

**S1. GENERAL INFORMATION** Complete for all satellite applications.

a. Space Station or Satellite Network Name: JUPITER 77W		e. Estimated Date of Placement into Service:		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s): 15 Years		j. Number of transponders offered on a common carrier basis: 0	
c. Construction Completion Date:		g. Total Number of Transponders: 64		k. Total Common Carrier Transponder Bandwidth: 0 MHz	
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 12000 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)		
47.2	G	50.2	G	R	Fixed Satellite Service
39.0	G	42	G	T	Fixed Satellite Service

**S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:**

a. Nominal Orbital Longitude (Degrees E/W): 77.3 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: The V-band spectrum at the nominal 77W.L. location is unassigned.	
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): <u>Degrees</u> <u>E/W</u>	
d. Toward West:	0.05 Degrees	e. Toward East:		g. Westernmost:	
	0.05 Degrees			h. Easternmost:	
i. Reason for service are selection (Optional):					

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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 intital phase angle.

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

**NO NGSO DATA FILED**

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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.
1	S		-2 dB contour of each "VU" and "VD" gateway spot beams.
2	S		-4 dB contour of each "UU" and "UD" user spot beams.

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

(a) Beam ID	(b) T/R Mode	(e) 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
VU1L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU1R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU2L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU2R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU3L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU3R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU4L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU4R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU5L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU5R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU6L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU6R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU7L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU7R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU8L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU8R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU9L	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU9R	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU10	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU10	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU11	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU11	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU12	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU12	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU13	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU13	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU14	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU14	R	53	51	0.05		30	N		1			1260	22	-100	20	1	
VU15	R	53	51	0.05		30	N		1			1260	22	-100	20	1	

VU15	R	53	51	0.05		30	N		1				1260	22	-100	20	1
VU16	R	53	51	0.05		30	N		1				1260	22	-100	20	1
VU16	R	53	51	0.05		30	N		1				1260	22	-100	20	1
VD1L	T	53	51	0.05		30	N		1	3	12.6	64					
VD1R	T	53	51	0.05		30	N		1	3	12.6	64					
VD2L	T	53	51	0.05		30	N		1	3	12.6	64					
VD2R	T	53	51	0.05		30	N		1	3	12.6	64					
VD3L	T	53	51	0.05		30	N		1	3	12.6	64					
VD3R	T	53	51	0.05		30	N		1	3	12.6	64					
VD4L	T	53	51	0.05		30	N		1	3	12.6	64					
VD4R	T	53	51	0.05		30	N		1	3	12.6	64					
VD5L	T	53	51	0.05		30	N		1	3	12.6	64					
VD5R	T	53	51	0.05		30	N		1	3	12.6	64					
VD6L	T	53	51	0.05		30	N		1	3	12.6	64					
VD6R	T	53	51	0.05		30	N		1	3	12.6	64					
VD7L	T	53	51	0.05		30	N		1	3	12.6	64					
VD7R	T	53	51	0.05		30	N		1	3	12.6	64					
VD8L	T	53	51	0.05		30	N		1	3	12.6	64					
VD8R	T	53	51	0.05		30	N		1	3	12.6	64					
VD9L	T	53	51	0.05		30	N		1	3	12.6	64					
VD9R	T	53	51	0.05		30	N		1	3	12.6	64					
VD10	T	53	51	0.05		30	N		1	3	12.6	64					
VD10	T	53	51	0.05		30	N		1	3	12.6	64					
VD11	T	53	51	0.05		30	N		1	3	12.6	64					
VD11	T	53	51	0.05		30	N		1	3	12.6	64					
VD12	T	53	51	0.05		30	N		1	3	12.6	64					
VD12	T	53	51	0.05		30	N		1	3	12.6	64					
VD13	T	53	51	0.05		30	N		1	3	12.6	64					
VD13	T	53	51	0.05		30	N		1	3	12.6	64					
VD14	T	53	51	0.05		30	N		1	3	12.6	64					
VD14	T	53	51	0.05		30	N		1	3	12.6	64					
VD15	T	53	51	0.05		30	N		1	3	12.6	64					
VD15	T	53	51	0.05		30	N		1	3	12.6	64					
VD16	T	53	51	0.05		30	N		1	3	12.6	64					
VD16	T	53	51	0.05		30	N		1	3	12.6	64					
UU1L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU1R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU2L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU2R	R	53	49	0.05		30	N		2				1260	22	-100	20	1

