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: ECHOSTAR-8		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: 32	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) 768 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)		
17.3	G	17.8	G	R	Feeder Link for Broadcasting Satellite Service in FSS
12.2	G	12.7	G	T	Broadcasting Satellite Service - Video
14.000	G	14.004	G	R	Space Operations Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 77 W	b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: The 77°W orbital location is registered at the ITU by the Mexican administration.
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):			

FEDERAL COMMUNICATIONS COMMISSION
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:

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

FEDERAL COMMUNICATIONS COMMISSION
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.
SARX	S		Vicinity of Cheyenne, WY and Gilbert, AZ in CONUS
SAC	S		CONUS
SAM	S		Mexico
SAGBL	S		Visible Earth

FEDERAL COMMUNICATIONS COMMISSION
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 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
RXG	R	49.65	43.65	0.12	0.2	30	N		SARX				3673	14	-108	21	1
RXC	R	49.43	40.43	0.12	0.2	30	N		SARX				3491	14	-108	21	1
TXC	T	36.14	26.14	0.12	0.2	30	N		SAC	3	125.3	57.1					
TXC	T	36.14	26.14	0.12	0.2	30	N		SAC	2.5	70.3	54.6					
TXM	T	36.32	30.32	0.12	0.2	30	N		SAM	2.5	70.3	54.8					
GBL	R	4	-4	1		30	N		SAGBL				2884	-34.6			
GBL	T	2	-4	1		30	N		SAGBL	2.5	22.5	13.5					

FEDERAL COMMUNICATIONS COMMISSION
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
RXG	R	C	-77		RXG.gxt					
RXC	R	C	-77		RXC.gxt					
TXC	T	C	-77		TXCH.gxt					
TXC	T	C	-77		TXCM.gxt					
TXM	T	C	-77		TXM.gxt					
GBL	R	C	-77							
GBL	T	C	-77							

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

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)
U0001	24000	R	17324	R	C
U0003	24000	R	17353.16	R	C
U0005	24000	R	17382.32	R	C
U0007	24000	R	17411.48	R	C
U0009	24000	R	17440.64	R	C
U0011	24000	R	17469.8	R	C
U0013	24000	R	17498.96	R	C
U0015	24000	R	17528.12	R	C
U0017	24000	R	17557.28	R	C
U0019	24000	R	17586.44	R	C
U0021	24000	R	17615.6	R	C
U0023	24000	R	17644.76	R	C
U0025	24000	R	17673.92	R	C
U0027	24000	R	17703.08	R	C
U0029	24000	R	17732.24	R	C
U0031	24000	R	17761.4	R	C
U0002	24000	R	17338.58	L	C
U0004	24000	R	17367.74	L	C
U0006	24000	R	17396.9	L	C
U0008	24000	R	17426.06	L	C
U0010	24000	R	17455.22	L	C
U0012	24000	R	17484.38	L	C
U0014	24000	R	17513.54	L	C
U0016	24000	R	17542.7	L	C
U0018	24000	R	17571.86	L	C
U0020	24000	R	17601.02	L	C
U0022	24000	R	17630.18	L	C
U0024	24000	R	17659.34	L	C
U0026	24000	R	17688.5	L	C
U0028	24000	R	17717.66	L	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
T0083	126.6	U0006	RXC	D0006	TXM
T0084	126.6	U0008	RXC	D0008	TXCH
T0085	126.6	U0010	RXC	D0010	TXM
T0086	126.6	U0012	RXC	D0012	TXCH
T0087	126.6	U0014	RXC	D0014	TXM
T0088	126.6	U0016	RXC	D0016	TXCH
T0089	126.6	U0018	RXC	D0018	TXM
T0090	126.6	U0020	RXC	D0020	TXCH
T0091	126.6	U0022	RXC	D0022	TXM
T0092	126.6	U0024	RXC	D0024	TXCH
T0093	126.6	U0026	RXC	D0026	TXM
T0094	126.6	U0028	RXC	D0028	TXCH
T0083	126.6	U0006	RXC	D0006	TXM
T0084	126.6	U0008	RXC	D0008	TXCH
T0085	126.6	U0010	RXC	D0010	TXM
T0086	126.6	U0012	RXC	D0012	TXCH
T0087	126.6	U0014	RXC	D0014	TXM
T0088	126.6	U0016	RXC	D0014	TXCH
T0089	126.6	U0018	RXC	D0018	TXM
T0090	126.6	U0020	RXC	D0020	TXCH
T0091	126.6	U0022	RXC	D0022	TXM
T0092	126.6	U0024	RXC	D0024	TXCH
T0093	126.6	U0026	RXC	D0026	TXM
T0094	126.6	U0028	RXC	D0028	TXCH
T0083	126.6	U0006	RXC	D0006	TXM
T0084	126.6	U0008	RXC	D0008	TXCH
T0085	126.6	U0010	RXC	D0010	TXM
T0086	126.6	U0012	RXC	D0012	TXCH
T0087	126.6	U0014	RXC	D0014	TXM
T0088	126.6	U0016	RXC	D0016	TXCH

