for licenses for new space stations, amendments to pending space station applications that include changes to the previously- submitted Schedule S, modifications to existing space station authorizations that include changes to the Schedule S on file, and requests for new authority to use non-U.S. licensed satellites to provide service in the United States.

Note that Schedule S does not collect all of the information required by the Commission's rules with respect to space stations. In addition to the information required in this form, the applicant is required to provide all the other information specified in Section 25.114 of the Commission's rules, 47 C.F.R. § 25.114. This information, as well as any other information that the applicant wishes to provide in connection with the application, may be attached as exhibits to the application (Form 312).

## FILING PROCEDURES

Note: Applicants may draft their Schedule S data prior to submitting the Form 312, but a Form 312 must be submitted via MyIBFS (<http://licensing.fcc.gov/myibfs>) prior to final submission of the Schedule S.

1. Log into the Schedule S software (::insert link when available::)
2. Begin creating/editing a Schedule S
  - a. Click the “Start a New Schedule S” button to begin a new Schedule S; or
  - b. Select a Schedule S from your dashboard list to modify or amend an existing Schedule S
3. **Filing Description:** Enter a brief description of your system to be used in the application list on the dashboard. Please do not use “See Attached.” (Limited to 255 characters)
4. **Satellite Information:** All fields are required.
  - a. **Select Orbit Type:** Select either geostationary orbit (GSO) or non-geostationary orbit (NGSO). Upon save, the navigation bar on the right will change to reflect the GSO or NGSO path.
  - b. **Space Station or Satellite Network Name:** Fill in the commonly recognized domestic or international satellite name. (Limited to 30 characters)
  - c. **Estimated Lifetime of Satellite(s) From Date of Launch:** Fill in the life expectancy for the satellite(s) upon launch. (Value entered must be between 0 and 30)
  - d. **Will the space station(s) operate on a Common Carrier basis?:** Select either Yes or No.
  - e. Clicking the “Save & Continue” button on the Satellite Information screen moves to the Operating Frequency Bands screen.
5. **Operating Frequency Bands:** This screen is the summary page for this data element. In order to add frequencies to the list of operating frequencies, click the “Add Frequency Band” button. In order to complete this section, at least one transmit frequency band and one receive frequency band need to be listed.
  - a. **Add/Edit Operating Frequency Bands:**
    - i. **Nature of Service:** From the drop down list, select the satellite service type, or select “Other Satellite Service (please specify)”. If “Other Satellite Service” is selected, provide a description of the particular service being provided (Limited to 60 characters), and enter the lower and upper limits of the operating frequency range (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123)).
    - ii. **Frequency Band:** A frequency band drop down list will appear after the nature of service (or satellite service) is selected from the drop down list. Select a frequency range from the drop down list, or select “Other” and be prompted to enter the lower and upper limits of the proposed operating frequencies in MHz. (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123).)
    - iii. **Mode Type:** Select mode type as either Transmit or Receive for each frequency range.
    - iv. Clicking the “Save & Continue” button on the Add/Edit Operating Frequency Bands screen returns the applicant to the Operating Frequency Bands summary page.
    - v. Continue to use the “Add Frequency Band” button until the Operating Frequency Bands list is complete.

b. Clicking the “Save & Continue” button on the Operating Frequency Bands screen moves to either the Orbital Information for Geostationary Satellites screen, or the Orbital Information for Non-Geostationary Satellites screen.

6. **Orbital Information for Geostationary Satellites:** Enter all data in displayed fields.

