

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

a. Space Station or Satellite Network Name: BSSNET119W		e. Estimated Date of Placement into Service: 12/30/2012		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date: 6/30/2009		f. Estimated Lifetime of Satellite(s): 15 Years		j. Number of transponders offered on a common carrier basis: 0	
c. Construction Completion Date: 10/30/2011		g. Total Number of Transponders: 222		k. Total Common Carrier Transponder Bandwidth: 0 MHz	
d1. Est Launch Date Begin: 12/30/2011	d2. Est Launch Date End: 12/30/2011	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 5328 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)		
17.3	G	17.7	G	T	Broadcasting Satellite Service - Data
17.3	G	17.7	G	T	Broadcasting Satellite Service - Sound
17.3	G	17.7	G	T	Broadcasting Satellite Service - Video
17.3	G	17.7	G	T	TTC
24.75	G	25.25	G	R	Broadcasting Satellite Service - Data
24.75	G	25.25	G	R	Broadcasting Satellite Service - Sound
24.75	G	25.25	G	R	Broadcasting Satellite Service - Video
24.75	G	25.25	G	R	TTC

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

a. Nominal Orbital Longitude (Degrees E/W): 118.8 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: Available Appendix F offset orbital location			
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:	0.05 Degrees			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:

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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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.
CONUS+	S		USA, HWA, ALS
NESPOT	S		USA, North of 38N, East of 100WL
SESPOT	S		USA, South of 38N, East of 100WL
WSPOT	S		USA, West of 100 WL
HISPOT	S		HWA
LAUL	S	ULLA SA.gxt	Sample spot LA Uplink
CMD	S	ULLA SA.gxt	Command station located in LA
ULSPOT	S		Example of 7 Feeder Links
TEL	S	ULLA SA.gxt	Telemetry station located in LA
CRBSPOT	S		ABW, ATN
ALSSPOT	S		ALS

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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 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	
USA	T	36.4	21.4	0.15		30	N		CONUS+	1.8	298	61.1						
SP28	T	47.7	45	0.1		30	N		NESPOT	2.5	11.5	58.3						
SP48	T	47.7	45	0.1		30	N		SESPOT	2.5	22	61.1						
SP31	T	47.7	45	0.1		30	N		WSPOT	2.5	5.3	54.9						
SP50	T	47.7	45	0.1		30	N		HISPOT	2.5	5.5	55.1						
LAUL	R	47	46	0.1		30	N		LAUL				794	17.5	-109	25	0.5	
CMD	R	47	46	0.1		30	N		LAUL				794	17.5				
SP01	T	47.7	45	0.1		30	N		WSPOT	2.5	5.6	55.2						
SP02	T	47.7	45	0.1		30	N		WSPOT	2.5	5.7	55.3						
SP03	T	47.7	45	0.1		30	N		WSPOT	2.5	5.6	55.2						
SP04	T	47.7	45	0.1		30	N		WSPOT	2.5	5.6	55.2						
SP05	T	47.7	45	0.1		30	N		WSPOT	2.5	5.7	55.3						
SP06	T	47.7	45	0.1		30	N		WSPOT	2.5	5.7	55.3						
SP07	T	47.7	45	0.1		30	N		NESPOT	2.5	11.5	58.3						
SP08	T	47.7	45	0.1		30	N		NESPOT	2.5	11.7	58.4						
SP09	T	47.7	45	0.1		30	N		WSPOT	2.5	5.5	55.1						
SP10	T	47.7	45	0.1		30	N		WSPOT	2.5	5.5	55.1						
SP11	T	47.7	45	0.1		30	N		WSPOT	2.5	5.5	55.1						
SP12	T	47.7	45	0.1		30	N		WSPOT	2.5	5.5	55.1						
SP13	T	47.7	45	0.1		30	N		WSPOT	2.5	5.5	55.1						
SP14	T	47.7	45	0.1		30	N		WSPOT	2.5	5.6	55.2						
SP15	T	47.7	45	0.1		30	N		NESPOT	2.5	11.3	58.2						
SP16	T	47.7	45	0.1		30	N		NESPOT	2.5	11.5	58.3						
SP17	T	47.7	45	0.1		30	N		NESPOT	2.5	11.7	58.4						
SP18	T	47.7	45	0.1		30	N		NESPOT	2.5	12	58.5						
SP19	T	47.7	45	0.1		30	N		WSPOT	2.5	5.4	55						
SP20	T	47.7	45	0.1		30	N		WSPOT	2.5	5.4	55						
SP21	T	47.7	45	0.1		30	N		WSPOT	2.5	5.4	55						
SP22	T	47.7	45	0.1		30	N		WSPOT	2.5	5.4	55						