UU3L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU3R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU4L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU4R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU5L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU5R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU6L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU6R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU7L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU7R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU8L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU8R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU9L	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU9R	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU10	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU10	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU11	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU11	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU12	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU12	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU13	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU13	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU14	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU14	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU15	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU15	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU16	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UU16	R	53	49	0.05		30	N		2				1260	22	-100	20	1
UD1L	T	53	49	0.05		30	N		2	3	50	70					
UD1R	T	53	49	0.05		30	N		2	3	50	70					
UD2L	T	53	49	0.05		30	N		2	3	50	70					
UD2R	T	53	49	0.05		30	N		2	3	50	70					
UD3L	T	53	49	0.05		30	N		2	3	50	70					
UD3R	T	53	49	0.05		30	N		2	3	50	70					
UD4L	T	53	49	0.05		30	N		2	3	50	70					
UD4R	T	53	49	0.05		30	N		2	3	50	70					
UD5L	T	53	49	0.05		30	N		2	3	50	70					
UD5R	T	53	49	0.05		30	N		2	3	50	70					
UD6L	T	53	49	0.05		30	N		2	3	50	70					

UD6R	T	53	49	0.05		30	N		2	3	50	70					
UD7L	T	53	49	0.05		30	N		2	3	50	70					
UD7R	T	53	49	0.05		30	N		2	3	50	70					
UD8L	T	53	49	0.05		30	N		2	3	50	70					
UD8R	T	53	49	0.05		30	N		2	3	50	70					
UD9L	T	53	49	0.05		30	N		2	3	50	70					
UD9R	T	53	49	0.05		30	N		2	3	50	70					
UD10	T	53	49	0.05		30	N		2	3	50	70					
UD10	T	53	49	0.05		30	N		2	3	50	70					
UD11	T	53	49	0.05		30	N		2	3	50	70					
UD11	T	53	49	0.05		30	N		2	3	50	70					
UD12	T	53	49	0.05		30	N		2	3	50	70					
UD12	T	53	49	0.05		30	N		2	3	50	70					
UD13	T	53	49	0.05		30	N		2	3	50	70					
UD13	T	53	49	0.05		30	N		2	3	50	70					
UD14	T	53	49	0.05		30	N		2	3	50	70					
UD14	T	53	49	0.05		30	N		2	3	50	70					
UD15	T	53	49	0.05		30	N		2	3	50	70					
UD15	T	53	49	0.05		30	N		2	3	50	70					
UD16	T	53	49	0.05		30	N		2	3	50	70					
UD16	T	53	49	0.05		30	N		2	3	50	70					

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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
VD12	T	C	-77.3			-139	-139	-139	-139	-119
VD13	T	C	-77.3			-139	-139	-139	-139	-119
VD13	T	C	-77.3			-139	-139	-139	-139	-119
VD14	T	C	-77.3			-139	-139	-139	-139	-119
VD14	T	C	-77.3			-139	-139	-139	-139	-119
VD15	T	C	-77.3			-139	-139	-139	-139	-119
VD15	T	C	-77.3			-139	-139	-139	-139	-119
VD16	T	C	-77.3			-139	-139	-139	-139	-119
VD16	T	C	-77.3			-139	-139	-139	-139	-119
UD1L	T	C	-77.3			-136	-136	-136	-136	-116
UD1R	T	C	-77.3			-136	-136	-136	-136	-116
UD2L	T	C	-77.3			-136	-136	-136	-136	-116
UD2R	T	C	-77.3			-136	-136	-136	-136	-116
UD3L	T	C	-77.3			-136	-136	-136	-136	-116
UD3R	T	C	-77.3			-136	-136	-136	-136	-116
UD4L	T	C	-77.3			-136	-136	-136	-136	-116
UD4R	T	C	-77.3			-136	-136	-136	-136	-116
UD5L	T	C	-77.3			-136	-136	-136	-136	-116
UD5R	T	C	-77.3			-136	-136	-136	-136	-116
UD6L	T	C	-77.3			-136	-136	-136	-136	-116
UD6R	T	C	-77.3			-136	-136	-136	-136	-116
UD7L	T	C	-77.3			-136	-136	-136	-136	-116
UD7R	T	C	-77.3			-136	-136	-136	-136	-116
VD1L	T	C	-77.3			-139	-139	-139	-139	-119
VD1R	T	C	-77.3			-139	-139	-139	-139	-119
VD2L	T	C	-77.3			-139	-139	-139	-139	-119
VD2R	T	C	-77.3			-139	-139	-139	-139	-119
VD3L	T	C	-77.3			-139	-139	-139	-139	-119