- Orbital Longitude Information:**
  - Orbital Longitude:** Enter orbital longitude in degrees. (Value entered must be between 0.000 and 180.000, and is limited to 3 decimal places to the right of the decimal point (e.g. 123.123).)
  - Hemisphere of Orbital Longitude:** Enter hemisphere of orbital longitude by selecting either East or West from the drop down list. If the orbital longitude is exactly 0.0° or exactly 180.0°, select “East”.
- Longitudinal Tolerance or East/West Station-Keeping:**
  - Toward West:** Enter the tolerance to the West in degrees. (Value entered must be between 0.01 and 1.00)
  - Toward East:** Enter the tolerance to the East in degrees. (Value entered must be between 0.01 and 1.00)
- Inclination Excursion or North/South Station-Keeping Tolerance:** Enter the inclination excursion or North/South station-keeping tolerance in degrees. (Value entered must be between 0.01 and 15.00)
- Maximum Eccentricity:** Maximum eccentricity information will only be requested if the applicant is applying to operate under the DBS or 17/24 GHz BSS nature of service, and/or within any portion of the 17300-17800 MHz frequency band. (Limited to 7 decimal places to the right of the decimal point (e.g. 0.1234567).)
- Antenna Axis Attitude Accuracy:** Enter the antenna axis attitude accuracy in degrees.
  - Roll:** Enter satellite antenna roll in degrees. (Value entered must be between 0.00 and 2.00)
  - Pitch:** Enter satellite antenna pitch in degrees. (Value entered must be between 0.00 and 2.00)
  - Yaw:** Enter satellite antenna yaw in degrees. (Value entered must be between 0.00 and 2.00)
- Clicking the “Save & Continue” button on Orbital Information for Geostationary Satellites screen moves to the Receiving Beam screen. (Instructions for the Receiving Beam screen are in Section 8 below.)

7. **Orbital Information for Non-Geostationary Satellites:** Enter all data in displayed fields.

- Total Number of Satellites in the Active Constellation:** Enter the total number of all proposed satellites in all planes, as well as any in-orbit spare satellites. If all satellites in the constellation are not identical, then add an attachment specifying which types of satellites are associated with each plane. It is assumed that all satellites within a plane are identical. If they are not, then applicants should consult the Satellite Division on the best way to handle this issue.
- Orbit Epoch Date:** Enter satellite orbit epoch date using the drop down calendar provided, or by entering the date in MM/DD/YYYY Format.
- Celestial Reference Body:** Enter the celestial body that the satellite constellation will orbit. (Limit of 10 characters (e.g. Moon, Sun, Earth, etc.))
- Clicking the “Save & Continue” button on the Orbital Information for Non-Geostationary Satellites screen moves to the Orbital Plane Information screen.

e. **Orbital Plane Information:** This landing page is the summary page for the orbital planes. As orbital plane information is added, it will be displayed on this summary page. It is assumed that all satellites within an orbital plane are identical.

Note: The field labeled "The Total Number of Orbital Planes in the Active Constellation", at the top of the screen, will automatically be incremented each time an orbital plane is added to the constellation information collected and added to the summary page; therefore this field cannot be edited.

- i. Clicking the "Add Orbital Plane" button moves to the Add/Edit Orbital Plane Information screen. Enter data in all displayed fields.
  1. **Number of Satellites in Plane:** Enter total number of satellites in plane, including in-orbit spare satellites.
  2. **Inclination Angle:** Enter inclination angle in degrees. (Value entered must be between 0 and 180)
  3. **Right Ascension of Ascending Node:** Enter right ascension of ascending node in degrees. (Value entered must be between 0 and 360)
  4. **Argument of Perigee:** Enter argument of perigee in degrees. (Value entered must be between 0 and 360)
  5. **Orbital Period:** Enter orbital period in seconds. (Value entered must be between 0 and 1,000,000)
  6. **Apogee:** Enter apogee in kilometers. The apogee should be entered as the altitude above the surface of the Earth. If the satellite is orbiting a celestial body other than Earth, then enter the apoapsis as the altitude above the surface of the celestial reference body entered in 7c above. (Value entered must be greater than altitude represented for perigee.)
  7. **Perigee:** Enter perigee in kilometers. The perigee should be entered as the altitude above the surface of the Earth. If the satellite is orbiting a celestial body other than Earth, then enter the periapsis as the altitude above the surface of the celestial reference body entered in 7c above. (Value entered must be greater than 0.)
  8. **Active Service Arc Begin Angle with Respect to Ascending Node:** Enter begin angle in degrees.
    - a. For NGSO satellites that orbit in the equatorial plane, enter 0 degrees for both the begin angle and the end angle.
    - b. For NGSO satellites in polar orbits that are active during the entire orbit, enter -90 degrees for the begin angle and +90 degrees for the end angle.
    - c. For NGSO satellites in orbits inclined more than 0 degrees and less than 180 degrees (except for satellites in polar orbits that are active for the entire orbit), or for satellites in polar orbits that are only active during a single segment of arc during each orbit, enter the minimum and maximum latitudes bounding that segment of arc in the begin angle and end angle respectively.
    - d. For NGSO satellites in orbits inclined more than 0 degrees and less than 180 degrees (except for satellites in polar orbits), or for satellites in polar orbits that are active during multiple non-contiguous segments of arc during each orbit, enter the south