SP23	T	47.7	45	0.1		30	N		WSPOT	2.5	5.4	55					
SP24	T	47.7	45	0.1		30	N		WSPOT	2.5	5.5	55.1					
SP25	T	47.7	45	0.1		30	N		NESPOT	2.5	11	58.1					
SP26	T	47.7	45	0.1		30	N		NESPOT	2.5	11.1	58.2					
SP27	T	47.7	45	0.1		30	N		NESPOT	2.5	11.3	58.2					
SP29	T	47.7	45	0.1		30	N		NESPOT	2.5	11.8	58.4					
SP30	T	47.7	45	0.1		30	N		WSPOT	2.5	5.3	54.9					
SP32	T	47.7	45	0.1		30	N		WSPOT	2.5	5.3	54.9					
SP33	T	47.7	45	0.1		30	N		WSPOT	2.5	5.3	54.9					
SP34	T	47.7	45	0.1		30	N		WSPOT	2.5	5.3	55					
SP35	T	47.7	45	0.1		30	N		WSPOT	2.5	5.4	55					
SP36	T	47.7	45	0.1		30	N		SESPOT	2.5	21.6	61.1					
SP37	T	47.7	45	0.1		30	N		SESPOT	2.5	21.9	61.1					
SP38	T	47.7	45	0.1		30	N		SESPOT	2.5	22.2	61.2					
SP39	T	47.7	45	0.1		30	N		NESPOT	2.5	11.4	58.3					
SP40	T	47.7	45	0.1		30	N		WSPOT	2.5	5.2	54.9					
SP41	T	47.7	45	0.1		30	N		WSPOT	2.5	5.2	54.9					
SP42	T	47.7	45	0.1		30	N		WSPOT	2.5	5.3	54.9					
SP43	T	47.7	45	0.1		30	N		WSPOT	2.5	5.3	55					
SP44	T	47.7	45	0.1		30	N		SESPOT	2.5	21.4	61					
SP45	T	47.7	45	0.1		30	N		SESPOT	2.5	21.7	61.1					
SP46	T	47.7	45	0.1		30	N		SESPOT	2.5	22	61					
SP47	T	47.7	45	0.1		30	N		SESPOT	2.5	21	60.9					
SP49	T	47.7	45	0.1		30	N		ALSSPOT	2.5	6.2	55.6					
SP51	T	47.7	45	0.1		30	N		CRBSPOT	2.5	22.7	61.3					
SP52	T	47.7	45	0.1		30	N		CRBSPOT	2.5	23.4	61.4					
SP53	T	47.7	45	0.1		30	N		ALSSPOT	2.5	6	55.4					
ES1	R	47	46	0.1		30	N		ULSPOT				794	17.5	-109	25	0.5
ES2	R	47	46	0.1		30	N		ULSPOT				794	17.5	-109	25	0.5
ES3	R	47	46	0.1		30	N		ULSPOT				794	17.5	-109	25	0.5
ES4	R	47	46	0.1		30	N		ULSPOT				794	17.5	-109	25	0.5
ES5	R	47	46	0.1		30	N		ULSPOT				794	17.5	-109	25	0.5
ES6	R	47	46	0.1		30	N		ULSPOT				794	17.5	-109	25	0.5
ES7	R	47	46	0.1		30	N		ULSPOT				794	17.5	-109	25	0.5
TEL	T	36.4	29	0.15		30	N		TEL	2	0.05	23.4					
CMD	R	47.7	46	0.1		30	N		CRBSPOT				794	18.7			
TELC	T	47.7	46	0.1		30	N		CRBSPOT	2	0.1	37.7					