VD3R	T	C	-77.3			-139	-139	-139	-139	-119
VD4L	T	C	-77.3			-139	-139	-139	-139	-119
VD4R	T	C	-77.3			-139	-139	-139	-139	-119
VD5L	T	C	-77.3			-139	-139	-139	-139	-119
VD5R	T	C	-77.3			-139	-139	-139	-139	-119
VD6L	T	C	-77.3			-139	-139	-139	-139	-119
VD6R	T	C	-77.3			-139	-139	-139	-139	-119
VD7L	T	C	-77.3			-139	-139	-139	-139	-119
VD7R	T	C	-77.3			-139	-139	-139	-139	-119
VD8L	T	C	-77.3			-139	-139	-139	-139	-119
VD8R	T	C	-77.3			-139	-139	-139	-139	-119
VD9L	T	C	-77.3			-139	-139	-139	-139	-119
VD9R	T	C	-77.3			-139	-139	-139	-139	-119
VD10	T	C	-77.3			-139	-139	-139	-139	-119
VD10	T	C	-77.3			-139	-139	-139	-139	-119
VD11	T	C	-77.3			-139	-139	-139	-139	-119
VD11	T	C	-77.3			-139	-139	-139	-139	-119
VD12	T	C	-77.3			-139	-139	-139	-139	-119
UD8L	T	C	-77.3			-136	-136	-136	-136	-116
UD8R	T	C	-77.3			-136	-136	-136	-136	-116
UD9L	T	C	-77.3			-136	-136	-136	-136	-116
UD9R	T	C	-77.3			-136	-136	-136	-136	-116
UD10	T	C	-77.3			-136	-136	-136	-136	-116
UD10	T	C	-77.3			-136	-136	-136	-136	-116
UD11	T	C	-77.3			-136	-136	-136	-136	-116
UD11	T	C	-77.3			-136	-136	-136	-136	-116
UD12	T	C	-77.3			-136	-136	-136	-136	-116
UD12	T	C	-77.3			-136	-136	-136	-136	-116
UD13	T	C	-77.3			-136	-136	-136	-136	-116
UD13	T	C	-77.3			-136	-136	-136	-136	-116
UD14	T	C	-77.3			-136	-136	-136	-136	-116
UD14	T	C	-77.3			-136	-136	-136	-136	-116
UD15	T	C	-77.3			-136	-136	-136	-136	-116
UD15	T	C	-77.3			-136	-136	-136	-136	-116
UD16	T	C	-77.3			-136	-136	-136	-136	-116
UD16	T	C	-77.3			-136	-136	-136	-136	-116

