FCC 312 Schedule S	FEDERAL COMMUNICATIONS COMMISSION SATELLITE SPACE STATION AUTHORIZATIONS (Technical and Operational Description)	Page 1: General, Frequency Bands, and GSO Orbit

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: JUPITER 97W		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:
c. Construction Completion Date:		g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth: MHz
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) MHz	l. Orbit Type: Mark all boxes that apply: [X] GSO [ ] 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)		
18.3	G	18.6	G	T	Fixed Satellite Service
18.6	G	18.8	G	T	Fixed Satellite Service
18.8	G	19.3	G	T	Fixed Satellite Service
19.7	G	20.2	G	T	Fixed Satellite Service
27.85	G	29.1	G	R	Fixed Satellite Service
29.25	G	29.5	G	R	Fixed Satellite Service
29.5	G	30	G	R	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 97.1 W	b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:
Longitudinal Tolerance or E/W Station-Keeping: d. Toward West: 0.05 Degrees e. Toward East: 0.05 Degrees	f. Inclination Excursion or N/S Station-Keeping Tolerance: 0.05 Degrees	Range of orbital are in which adequate service can be provided (Optional): Degrees E/W g. Westernmost: 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:

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

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

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.
SA1	E		CONUS, Alaska, Puerto Rico, Canada, Mexico and parts of Central and South America
SA2	E		Cuba
SA3	E		CONUS, Canada, Mexico

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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 Isolation (dB)	(h) Polarization Switchable? (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 Noice 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
GR1	R			0.05	1	30			SA3					25.3	-98	1	1
GT1	T			0.05	1	30			SA3			67.4					
UR1	R			0.05	1	21.5			SA1					18.3	-94	1	1
UT1	T			0.05	1	21.5			SA1			71					
CR1	R			0.05	1	21.5			SA2					14.2	-94	1	1
CT1	T			0.05	1	21.5			SA2			62					
CMD	R			0.05	1	20			SA3					-23	-75	1	1
TLM	T			0.05	1	20			SA3			15.5					
BCN	T			0.05	1	20			SA3			24.2					
RFAT	R			0.05	1	27			SA3					23.3	-114	1	1
IOT	T			0.05	1	27			SA3			42.8					

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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
GR1	R	C			GR1.gxt					
GT1	T	C			GT1.gxt	-142.9	-142.7	-142.6	-142.5	-122.4
UR1	R	C			UR1.gxt					
UT1	T	C			UT1.gxt	-122.3	-122.2	-122	-121.9	-121.8
CR1	R	C			CR1.gxt					
CT1	T	C			CT1.gxt	-145.3	-145.1	-145	-144.9	-144.8
CMD	R	C								
TLM	T	C				-146.8	-146.7	-146.6	-146.5	-146.4
BCN	T	C			BCN.gxt	-170.1	-169.5	-168.8	-168.7	-168.6
RFAT	R	C			RFAT.gxt					
IOT	T	C			IOT.gxt					

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S9. SPACE STATION CHANNELS For each frequency channel 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)
UL1	250000	R	28225	R	C
UL2	250000	R	28475	R	C
UL3	250000	R	28725	R	C
UL4	250000	R	28975	R	C
UL5	250000	R	29625	R	C
UL6	250000	R	29875	R	C
UL7	250000	R	28225	L	C
UL8	250000	R	28475	L	C
UL9	250000	R	28725	L	C
UL10	250000	R	28975	L	C
UL11	250000	R	29375	R	C
UL12	250000	R	27975	L	C
UL13	250000	R	29375	L	C
UL14	125000	R	29312.5	L	C
UL15	125000	R	29437.5	L	C
UL16	125000	R	29812.5	L	C
UL17	125000	R	29937.5	L	C
UL18	125000	R	29687.5	L	C
UL19	125000	R	29562.5	L	C
UL20	125000	R	29312.5	R	C
UL21	125000	R	29437.5	R	C
UL22	125000	R	29812.5	R	C
UL23	125000	R	29937.5	R	C
UL24	125000	R	29562.5	R	C
UL25	125000	R	29687.5	R	C
DL1	250000	T	18425	R	C
DL2	250000	T	18675	R	C
DL3	250000	T	18925	R	C
DL4	250000	T	19175	R	C
DL5	250000	T	19825	R	C

S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
TX1		UL1	GR1		
TX2		UL2	GR1		
TX3		UL3	GR1		
TX4		UL4	GR1		
TX5		UL5	GR1		
TX6		UL6	GR1		
TX7		UL7	GR1		
TX8		UL8	GR1		
TX9		UL9	GR1		
TX10		UL10	GR1		
TX11		UL11	GR1		
TX12		UL12	GR1		
TX13		UL13	GR1		
TX14		UL14	UR1		
TX15		UL15	UR1		
TX16		UL16	UR1		
TX17		UL17	UR1		
TX18		UL18	UR1		
TX19		UL19	UR1		
TX20		UL20	UR1		
TX21		UL21	UR1		
TX22		UL22	UR1		
TX23		UL23	UR1		
TX24		UL24	UR1		
TX25		UL25	UR1		
TX26		UL14	CR1		
TX27		UL15	CR1		
TX28		UL16	CR1		
TX29		UL17	CR1		
TX30		UL18	CR1		