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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
USA	T	C	-118.8		119 Conus.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP50	T	C	-118.8		SP50.gxt	-122.4	-122.3	-122.2	-122.1	-122
SP02	T	C	-118.8		SP02.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP01	T	C	-118.8		SP01.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP04	T	C	-118.8		SP04.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP05	T	C	-118.8		SP05.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP06	T	C	-118.8		SP06.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP07	T	C	-118.8		SP07.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP08	T	C	-118.8		SP08.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP09	T	C	-118.8		SP09.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP10	T	C	-118.8		SP10.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP11	T	C	-118.8		SP11.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP12	T	C	-118.8		SP12.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP13	T	C	-118.8		SP13.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP14	T	C	-118.8		SP14.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP15	T	C	-118.8		SP15.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP16	T	C	-118.8		SP16.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP28	T	C	-118.8		SP28.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP31	T	C	-118.8		SP31.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP48	T	C	-118.8		SP48.gxt	-116.4	-116.3	-116.2	-116	-115.9
LAUL	R	C	-118.8		ULLA G.gxt					
SP03	T	C	-118.8		SP03.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
CMD	R	C	-118.8		ULLA G.gxt					
SP17	T	C	-118.8		SP17.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP18	T	C	-118.8		SP18.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP19	T	C	-118.8		SP19.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP20	T	C	-118.8		SP20.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP21	T	C	-118.8		SP21.gxt	-122.6	-122.5	-122.4	-122.2	-122.1

SP22	T	C	-118.8		SP22.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP23	T	C	-118.8		SP23.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP24	T	C	-118.8		SP24.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP25	T	C	-118.8		SP25.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP26	T	C	-118.8		SP26.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP27	T	C	-118.8		SP27.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP29	T	C	-118.8		SP29.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP30	T	C	-118.8		SP30.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP32	T	C	-118.8		SP32.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP33	T	C	-118.8		SP33.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP34	T	C	-118.8		SP34.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP35	T	C	-118.8		SP35.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP36	T	C	-118.8		SP36.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP37	T	C	-118.8		SP37.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP38	T	C	-118.8		SP38.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP39	T	C	-118.8		SP39.gxt	-119.2	-119.1	-119	-118.8	-118.7
SP40	T	C	-118.8		SP40.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP41	T	C	-118.8		SP41.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP42	T	C	-118.8		SP42.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP43	T	C	-118.8		SP43.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP44	T	C	-118.8		SP44.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP45	T	C	-118.8		SP45.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP46	T	C	-118.8		SP46.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP47	T	C	-118.8		SP47.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP49	T	C	-118.8		SP49.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
SP51	T	C	-118.8		SP51.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP52	T	C	-118.8		SP52.gxt	-116.4	-116.3	-116.2	-116	-115.9
SP53	T	C	-118.8		SP53.gxt	-122.6	-122.5	-122.4	-122.2	-122.1
TEL	T	C	-118.8		119 Conus.gxt	-140.5	-140.5	-140.5	-140.5	-140.5
CMD	R	C	-118.8		SP51R.gxt					
TELC	T	C	-118.8		SP51.gxt	-126.2	-126.2	-126.2	-126.2	-126.2