latitude corresponding to the inclination angle of the orbit as the begin angle and the north latitude corresponding to the inclination angle of the orbit as the end angle, and describe the active arc segments in the narrative portion of the application.

9. **Active Service Arc End Angle with Respect to Ascending Node:** Enter end angle in degrees. (Refer to instructions provided under the previous bullet titled "Active Service Arc Begin Angle with Respect to Ascending Node" in order to fill in the appropriate "Active Service Arc End Angle with Respect to Ascending Node". Clicking the "Save & Continue" button on the Add/Edit Orbital Plane Information screen moves to the Add/Edit Mean Anomaly For Each Satellite In Orbital Plane screen.
  - ii. **Add/Edit Mean Anomaly For Each Satellite In Orbital Plane:** Enter the mean anomaly, in degrees, at the orbit epoch date for each satellite in the plane. (Value entered must be between 0 and 360)
  - iii. Clicking the "Save & Continue" button on Add/Edit Mean Anomaly For Each Satellite In Orbital Plane screen returns to the Orbital Plane Information screen.
  - iv. Continue adding additional orbital planes as needed, using the "Add Orbital Plane" button until the constellation is complete.
  - v. Clicking the "Save & Continue" button on Orbital Plane Information screen, moves to Receiving Beam screen.
8. **Receiving Beam:** This is the receiving beam summary page. Click the "Add Beam" button to enter beam information for each receive beam on the Add Receiving Beam screen. There must be at least one receive beam for every receive band frequency range listed in the Operating Frequency Band summary page.
  - a. **Add Receiving Beam:** Enter all data in displayed fields as part of beam information.
    - i. **Beam ID:** Enter unique descriptive beam identifier. (Limit of 4 alphanumeric characters.)
    - ii. **Receive Beam Frequency:** Enter the lower and upper frequency band limits of the particular receive beam in MHz. (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123).) The frequency range specified must be within the operating receive band frequency ranges listed in the Operating Frequency Band summary page.
    - iii. **Beam Type:** From the drop down list, select whether the beam is fixed, steerable, shapeable, both steerable and shapeable, or spot.
    - iv. **Polarization:** From the drop down list, select whether the polarization for the beam is H, V, RHCP or LHCP.
    - v. **Peak Gain:** Enter peak gain in dBi. (Value entered must be between -10.0 and 100.0)
    - vi. **Antenna Pointing Error:** Enter antenna pointing error in degrees. (Value entered must be between 0.0 and 2.0)
    - vii. **Antenna Rotational Error:** Enter antenna rotational error in degrees. (Value entered must be between 0.0 and 2.0)
    - viii. **Minimum Cross-polar Isolation within Service Area:** Enter minimum cross-polar isolation value in dB. Minimum cross-polar isolation information will only be requested if the applicant is applying to operate under the DBS or 17/24 GHz BSS nature of service, and/or within any portion of the 17300-17800 MHz frequency band. (Value entered must be between 0.0 and 50.0)