DL6	250000	T	20075	R	C
DL7	250000	T	18425	L	C
DL8	250000	T	18675	L	C
DL9	250000	T	18925	L	C
DL10	250000	T	19175	L	C
DL11	250000	T	19825	L	C
DL12	250000	T	20075	L	C
DL13	125000	T	18362.5	L	C
DL14	125000	T	18487.5	L	C
DL15	125000	T	18862.5	L	C
DL16	125000	T	18987.5	L	C
DL17	125000	T	18737.5	L	C
DL18	125000	T	18612.5	L	C
DL19	125000	T	19762.5	L	C
DL20	125000	T	19887.5	L	C
DL21	125000	T	19112.5	L	C
DL22	125000	T	19237.5	L	C
DL23	125000	T	20012.5	L	C
DL24	125000	T	20137.5	L	C
CMD1	1000	R	28351.5	R	T
CMD2	1000	R	28353.5	R	T
TLM1	1000	T	19701	R	T
TLM2	1000	T	19703	R	T
BCN1	25	T	20199	H	T
RFAT1	25	R	29998.5	R	T
RFAT2	25	R	29998.5	L	T

TX31		UL19	CR1		
TX32		UL20	CR1		
TX33		UL21	CR1		
TX34		UL22	CR1		
TX35		UL23	CR1		
TX36		UL24	CR1		
TX37		UL25	CR1		
TX38				DL1	UT1
TX39				DL2	UT1
TX40				DL3	UT1
TX41				DL4	UT1
TX42				DL5	UT1
TX43				DL6	UT1
TX44				DL7	UT1
TX45				DL8	UT1
TX46				DL9	UT1
TX47				DL10	UT1
TX48				DL11	UT1
TX49				DL12	UT1
TX50				DL1	CT1
TX51				DL2	CT1
TX52				DL3	CT1
TX53				DL4	CT1
TX54				DL5	CT1
TX55				DL6	CT1
TX56				DL7	CT1
TX57				DL8	CT1
TX58				DL9	CT1
TX59				DL10	CT1
TX60				DL11	CT1
TX61				DL12	CT1
TX62				DL13	GT1
TX63				DL14	GT1
TX64				DL15	GT1
TX65				DL16	GT1
TX66				DL17	GT1
TX67				DL18	GT1
TX68				DL19	GT1
TX69				DL20	GT1

TX70				DL21	GT1
TX71				DL22	GT1
TX72				DL23	GT1
TX73				DL24	GT1
TC1		CMD1	CMD		
TC2		CMD2	CMD		
TC3		CMD1	GR1		
TC4		CMD2	GR1		
TM1				TLM1	TLM
TM2				TLM2	TLM
TM3				TLM1	GT1
TM4				TLM2	GT1
BECN				BCN1	BCN
RF1		RFAT1	RFAT		
RF2		RFAT2	RFAT		

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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						
D2	125MG7W	125000						
D3	40M0G7W	40000						
D4	3M67G7W	3672						
D5	1M22G7W	1224						
D6	612KG7W	612						

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S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a) Analog Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) Signal Type	(e) Channels per Carrier	Multi-channel Telephony				(j) Video Standard NTSC, PAL, etc.	(k) Video Noise-Weighting (dB)	(l) Video and SCPC/FM Modulation Index	(m) SCPC/FM Compander, Preemphasis, and Noise Weighting (dB)	(n) Total C/N Performance Objective (dB)	(o) Single Entry C/I Objective (dB)
					(f) Ave. Companded Talker Level (dBm0)	(g) Bottom Baseband Freq. (MHz)	(h) Top Baseband Freq. (MHz)	(i) RMS Modulation Index						
A1	1M00F2D	1000												
A2	1M00G2D	1000												
A3	25K0N	25												

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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)			
								(i)Assoc. Stn. Max. Antenna Gain (dBi)	Assoc. Station Transmit Power (dBW)		EIRP (dBW)		(n) Max. Power Flux Density (dBW/m2/Hz)	(o)Assoc. Stn Rec. G/T (dB/K)
(a) Start	(b) End	(c) Digital (Table S11)	(d) Analog (Table S12)						(j) Min.	(k) Max.	(l) Min.	(m) Max.		
TX38	TX49	D1										65		
TX38	TX49	D2										62		
TX38	TX49	D3										57		
TX50	TX61	D1										62		
TX50	TX61	D2										59		
TX50	TX61	D3										54		
TX62	TX73	D4										46.1		
TX62	TX73	D5										41.3		
TX62	TX73	D6										38.3		
TM1	TM2		A2									15.5		
TM3	TM4		A2									41.2		
BECN	BECN		A3									24.2		

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

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?:	[X] **YES**	[ ] **NO**	[ ] **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?	[X] **YES**	[ ] **NO**	[ ] **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?	[X] **YES**	[ ] **NO**	[ ] **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.