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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)
FA001	26000	T	17325	L	C
FA003	26000	T	17354.16	L	C
FA005	26000	T	17383.32	L	C
FA007	26000	T	17412.48	L	C
FA009	26000	T	17441.64	L	C
FA011	26000	T	17470.8	L	C
FA013	26000	T	17499.96	L	C
FA015	26000	T	17529.12	L	C
FA017	26000	T	17558.28	L	C
FA019	26000	T	17587.44	L	C
FA021	26000	T	17616.6	L	C
FA023	26000	T	17645.76	L	C
FA025	26000	T	17674.92	L	C
FB002	26000	T	17325	R	C
FB004	26000	T	17354.16	R	C
FB006	26000	T	17383.32	R	C
FB008	26000	T	17412.48	R	C
FB010	26000	T	17441.64	R	C
FB012	26000	T	17470.8	R	C
FB014	26000	T	17499.96	R	C
FB016	26000	T	17529.12	R	C
FB018	26000	T	17558.28	R	C
FB020	26000	T	17587.44	R	C
FB022	26000	T	17616.6	R	C
FB024	26000	T	17645.76	R	C
FB026	26000	T	17674.92	R	C
GA001	26000	R	24775	R	C
GA003	26000	R	24804.16	R	C
GA005	26000	R	24833.32	R	C
GA007	26000	R	24862.48	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
NA001	156	GA001	LAUL	FA001	USA
NA002	156	GA003	LAUL	FA003	USA
NA003	156	GA005	LAUL	FA005	USA
NA004	156	GA007	LAUL	FA007	USA
NA005	156	GA009	LAUL	FA009	USA
NB001	156	GB002	LAUL	FB002	USA
NB002	156	GB004	LAUL	FB004	USA
NB003	156	GB006	LAUL	FB006	USA
NB004	156	GB008	LAUL	FB008	USA
NB005	156	GB010	LAUL	FB010	USA
00001	156	GB002	ES1	FB012	SP01
00002	156	GB004	ES1	FB014	SP01
00003	156	GB006	ES1	FB016	SP01
00004	156	GB008	ES1	FB018	SP01
00005	156	GB010	ES1	FB020	SP02
00006	156	GB012	ES1	FB022	SP02
00007	156	GB014	ES1	FB024	SP02
00008	156	GB016	ES1	FB026	SP02
00009	156	GA017	ES1	FA011	SP09
00010	156	GA019	ES1	FA013	SP09
00011	156	GA021	ES1	FA015	SP09
00012	156	GA023	ES1	FA017	SP09
00013	156	GA025	ES1	FA019	SP10
00014	156	GA027	ES1	FA021	SP10
00015	156	GA029	ES1	FA023	SP10
00016	156	GA031	ES1	FA025	SP10
00017	156	GB002	ES1	FB012	SP20
00018	156	GB004	ES1	FB014	SP20
00019	156	GB006	ES1	FB016	SP20
00020	156	GB008	ES1	FB018	SP20



GA009	26000	R	24891.64	R	C
GA011	26000	R	24920.8	R	C
GA013	26000	R	24949.96	R	C
GA015	26000	R	24979.12	R	C
GA017	26000	R	25008.28	R	C
GA019	26000	R	25037.44	R	C
GA021	26000	R	25066.6	R	C
GA023	26000	R	25095.76	R	C
GA025	26000	R	25124.92	R	C
GA027	26000	R	25154.08	R	C
GA029	26000	R	25183.24	R	C
GA031	26000	R	25212.4	R	C
GB002	26000	R	24775	L	C
GB004	26000	R	24804.16	L	C
GB006	26000	R	24833.32	L	C
GB008	26000	R	24862.48	L	C
CMD1	1000	R	24753	R	T
TLM1	1000	T	17303	R	T
TLM2	1000	T	17306	R	T
GB010	26000	R	24891.64	L	C
GB012	26000	R	24920.8	L	C
GB014	26000	R	24949.96	L	C
GB016	26000	R	24979.12	L	C
GB018	26000	R	25008.28	L	C
GB020	26000	R	25037.44	L	C
GB022	26000	R	25066.6	L	C
GB024	26000	R	25095.76	L	C
GB026	26000	R	25124.92	L	C
GB028	26000	R	25154.08	L	C
GB030	26000	R	25183.24	L	C
GB032	26000	R	25212.4	L	C
CMD2	1000	R	24755	R	T

