

S1. GENERAL INFORMATION Complete for all satellite applications.

| | | |
|--|--|--|
| a. Space Station or Satellite Network Name: GALAXY 15 | e. Estimated Date of Placement into Service: | i. Will the space station(s) operate on a Common Carrier Basis: |
| b. Construction Commencement Date: | f. Estimated Lifetime of Satellite(s): Years | j. Number of transponders offered on a common carrier basis: |
| c. Construction Completion Date: | g. Total Number of Transponders: | k. Total Common Carrier Transponder Bandwidth: MHz |
| d. Estimated Launch Date: | h. Total Transponder Bandwidth (no. transponders x Bandwidth) MHz | i. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> NGSO |

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper
Also indicate the nature of service(s) for each frequency band.

| Frequency Band Limits | | | | e. T/R Mode | f. Nature of Service(s): List all that apply to this band |
|-----------------------|--------------------|-----------------------|--------------------|-------------|---|
| Lower Frequency (.Hz) | | Upper Frequency (.Hz) | | | |
| a. Numeric | b. Unit (K/M/G) | c. Numeric | d. Unit (K/M/G) | | |

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

| | | | |
|--|--|--|--|
| a. Nominal Orbital Longitude (Degrees E/W): 133 W | b. Alternate Orbital Longitude (Degrees E/W): | c. Reason for orbital location selection: | |
| Longitudinal Tolerance or E/W Station-Keeping: | f. Inclination Excursion or N/S Station-Keeping Tolerance: | Range of orbital are in which adequate service can be provided (Optional): Degrees E/W | |
| d. Toward West: 0.05 Degrees | e. Toward East: 0.05 Degrees | g. Westernmost: h. Easternmost: | |
| i. Reason for service are selection (Optional): | | | |

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SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System:

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):

S4b. Total Number of Orbital Planes in Network or System:

S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

| (e) Orbital Plane No. | (f) No. of Satellites in Plane | (g) Inclination Angle (degrees) | (h) Orbital Period (Seconds) | (i) Apogee (km) | (j) Perigee (km) | (k) Right Ascension of the Ascending Node (Deg.) | (l) Argument of Perigee (Degrees) | Active Service Arc Range (Degrees) | | |
|-----------------------|--------------------------------|---------------------------------|------------------------------|-----------------|------------------|--|-----------------------------------|------------------------------------|---------------|-----------|
| | | | | | | | | (m) Begin Angle | (n) End Angle | (o) Other |
| | | | | | | | | | | |

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

| (a) Orbital Plane No. | (b) Satellite Number | (c) Initial Phase Angle (Degrees) |
|-----------------------|----------------------|-----------------------------------|
| | | |

NO NGSO DATA FILED

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SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S6. SERVICE AREA CHARACTERISTICS for each service area provide:

| (a) Service Area ID | (b) Type of Associated Station (Earth or Space) | (c) Service Area Diagram File Name (GXT File) | (d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram. |
|---------------------|---|---|---|
|---------------------|---|---|---|

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SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

| (a) Beam ID | (b) T/R Mode | Isotropic Antenna Gain | | (e) Pointing Error (Degrees) | (f) Rotational Error (Degrees) | (g) Min. Cross- Polar Iso- lation (dB) | (h) Polar- ization Switch- able? (Y/N) | (i) Polarization Alignment Rel. Equatorial Plane (Degrees) | (j) Service Area ID | Transmit | | | Receive | | | | | |
|-------------------|--------------------|---------------------------|-------------------|---------------------------------------|---|---|--|---|------------------------|--------------------------------|--------------------------------------|------------------------------|------------------------------------|---------------------------------------|--|-----------------------|------------------|--|
| | | (c) Peak (dBi) | (d) Edge (dBi) | | | | | | | (k) Input Losses (dB) | (l) Effective Output Power (W) | (m) Max. EIRP (dBW) | (n) System Noise Temp (k) | (o) G/T Max. Gain Pt. (db/K) | (p) Min. Saturation Flux Density (dBW/m2) | Input Attenuator (dB) | | |
| | | | | | | | | | | | | | | | | (q) Max. Value | (r) Step Size | |
| WCA | T | 13.1 | 11.1 | | | | | | | 9.2 | 0.95 | 12.9 | | | | | | |

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 SATELLITE SPACE STATION AUTHORIZATIONS
 FCC Form 312 - Schedule S: (Technical and Operational Description)**

S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data:
 Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

| (a) Beam ID | (b) T/R Mode | (c) Co-or Cross Polar Mode ("C" or" X") | (d) GSO Ref. Orbital Longitude (Deg. E/W) | (e) NGSO Antenna Gain Contour Description (Figure/Table/ Exhibit) | (f) GSO Antenna Gain Contour Data (GXT File) | Max. Power Flux Density (dBW/M2/Hz) | | | | |
|-------------------|--------------------|---|---|---|--|--|------------|------------|------------|------------|
| | | | | | | At Angle of Arrival above horizontal (for emission with highest PFD) | | | | |
| | | | | | | (g) 5 Deg | (h) 10 Deg | (i) 15 Deg | (j) 20 Deg | (k) 25 Deg |
| WCA | T | | | | | -168 | -168 | -168 | -168 | -168 |