- ix. **Polarization Alignment Relative to the Equatorial Plane:** Enter the polarization alignment value in degrees. (Value entered must be between -90 and 90 for beams having "H" or "V" polarization.)
- x. **Polarization Switchable:** Select either Yes or No.
- xi. **Co- or Cross-Polar Mode:** Select either "C" for co-polar mode, or "X" for cross-polar mode.
- xii. **G/T at Maximum Gain Point:** Enter G/T value in dB/K. (Value entered must be between -99.0 and 99.0)
- xiii. **Minimum Saturation Flux Density:** Enter density value in dBW/m<sup>2</sup>/MHz. (Value entered must be between -999.9 and 0.0)
- xiv. **Maximum Saturation Flux Density:** Enter density value in dBW/m<sup>2</sup>/MHz. (Value entered must be between -999.9 and 0.0, but greater than the minimum saturation flux density for the same beam.)
- xv. **GSO or NGSO Antenna Gain Data:** Click on the word "here", highlighted in blue text to attach one or more GXT files associated with the receive beam. If all of the GXT files for the receive and transmit beams are in a GIMS database container file, the associated MDB file can be attached there instead. Please refer to the following guidelines for determining the appropriate format for representing antenna gain data for the various beam types:
  1. **For fixed beams on space stations in the geostationary orbit**, the predicted space station antenna gain contour(s) for each receive antenna beam, except for beams where the contour at 8 dB below peak falls entirely beyond the edge of the visible Earth should be attached in a GIMS-readable format, one file per beam or in a GIMS database container file.
  2. **For space stations in non-geostationary orbits**, specify for each unique orbital plane the predicted antenna gain contour(s) for each receive antenna beam for one space station if all space stations are identical in the constellation. If individual space stations in the constellation have different antenna beam configurations, specify the predicted antenna gain contours for each receive beam for each space station type and orbit or orbital plane requested. A file containing a cross-reference to each satellite and its associated space station type should be attached as well. The contours should be plotted on an area map with the beam depicted on the surface of the earth with the space stations' peak antenna gain pointed at nadir to a latitude and longitude within the proposed service area. For intersatellite links, specify the peak antenna gain and 3 dB beamwidth.
  3. **For space stations with shapeable antenna beams**, specify the contours for the receiving beam configuration with the smallest gain-to-temperature ratio and the highest required saturation power flux density. The proposed maximum coverage area must be clearly specified.
  4. **For space stations with steerable beams that are not shapeable**, specify the applicable contours, as defined in paragraph 1 or 2 of this section, with a description of the area that the steerable beam(s) is expected to serve, or provide the contour information described in paragraph 3 of this section.

5. **For space stations with steerable beams that are also shapeable**, specify the contours for the receiving beam configuration with the smallest gain-to-temperature ratio and the highest required saturation power flux density. Include the contours that would result from moving the beam peak around the limit of the effective beam peak area and the 0 dB relative antenna gain isoline. The proposed maximum coverage area must be clearly specified.
6. **For geostationary satellites with large numbers of identical fixed spot beams**, other than DBS satellites, applicants may, as an alternative to submitting the information described in paragraph 1 of this section with respect to these beams, provide the predicted antenna gain contours for one receive antenna beam, together with one of the following:
  - a. An area map showing all of the spot beams depicted on the surface of the Earth;
  - b. A table identifying the maximum antenna gain point(s) in latitude and longitude to the nearest 0.1 degree; or
  - c. A map of the isolines formed by combining all of the spot beams into one or more composite beams.
7. **For non-geostationary satellites with large numbers of identical fixed beams on each satellite**, applicants may, as an alternative to submitting the information described in paragraph 2 of this section, specify the predicted antenna gain contours for one receive beam pointed to nadir, together with an area map showing all of the spot beams depicted on the surface of the earth with the satellites' peak antenna gain pointed to a selected latitude and longitude within the service area.

xvi. **Service Area:** Click on the word "here", highlighted in blue text, and attach one or more GXT, TXT, and/or PDF files associated with the receive beam. If all of the GXT files for your receive and transmit beams are in a GIMS database container file, the associated MDB file can be attached there also, if it has not already been uploaded in the Attachments screen. If a file is not being attached, please provide a service area description in the associated text box. (Limit text to 60 characters. Geographic designators such as State Codes, ITU Codes, or Figure Numbers can be used.)

xvii. Clicking the "Save and Continue" button returns to the Receiving Beam screen, which is the receiving beam summary page.