00021	156	GB010	ES1	FB020	SP21
00022	156	GB012	ES1	FB022	SP21
00023	156	GB014	ES1	FB024	SP21
00024	156	GB016	ES1	FB026	SP21
00025	156	GB018	ES1	FB012	SP31
00026	156	GB020	ES1	FB014	SP31
00027	156	GB022	ES1	FB016	SP31
00028	156	GB024	ES1	FB018	SP31
00029	156	GA025	ES1	FA019	SP32
00030	156	GA027	ES1	FA021	SP32
00031	156	GA029	ES1	FA023	SP32
00032	156	GA031	ES1	FA025	SP32
00033	156	GB002	ES2	FB012	SP03
00034	156	GB004	ES2	FB014	SP03
00035	156	GB006	ES2	FB016	SP03
00036	156	GB008	ES2	FB018	SP03
00037	156	GB010	ES2	FB020	SP04
00038	156	GB012	ES2	FB022	SP04
00039	156	GB014	ES2	FB024	SP04
00040	156	GB016	ES2	FB026	SP04
00041	156	GA017	ES2	FA011	SP11
00042	156	GA019	ES2	FA013	SP11
00043	156	GA021	ES2	FA015	SP11
00044	156	GA023	ES2	FA017	SP11
00045	156	GA025	ES2	FA019	SP12
00046	156	GA027	ES2	FA021	SP12
00047	156	GA029	ES2	FA023	SP12
00048	156	GA031	ES2	FA025	SP12
00049	156	GB002	ES2	FB012	SP22
00050	156	GB004	ES2	FB014	SP22
00051	156	GB006	ES2	FB016	SP22
00052	156	GB008	ES2	FB018	SP22
00053	156	GB010	ES2	FB020	SP23
00054	156	GB012	ES2	FB022	SP23
00055	156	GB014	ES2	FB024	SP23
00056	156	GB016	ES2	FB026	SP23
00057	156	GB018	ES2	FB012	SP33
00058	156	GB020	ES2	FB014	SP33
00059	156	GB022	ES2	FB016	SP33

00060	156	GB024	ES2	FB018	SP33
00061	156	GA025	ES2	FA019	SP34
00062	156	GA027	ES2	FA021	SP34
00063	156	GA029	ES2	FA023	SP34
00064	156	GA031	ES2	FA025	SP34
00065	156	GB002	ES3	FB012	SP05
00066	156	GB004	ES3	FB014	SP05
00067	156	GB006	ES3	FB016	SP05
00068	156	GB008	ES3	FB018	SP05
00069	156	GB010	ES3	FB020	SP06
00070	156	GB012	ES3	FB022	SP06
00071	156	GB014	ES3	FB024	SP06
00072	156	GB016	ES3	FB026	SP06
00073	156	GA017	ES3	FA011	SP13
00074	156	GA019	ES3	FA013	SP13
00075	156	GA021	ES3	FA015	SP13
00076	156	GA023	ES3	FA017	SP13
00077	156	GA025	ES3	FA019	SP14
00078	156	GA027	ES3	FA021	SP14
00079	156	GA029	ES3	FA023	SP14
00080	156	GA031	ES3	FA025	SP14
00081	156	GB002	ES3	FB012	SP24
00082	156	GB004	ES3	FB014	SP24
00083	156	GB006	ES3	FB016	SP24
00084	156	GB008	ES3	FB018	SP24
00085	156	GB010	ES3	FB020	SP25
00086	156	GB012	ES3	FB022	SP25
00087	156	GB014	ES3	FB024	SP25
00088	156	GB016	ES3	FB026	SP25
00089	156	GB018	ES3	FB012	SP35
00090	156	GB020	ES3	FB014	SP35
00091	156	GB022	ES3	FB016	SP35
00092	156	GB024	ES3	FB018	SP35
00093	156	GA025	ES3	FA019	SP36
00094	156	GA027	ES3	FA021	SP36
00095	156	GA029	ES3	FA023	SP36
00096	156	GA031	ES3	FA025	SP36
00097	156	GB002	ES4	FB012	SP07
00098	156	GB004	ES4	FB014	SP07