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 SATELLITE SPACE STATION AUTHORIZATIONS
 FCC Form 312 - Schedule S: (Technical and Operational Description)**

S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

| (a) Channel No. | (B) Assigned Bandwidth (kHz) | (c) T/R Mode | (d) Center Frequency (MHz) | (e) Polarization (H, V, L, R) | (f) TTC or Comm Channel (T or C) |
|-----------------------|------------------------------------|--------------------|----------------------------------|-------------------------------------|---|
| CMD1 | 1000 | R | 6420.5 | V | T |
| CMD2 | 1000 | R | 6420.5 | R | T |

| (a) Transponder ID | (b) Transponder Gain (dB) | Receive Band | | Transmit Band | |
|--------------------------|---------------------------------|--------------------|----------------|--------------------|-------------|
| | | (c) Channel No. | (d) Beam ID | (e) Channel No. | (f) Beam ID |

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SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

| (a) Digital Mod. ID | (b) Emission Designator | (c) Assigned Bandwidth (kHz) | (d) No. of Phases | (e) Uncoded Data Rate (kbps) | (f) FEC Error Correction Coding Rate | (g) CDMA Processing Gain (dB) | (h) Total C/N Performance Objective (dB) | (i) Single Entry C/I Objective (dB) |
|---------------------|-------------------------|------------------------------|-------------------|------------------------------|--------------------------------------|-------------------------------|--|-------------------------------------|
|---------------------|-------------------------|------------------------------|-------------------|------------------------------|--------------------------------------|-------------------------------|--|-------------------------------------|

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SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S13. TYPICAL EMISSIONS For each planned type of emission provide:

| Associated Transponder ID Range | | Modulation ID | | (e) Carriers per Transponder | (f) Carrier Spacing (kHz) | (g) Noise Budget Reference (Table No.) | (h) Energy Dispersal Bandwidth (kHz) | Receive Band (Assoc. Transmit Stn) | | Transmit Band (This Space Station) | | | |
|---------------------------------|---------|-------------------------|------------------------|------------------------------|---------------------------|--|--------------------------------------|---|-------------------------------------|------------------------------------|--|--|--------------------------------|
| | | (c) Digital (Table S11) | (d) Analog (Table S12) | | | | | (i) Assoc. Stn. Max. Antenna Gain (dBi) | Assoc. Station Transmit Power (dBW) | EIRP (dBW) | | (n) Max. Power Flux Density (dBW/m ² /Hz) | (o) Assoc. Stn Rec. G/T (dB/K) |
| (a) Start | (b) End | | | | | | (j) Min. | (k) Max. | (l) Min. | (m) Max. | | | |

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SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 10: TT and C

S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): #Error

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 11:
Characteristics and
Certifications

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

| | | |
|---|-----------------------------------|---|
| S15a. Mass of spacecraft without fuel (kg): 880 | Spacecraft Dimensions (meters) | Probability of Survival to End of Life (0.0 - 1.0) |
| S15b. Mass of fuel and disposables at launch (kg): 1150 | | |
| S15c. Mass of spacecraft and fuel at launch (kg): 2030 | S15f. Length (m): 12.75 | S15i. Payload: 0.93 |
| S15d. Mass of fuel, in orbit, at beginning of life (kg): 384 | S15g. Width (m): 4.5 | S15j. Bus: 0.86 |
| S15e. Deployed Area of Solar Array (square meters): 14.8 | S15h. Height (m): 3.8 | S15k. Total: 0.8 |

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

| Spacecraft Subsystem | Electrical Power (Watts) At Beginning of Life | | Electrical Power (Watts) At End of Life | |
|---------------------------------|---|-------------|---|-------------|
| | At Equinox | At Solstice | At Equinox | At Solstice |
| Payload (Watts): | (a): 2066.5 | (f): 2066.5 | (k): 2066.5 | (p): 2066.5 |
| Bus (Watts): | (b): 811.5 | (g): 490.3 | (l): 811.5 | (q): 490.3 |
| Total (Watts): | (c): 2878 | (h): 2556.8 | (m): 2878 | (r): 2556.8 |
| Solar Array (Watts): | (d): 4212.8 | (i): 3753.6 | (n): 3173.5 | (s): 2827.6 |
| Depth of Battery Discharge (%): | (e) 75 % | (j) % | (o) 78.6 % | (t) % |

S17. CERTIFICATIONS:

| | | | | | | |
|--|--------------------------|-----|--------------------------|----|--------------------------|-----|
| a. Are the power flux density limits of § 25.208 met? | <input type="checkbox"/> | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> | N/A |
| b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met? | <input type="checkbox"/> | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> | N/A |
| c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (3) met? | <input type="checkbox"/> | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> | N/A |

In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R § 25.114.