- b. Continue adding additional receiving beams as needed, using the "Add Beam" button.
- c. Clicking the "Save and Continue" button on receiving beams summary page moves to Receiving Channels screen.

9. **Receiving Channels:** Enter all data in the displayed fields for each receive channel. Click the "Add Row" button to enter additional receive channels and associated information on the receiving channels summary page. Channel information for at least one receive channel should be provided for each receive beam listed in the receiving beam summary page.
  - a. **Channel ID:** Enter unique descriptive channel identifier. (Limit of 4 alphanumeric characters)
  - b. **Channel Bandwidth:** Enter channel bandwidth in MHz. (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123).) The channel

center frequency, plus or minus one-half of the assigned channel bandwidth, must be within one of the associated receive beam frequency ranges listed in the receiving beam summary page.

- c. **Center Frequency:** Enter the channel center frequency in MHz. (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123).)
- d. **Feeder Link, Service Link or TT&C:** From the drop down list, select whether the channel is used as a feeder link, service link, or for telemetry/telecommand/control (TT&C)
- e. Continue adding additional receive channels as needed, using the “Add Row” button.
- f. Clicking the “Save and Continue” button on receiving channels summary page moves to Transmitting Beam screen.

10. **Transmitting Beam:** This landing page is the transmitting beam summary page. Click the “Add Beam” button to enter beam information for each transmit beam on the Add Transmitting Beam screen. There must be at least one transmit beam for every transmit band frequency range listed in the Operating Frequency Band summary page.

- a. **Add Transmitting Beam:** Enter all data in displayed fields as part of beam information.
  - i. **Beam ID:** Enter unique descriptive beam identifier. (Limit of 4 alphanumeric characters.)
  - ii. **Transmit Beam Frequency:** Enter the lower and upper frequency band limits of the particular transmit beam in MHz. (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123).) The frequency range specified needs to be within the operating transmit band frequency ranges listed in the Operating Frequency Band summary page.
  - iii. **Beam Type:** From the drop down list, select whether the beam is fixed, steerable, shapeable, both steerable and shapeable, or spot.
  - iv. **Polarization:** From the drop down list, select whether the polarization for the beam is H, V, RHCP or LHCP.
  - v. **Peak Gain:** Enter peak gain in dBi. (Value entered must be between -10.0 and 100.0)
  - vi. **Antenna Pointing Error:** Enter antenna pointing error in degrees. (Value entered must be between 0.0 and 1.0)
  - vii. **Antenna Rotational Error:** Enter antenna rotational error in degrees. (Value entered must be between 0.0 and 1.0)
  - viii. **Minimum Cross-polar Isolation within Service Area:** Enter minimum cross-polar isolation value in dB. Minimum cross-polar isolation information will only be requested if the applicant is applying to operate under the DBS or 17/24 GHz BSS nature of service, and/or within any portion of the 17300-17800 MHz frequency band. (Value entered must be between 0.0 and 50.0)
  - ix. **Polarization Alignment Relative to the Equatorial Plane:** Enter the polarization alignment value in degrees. (Value entered must be between -90 and 90 for beams having “H” or “V” polarization.)
  - x. **Polarization Switchable:** Select either Yes or No.
  - xi. **Co- or Cross Polar Mode:** Select either “C” for co-polar mode, or “X” for cross-polar mode.
  - xii. **Maximum Transmit EIRP Density:** Enter EIRP density value in dBW/Hz. (Value entered must be between 0.0 and 100.0)
  - xiii. **Maximum Transmit EIRP:** Enter EIRP value in dBW. (Value entered must be between 0.0 and 100.0)
  - xiv. **GSO or NGSO Antenna Gain Data:** Click on the word “here”, highlighted in blue

text, and attach one or more GXT files associated with the transmit beam. If all of the GXT files for your receive and transmit beams are in a GIMS database container file, the associated MDB file can be attached there also. Please refer to the following guidelines for determining the appropriate format for representing antenna gain data for the various beam types:

1. **For space stations in geostationary orbit**, the predicted space station antenna gain contour(s) for each transmit antenna beam, except for beams where the contour at 8 dB below peak falls entirely beyond the edge of the visible Earth, must be presented in a GIMS-readable format, one file per beam, or in a GIMS database container file.
2. **For space stations in non-geostationary orbits**, specify for each unique orbital plane the predicted antenna gain contour(s) for each transmit antenna beam for one space station if all space stations are identical in the constellation. If individual space stations in the constellation have different antenna beam configurations, specify the predicted antenna gain contours for each transmit beam for each space station type and orbit or orbital plane requested. A file containing a cross-reference to each satellite and its associated space station type must be attached as well. The contours should be plotted on an area map with the beam depicted on the surface of the earth with the space stations' peak antenna gain pointed at nadir to a latitude and longitude within the proposed service area. For intersatellite links, specify the peak antenna gain and 3 dB beamwidth.
3. **For space stations with shapeable antenna beams**, specify the contours, as defined in paragraph 1 or 2 of this section, for the transmitting beam configuration that results in the highest EIRP density for the beams. The proposed maximum coverage area must be clearly specified.
4. **For space stations with steerable beams that are not shapeable**, specify the applicable contours, as defined in paragraph 1 or 2 of this section, with a description of the area that the steerable beam(s) is expected to serve, or provide the contour information described in paragraph 3 of this section.
5. **For space stations with steerable beams that are shapeable** specify the contours, as defined in paragraph 1 or 2 of this section, for the transmitting beam configuration that results in the highest EIRP density for the beams. Include the contours that would result from moving the beam described in paragraph 3 around the limit of the effective beam peak area and the 0 dB relative antenna gain isoline. The proposed maximum coverage area must be clearly specified.
6. **For satellites with large numbers of identical fixed spot beams**, other than DBS satellites, applicants may, as an alternative to submitting the information described in paragraph 1 of this section with respect to these beams, provide the predicted antenna gain contours for one transmit antenna beam, together with one of the following:
  - a. An area map showing all of the spot beams depicted on the surface of the Earth;
  - b. A table identifying the maximum antenna gain point(s) in latitude

and longitude to the nearest 0.1 degree; or

- c. A map of the isolines formed by combining all of the spot beams into one or more composite beams.

7. **For non-geostationary satellites with large numbers of identical fixed beams** on each satellite, applicants may, as an alternative to submitting the information described in paragraph 2 of this section above, specify the predicted antenna gain contours for one transmit beam pointed to nadir, together with an area map showing all of the spot beams depicted on the surface of the earth with the satellites' peak antenna gain pointed to a selected latitude and longitude within the service area.

- xv. **Service Area:** Click on the word "here", highlighted in blue text, and attach one or more GXT, TXT, and/or PDF files associated with the transmit beam. If all of the GXT files for your receive and transmit beams are in a GIMS database container file, the associated MDB file can be attached there also, if it has not already been uploaded in the Attachments screen. If a file is not being attached, please provide a service area description in the associated text box. (Limit text to 60 characters. Geographic designators such as State Codes, ITU Codes, or Figure Numbers can be used.)
- xvi. Clicking the "Save and Continue" button moves to the Maximum Power Flux Density for Beam ID screen.
- xvii. **Maximum Power Flux Density for Beam ID:** Enter the maximum power flux density (PFD) values for each transmit Beam ID. The frequency band specified for the particular transmit beam will determine which of three power flux density tables will need to be populated. One table collects PFD values at angles of arrival above the horizon at random increments from 0-90°, another at one degree increments from 0-5°, and yet another by geographic regions.
  1. **Add Maximum Power Flux Density:** Enter all data in the displayed fields.
    - a. **BW:** From the drop down list, select a reference bandwidth of 4 kHz, 1 MHz or 200 MHz by which the maximum PFD values are derived.
    - b. For all satellite services and frequency bands, not covered by the following two cases, provide the maximum PFD values at angles of arrival of 0-5°, 5-10°, 10-15°, 15-20°, 20-25°, 25-90° above the horizon in dBW/m<sup>2</sup>/**BW**. (Values must be between -1000.0 and -50.0)
    - c. For NGSO/FSS sharing with MVDDS in the 12200-12700 MHz frequency band, provide the maximum PFD values at angles of arrival of 0-1°, 1-2°, 2-3°, 3-4°, and 4-5° above the horizon in dBW/m<sup>2</sup>/**BW**. (Values must be between -1000.0 and -50.0)
    - d. For DBS or 17/24 GHz BSS, and/or service within any portion of the 17300-17800 MHz frequency band, provide the maximum PFD values in each of the **Southeastern, Northeastern, Western and "Other"** geographic regions in dBW/m<sup>2</sup>/**BW**, as defined in § 25.208(w). (Values must be between -1000.0 and -50.0)
    - e. The "Add Row" button can be used to enter maximum PFD values for additional reference bandwidths.