00099	156	GB006	ES4	FB016	SP07
00100	156	GB008	ES4	FB018	SP07
00101	156	GB010	ES4	FB020	SP08
00102	156	GB012	ES4	FB022	SP08
00103	156	GB014	ES4	FB024	SP08
00104	156	GB016	ES4	FB026	SP08
00105	156	GA017	ES4	FA011	SP15
00106	156	GA019	ES4	FA013	SP15
00107	156	GA021	ES4	FA015	SP15
00108	156	GA023	ES4	FA017	SP15
00109	156	GA025	ES4	FA019	SP16
00110	156	GA027	ES4	FA021	SP16
00111	156	GA029	ES4	FA023	SP16
00112	156	GA031	ES4	FA025	SP16
00113	156	GB002	ES4	FB012	SP26
00114	156	GB004	ES4	FB014	SP26
00115	156	GB006	ES4	FB016	SP26
00116	156	GB008	ES4	FB018	SP26
00117	156	GB010	ES4	FB020	SP27
00118	156	GB012	ES4	FB022	SP27
00119	156	GB014	ES4	FB024	SP27
00120	156	GB016	ES4	FB026	SP27
00121	156	GB018	ES4	FB012	SP37
00122	156	GB020	ES4	FB014	SP37
00123	156	GB022	ES4	FB016	SP37
00124	156	GB024	ES4	FB018	SP37
00125	156	GA025	ES4	FA019	SP38
00126	156	GA027	ES4	FA021	SP38
00127	156	GA029	ES4	FA023	SP38
00128	156	GA031	ES4	FA025	SP38
00129	156	GB002	ES5	FB012	SP28
00130	156	GB004	ES5	FB014	SP28
00131	156	GB006	ES5	FB016	SP28
00132	156	GB008	ES5	FB018	SP28
00133	156	GB010	ES5	FB020	SP29
00134	156	GB012	ES5	FB022	SP29
00135	156	GB014	ES5	FB024	SP29
00136	156	GB016	ES5	FB026	SP29
00137	156	GA017	ES5	FA011	SP39

00138	156	GA019	ES5	FA013	SP39
00139	156	GA021	ES5	FA015	SP39
00140	156	GA023	ES5	FA017	SP39
00141	156	GA025	ES5	FA019	SP47
00142	156	GA027	ES5	FA021	SP47
00143	156	GA029	ES5	FA023	SP47
00144	156	GA031	ES5	FA025	SP47
00145	156	GB002	ES5	FB012	SP45
00146	156	GB004	ES5	FB014	SP45
00147	156	GB006	ES5	FB016	SP45
00148	156	GB008	ES5	FB018	SP45
00149	156	GB010	ES5	FB020	SP46
00150	156	GB012	ES5	FB022	SP46
00151	156	GB014	ES5	FB024	SP46
00152	156	GB016	ES5	FB026	SP46
00153	156	GB018	ES5	FB012	SP17
00154	156	GB020	ES5	FB014	SP17
00155	156	GB022	ES5	FB016	SP17
00156	156	GB024	ES5	FB018	SP17
00157	156	GA025	ES5	FA019	SP18
00158	156	GA027	ES5	FA021	SP18
00159	156	GA029	ES5	FA023	SP18
00160	156	GA031	ES5	FA025	SP18
00161	156	GB002	ES6	FB012	SP43
00162	156	GB004	ES6	FB014	SP43
00163	156	GB006	ES6	FB016	SP43
00164	156	GB008	ES6	FB018	SP43
00165	156	GB010	ES6	FB020	SP44
00166	156	GB012	ES6	FB022	SP44
00167	156	GB014	ES6	FB024	SP44
00168	156	GB016	ES6	FB026	SP44
00169	156	GA017	ES6	FA011	SP48
00170	156	GA019	ES6	FA013	SP48
00171	156	GA021	ES6	FA015	SP48
00172	156	GA023	ES6	FA017	SP48
00173	156	GA025	ES6	FA019	SP30
00174	156	GA027	ES6	FA021	SP30
00175	156	GA029	ES6	FA023	SP30
00176	156	GA031	ES6	FA025	SP30