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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)
UL01	250000	R	47325	L	C
UL02	250000	R	47325	R	C
UL03	250000	R	47575	L	C
UL04	250000	R	47575	R	C
UL05	250000	R	47825	L	C
UL06	250000	R	47825	R	C
UL07	250000	R	48075	L	C
UL08	250000	R	48075	R	C
UL09	250000	R	48325	L	C
UL10	250000	R	48325	R	C
UL11	250000	R	48575	L	C
UL12	250000	R	48575	R	C
UL13	250000	R	48825	L	C
UL14	250000	R	48825	R	C
UL15	250000	R	49075	L	C
UL16	250000	R	49075	R	C
UL17	125000	R	49262.5	L	C
UL18	125000	R	49262.5	R	C
UL19	125000	R	49387.5	L	C
UL20	125000	R	49387.5	R	C
UL21	125000	R	49512.5	L	C
UL22	125000	R	49512.5	R	C
UL23	125000	R	49637.5	L	C
UL24	125000	R	49637.5	R	C
UL25	125000	R	49762.5	L	C
UL26	125000	R	49762.5	R	C
UL27	125000	R	49887.5	L	C
UL28	125000	R	49887.5	R	C
UL29	125000	R	50012.5	L	C
UL30	125000	R	50012.5	R	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
FL01	119	UL07	VU1L	DL07	UD11L
FL02	119	UL08	VU1R	DL08	UD11R
FL03	119	UL11	VU2L	DL11	UD13L
FL04	119	UL12	VU2R	DL12	UD13R
FL05	119	UL09	VU3L	DL09	UD7L
FL06	119	UL10	VU3R	DL10	UD7R
FL07	119	UL05	VU4L	DL05	UD5L
FL08	119	UL06	VU4R	DL06	UD5R
FL09	119	UL05	VU5L	DL05	UD4L
FL10	119	UL06	VU5R	DL06	UD4R
FL11	119	UL13	VU6L	DL13	UD14L
FL12	119	UL14	VU6R	DL14	UD14R
FL13	119	UL09	VU7L	DL09	UD3L
FL14	119	UL10	VU7R	DL10	UD3R
FL15	119	UL01	VU8L	DL01	UD15L
FL16	119	UL02	VU8R	DL02	UD15R
FL17	119	UL15	VU9L	DL15	UD16L
FL18	119	UL16	VU9R	DL16	UD16R
FL19	119	UL03	VU10L	DL03	UD12L
FL20	119	UL04	VU10R	DL04	UD12R
FL21	119	UL07	VU11L	DL07	UD1L
FL22	119	UL08	VU11R	DL08	UD1R
FL23	119	UL03	VU12L	DL03	UD10L
FL24	119	UL04	VU12R	DL04	UD10R
FL25	119	UL11	VU13L	DL11	UD2L
FL26	119	UL12	VU13R	DL12	UD2R
FL27	119	UL13	VU14L	DL13	UD6L
FL28	119	UL14	VU14R	DL14	UD6R
FL29	119	UL01	VU15L	DL01	UD8L
FL30	119	UL02	VU15R	DL02	UD8R

UL31	125000	R	50137.5	L	C
UL32	125000	R	50137.5	R	C
DL01	250000	T	40125	L	C
DL02	250000	T	40125	R	C
DL03	250000	T	40375	L	C
DL04	250000	T	40375	R	C
DL05	250000	T	40625	L	C
DL06	250000	T	40625	R	C
DL07	250000	T	40875	L	C
DL08	250000	T	40875	R	C
DL09	250000	T	41125	L	C
DL10	250000	T	41125	R	C
DL11	250000	T	41375	L	C
DL12	250000	T	41375	R	C
DL13	250000	T	41625	L	C
DL14	250000	T	41625	R	C
DL15	250000	T	41875	L	C
DL16	250000	T	41875	R	C
DL17	125000	T	39062.5	L	C
DL18	125000	T	39062.5	R	C
DL19	125000	T	39187.5	L	C
DL20	125000	T	39187.5	R	C
DL21	125000	T	39312.5	L	C
DL22	125000	T	39312.5	R	C
DL23	125000	T	39437.5	L	C
DL24	125000	T	39437.5	R	C
DL25	125000	T	39562.5	L	C
DL26	125000	T	39562.5	R	C
DL27	125000	T	39687.5	L	C
DL28	125000	T	39687.5	R	C
DL29	125000	T	39812.5	L	C
DL30	125000	T	39812.5	R	C
DL31	125000	T	39937.5	L	C
DL32	125000	T	39937.5	R	C