2. “Save and Continue” button returns to the Transmitting Beam screen, which is the transmitting beam summary page.
- b. Continue adding additional transmitting beams as needed, using the “Add Beam” button.
- c. Clicking the “Save and Continue” button on transmitting beams summary page moves to Transmitting Channels screen.

11. **Transmitting Channels:** Enter all data in the displayed fields for each transmit channel. Click the “Add Row” button to enter additional transmit channels and associated information on the transmit channels summary page. Channel information for at least one transmit channel should be provided for each transmit beam listed in the transmitting beam summary page.

- a. **Channel ID:** Enter unique descriptive channel identifier. (Limit of 4 alphanumeric characters)
- b. **Channel Bandwidth:** Enter channel bandwidth in MHz. (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123)). The channel center frequency, plus or minus one-half of the assigned channel bandwidth, must be within one of the associated transmit beam frequency ranges listed in the transmitting beam summary page.
- c. **Center Frequency:** Enter the channel center frequency in MHz. (Limited to 5 decimal places to the left of the decimal point and 3 places to the right (e.g. 12345.123)).
- d. **Feeder Link, Service Link or TT&C:** From the drop down list, select whether the channel is used as a feeder link, service link, or for telemetry/telecommand/control (TT&C)
- e. Continue adding additional transmit channels as needed, using the “Add Row” button.
- f. Clicking the “Save and Continue” button on transmitting channels summary page moves to Certification Questions screen.

12. **Certification Questions:**

- a. Read all questions and select Yes, No or N/A based on review of the applicable Commission Rules cited. If the answer to any of the questions is No, please file a waiver request with the application, along with the appropriate justification for granting such a waiver.
- b. Clicking the “Save & Continue” button on Certification Questions screen returns to Application Summary screen.

13. **“Attachments” button:** At the top right of every screen is an “Attachments” button, which contains all documents that are uploaded to this location as attachments to this form, because they are required under certain fields in the form, or they offer an opportunity for applicants to provide supporting information to facilitate processing their application. The allowable files that can be uploaded have the following file extensions: GXT, TXT, PDF and MDB. GIMS database container files, which have an MDB file extension, are also acceptable.

14. **“Draft Copy” button:** At the top right of every screen is a “Draft Copy” button, which allows applicants to print their applications for review and record keeping purposes.

15. **Application Summary page**

- a. General summary of the Schedule S.
- b. If there are errors in the Schedule S, they will be noted here, as well as on the navigation list (with a red X), and on the page containing the error.

16. **Filing the Schedule S (NOTE: the FCC Form 312 Main Form MUST be filed in MyIBFS prior to submitting a completed Schedule S)**

- a. **Select CONTINUE** from the Summary Page
- b. **Enter File Number and FRN** of the FCC Form 312 filed in MyIBFS in the designated fields
- c. **SUBMIT**

#### **FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

We have estimated that each response to this collection of information will take up to 80 hours. Our estimate includes the time to read the instructions, look through existing records, gather and maintain the required data, and actually complete and review the form or response. If you have any comments on this estimate, or on how we can improve the collection and reduce the burden it causes you, please write the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments via the Internet if you send them to [pra@fcc.gov](mailto:pra@fcc.gov). Please DO NOT SEND COMPLETED APPLICATIONS TO THIS ADDRESS. Remember - you are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

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