00177	156	GB002	ES6	FB012	SP51
00178	156	GB004	ES6	FB014	SP51
00179	156	GB006	ES6	FB016	SP51
00180	156	GB008	ES6	FB018	SP51
00181	156	GB010	ES6	FB020	SP42
00182	156	GB012	ES6	FB022	SP42
00183	156	GB014	ES6	FB024	SP42
00184	156	GB016	ES6	FB026	SP42
00185	156	GB018	ES6	FB012	SP53
00186	156	GB020	ES6	FB014	SP53
00187	156	GB022	ES6	FB016	SP53
00188	156	GB024	ES6	FB018	SP53
00189	156	GB002	ES7	FB012	SP41
00190	156	GB004	ES7	FB014	SP41
00191	156	GB006	ES7	FB016	SP41
00192	156	GB008	ES7	FB018	SP41
00193	156	GB010	ES7	FB020	SP40
00194	156	GB012	ES7	FB022	SP40
00195	156	GB014	ES7	FB024	SP40
00196	156	GB016	ES7	FB026	SP40
00197	156	GB010	ES7	FB020	SP19
00198	156	GB012	ES7	FB022	SP19
00199	156	GB014	ES7	FB024	SP19
00200	156	GB016	ES7	FB026	SP19
00201	156	GA025	ES7	FA019	SP50
00202	156	GA027	ES7	FA021	SP50
00203	156	GA029	ES7	FA023	SP50
00204	156	GA031	ES7	FA025	SP50
00205	156	GB010	ES7	FB020	SP52
00206	156	GB012	ES7	FB022	SP52
00207	156	GB014	ES7	FB024	SP52
00208	156	GB016	ES7	FB026	SP52
00209	156	GA025	ES7	FA019	SP49
00210	156	GA027	ES7	FA021	SP49
00211	156	GA029	ES7	FA023	SP49
00212	156	GA031	ES7	FA025	SP49
C1		CMD1	CMD		
C2		CMD2	CMD		
T1				TLM1	TEL

T2				TLM2	TEL
C1CRB		CMD1	CMDCR		
C2CRB		CMD2	CMDCR		
T1CRB				TLM1	TELCR
T2CRB				TLM2	TELCR

**FEDERAL COMMUNICATIONS COMMISSION**  
**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)
D1	25M8G7W	25800	8	42570	0.67		7.1	20





**FEDERAL COMMUNICATIONS COMMISSION**  
**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 (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) (j) Min. (k) Max.		EIRP (dBW) (l) Min. (m) Max.		(n) Max. Power Flux Density (dBW/m <sup>2</sup> /Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
NA001	NB005	D1		1		Comm link CO		67.6	7	14.9	46.1	61.1	-115	16.4
00001	00212	D1		1		Comm link Spo		67.6	8	30.4	59.1	61.1	-115	16.4
C1	C2		C1			Command Link		64.4	5.5	24.5				17.5
T1	T2		T1			Telemetry Link					16	23.4	-140.5	41.2
C1CRB	C2CRB		C1					64.4	5.5	24.5				18.7
T1CRB	T2CRB		T1								37.7	37.7	-126.2	41.2

**FEDERAL COMMUNICATIONS COMMISSION**  
**SATELLITE SPACE STATION AUTHORIZATIONS**  
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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

**Remote Control (TT C) Location(s):**

S14a: Street Address:			
S14b. City: Curacao	S14c. County:	S14d. State/Country	S14e. Zip Code:
S14f. Telephone Number:		S14g. Call Sign of Control Station (if appropriate):	

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Characteristics and  
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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 3715	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 2684		
S15c. Mass of spacecraft and fuel at launch (kg): 6339	S15f. Length (m): 50	S15i. Payload: 0.6
S15d. Mass of fuel, in orbit, at beginning of life (kg): 277	S15g. Width (m): 8.2	S15j. Bus: 0.85
S15e. Deployed Area of Solar Array (square meters): 80	S15h. Height (m): 7.3	S15k. Total: 0.51

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): 14822	(f): 14822	(k): 14822	(p): 14822
Bus (Watts):	(b): 1766	(g): 955	(l): 1766	(q): 955
Total (Watts):	(c): 16688	(h): 15877	(m): 16688	(r): 15877
Solar Array (Watts):	(d): 20892	(i): 18568	(n): 19792	(s): 17602
Depth of Battery Discharge (%):	(e) 75 %	(j) 75 %	(o) 75 %	(t) 75 %

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 checked="" 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 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.**