FL31	119	UL15	VU16L	DL15	UD9L
FL32	119	UL16	VU16R	DL16	UD9R
RL01	113	UL23	UU1L	DL23	VD11L
RL02	113	UL24	UU1R	DL24	VD11R
RL03	113	UL27	UU2L	DL27	VD13L
RL04	113	UL28	UU2R	DL28	VD13R
RL05	113	UL25	UU3L	DL25	VD7L
RL06	113	UL26	UU3R	DL26	VD7R
RL07	113	UL21	UU4L	DL21	VD5L
RL08	113	UL22	UU4R	DL22	VD5R
RL09	113	UL21	UU5L	DL21	VD4L
RL10	113	UL22	UU5R	DL22	VD4R
RL11	113	UL29	UU6L	DL29	VD14L
RL12	113	UL30	UU6R	DL30	VD14R
RL13	113	UL25	UU7L	DL25	VD3L
RL14	113	UL26	UU7R	DL26	VD3R
RL15	113	UL17	UU8L	DL17	VD15L
RL16	113	UL18	UU8R	DL18	VD15R
RL17	113	UL31	UU9L	DL31	VD16L
RL18	113	UL32	UU9R	DL32	VD16R
RL19	113	UL19	UU10L	DL19	VD12L
RL20	113	UL20	UU10R	DL20	VD12R
RL21	113	UL23	UU11L	DL23	VD1L
RL22	113	UL24	UU11R	DL24	VD1R
RL23	113	UL19	UU12L	DL19	VD10L
RL24	113	UL20	UU12R	DL20	VD10R
RL25	113	UL27	UU13L	DL27	VD2L
RL26	113	UL28	UU13R	DL28	VD2R
RL27	113	UL29	UU14L	DL29	VD6L
RL28	113	UL30	UU14R	DL30	VD6R
RL29	113	UL17	UU15L	DL17	VD8L
RL30	113	UL18	UU15R	DL18	VD8R
RL31	113	UL31	UU16L	DL31	VD9L
RL32	113	UL32	UU16R	DL32	VD9R

**FEDERAL COMMUNICATIONS COMMISSION**  
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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)
D1	250MG7W	250000	16	533000	0.6642		9.3	21.5
D2	250MG7W	250000	8	450000	0.747		8.2	20.4
D3	250MG7W	250000	4	358000	0.895		6.6	18.8
D4	3M67G7W	3672	8	6666	0.747		8.2	20.4
D5	1M22G7W	1224	8	1950	0.6642		7.1	19.3
D6	612KG7W	612	4	868	0.8869		6.5	18.7
D7	612KG7W	612	2	243	0.5		-1.3	10.9
D8	125MG7W	125000	4	225000	0.747		8.2	20.4



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**FCC Form 312 - Schedule S: (Technical and Operational Description)**

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

Associated Transponder ID Range (a) Start (b) End		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 <sup>2</sup> /Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
						(j) Min.	(k) Max.		(l) Min.	(m) Max.				
FL01	FL32	D1		1		LB1.docx		63	11	23	66	70	-116	24.6
FL01	FL32	D2		1		LB2.docx		63	11	23	66	70	-116	24.6
FL01	FL32	D3		1		LB3.docx		63	11	23	66	70	-116	24.6
RL01	RL32	D4		34	3676	LB4.docx		49.8	6	6	43.7	45.7	-122	37.4
RL01	RL32	D5		102	1225	LB5.docx		49.8	6	6	38.9	40.9	-122	37.4
RL01	RL32	D6		204	612	LB6.docx		49.8	6	6	35.9	37.9	-122	37.4
RL01	RL32	D7		204	612	LB7.docx		49.8	6	6	35.9	37.9	-122	37.4
RL01	RL32	D8		1		LB8.docx		63.3	7	20	62	64	-119	37.4

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**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): Yes

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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 3647	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 3140		
S15c. Mass of spacecraft and fuel at launch (kg): 6787	S15f. Length (m): 32.5	S15i. Payload: 0.8764
S15d. Mass of fuel, in orbit, at beginning of life (kg): 400	S15g. Width (m): 9.4	S15j. Bus: 0.7769
S15e. Deployed Area of Solar Array (square meters): 92	S15h. Height (m): 8.4	S15k. Total: 0.6809

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): 15453	(f): 15453	(k): 15453	(p): 15453
Bus (Watts):	(b): 2840	(g): 1596	(l): 2840	(q): 1596
Total (Watts):	(c): 18293	(h): 17049	(m): 18293	(r): 17049
Solar Array (Watts):	(d): 20070	(i): 18090	(n): 19977	(s): 18006
Depth of Battery Discharge (%):	(e) 73.1 %	(j) %	(o) 73.1 %	(t) %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input checked="" 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 checked="" 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 checked="" 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.**