U0030	24000	R	17746.82	L	C
U0032	24000	R	17775.98	L	C
D0001	24000	T	12224	R	C
D0003	24000	T	12253.16	R	C
D0005	24000	T	12282.32	R	C
D0007	24000	T	12311.48	R	C
D0009	24000	T	12340.64	R	C
D0011	24000	T	12369.8	R	C
D0013	24000	T	12398.96	R	C
D0015	24000	T	12428.12	R	C
D0017	24000	T	12457.28	R	C
D0019	24000	T	12486.44	R	C
D0021	24000	T	12515.6	R	C
D0023	24000	T	12544.76	R	C
D0025	24000	T	12573.92	R	C
D0027	24000	T	12603.08	R	C
D0029	24000	T	12632.24	R	C
D0031	24000	T	12661.4	R	C
D0002	24000	T	12238.58	L	C
D0004	24000	T	12267.74	L	C
D0006	24000	T	12296.9	L	C
D0008	24000	T	12326.06	L	C
D0010	24000	T	12355.22	L	C
D0012	24000	T	12384.38	L	C
D0014	24000	T	12413.54	L	C
D0016	24000	T	12442.7	L	C
D0018	24000	T	12471.86	L	C
D0020	24000	T	12501.02	L	C
D0022	24000	T	12530.18	L	C
D0024	24000	T	12559.34	L	C
D0026	24000	T	12588.5	L	C
D0028	24000	T	12617.66	L	C
D0030	24000	T	12646.82	L	C
D0032	24000	T	12675.98	L	C
CR001	800	R	17799	R	T
TM001	800	T	12206	L	T
TM002	800	T	12207	L	T
CR002	800	R	14001	R	T
CR003	800	R	14003	R	T

T0089	126.6	U0018	RXC	D0018	TXM
T0090	126.6	U0020	RXC	D0020	TXCH
T0091	126.6	U0022	RXC	D0022	TXM
T0092	126.6	U0024	RXC	D0024	TXCH
T0093	126.6	U0026	RXC	D0026	TXM
T0094	126.6	U0028	RXC	D0028	TXCH
T0095	126.6	U0030	RXC	D0030	TXM
T0096	126.6	U0032	RXC	D0032	TXCH
T0097	126.6	U0001	RXC	D0001	TXCM
T0098	126.6	U0003	RXC	D0003	TXCM
T0099	126.6	U0005	RXC	D0005	TXCM
T0100	126.6	U0007	RXC	D0007	TXCM
T0101	126.6	U0009	RXC	D0009	TXCM
T0102	126.6	U0011	RXC	D0011	TXCM
T0103	126.6	U0013	RXC	D0013	TXCM
T0104	126.6	U0015	RXC	D0015	TXCM
T0105	126.6	U0017	RXC	D0017	TXCM
T0106	126.6	U0019	RXC	D0019	TXCM
T0107	126.6	U0021	RXC	D0021	TXCM
T0108	126.6	U0023	RXC	D0023	TXCM
T0109	126.6	U0025	RXC	D0025	TXCM
T0110	126.6	U0027	RXC	D0027	TXCM
T0111	126.6	U0029	RXC	D0029	TXCM
T0112	126.6	U0031	RXC	D0031	TXCM
T0113	126.6	U0002	RXC	D0002	TXCM
T0114	126.6	U0004	RXC	D0004	TXCM
T0115	126.6	U0006	RXC	D0006	TXCM
T0116	126.6	U0008	RXC	D0008	TXCM
T0117	126.6	U0010	RXC	D0010	TXCM
T0118	126.6	U0012	RXC	D0012	TXCM
T0119	126.6	U0014	RXC	D0014	TXCM
T0120	126.6	U0016	RXC	D0016	TXCM
T0121	126.6	U0018	RXC	D0018	TXCM
T0122	126.6	U0020	RXC	D0020	TXCM
T0123	126.6	U0022	RXC	D0022	TXCM
T0124	126.6	U0024	RXC	D0024	TXCM
T0125	126.6	U0026	RXC	D0026	TXCM
T0126	126.6	U0028	RXC	D0028	TXCM
T0127	126.6	U0030	RXC	D0030	TXCM

T0128	126.6	U0032	RXC	D0032	TXCM
C002		CR002	GBLU		
C003		CR003	GBLU		
T001				TM001	GBLD
T002				TM002	GBLD
C001		CR001	GBLU		
T0001	129.1	U0001	RXG	D0001	TXCH
T0002	129.1	U0003	RXG	D0003	TXM
T0003	129.1	U0005	RXG	D0005	TXCH
T0004	129.1	U0007	RXG	D0007	TXM
T0005	129.1	U0009	RXG	D0009	TXCH
T0006	129.1	U0011	RXG	D0011	TXM
T0007	129.1	U0013	RXG	D0013	TXCH
T0008	129.1	U0015	RXG	D0015	TXM
T0009	129.1	U0017	RXG	D0017	TXCH
T0010	129.1	U0019	RXG	D0019	TXM
T0011	129.1	U0021	RXG	D0021	TXCH
T0012	129.1	U0023	RXG	D0023	TXM
T0013	129.1	U0025	RXG	D0025	TXCH
T0014	129.1	U0027	RXG	D0027	TXM
T0015	129.1	U0029	RXG	D0029	TXCH
T0016	129.1	U0031	RXG	D0031	TXM
T0017	129.1	U0002	RXG	D0002	TXM
T0018	129.1	U0004	RXG	D0004	TXCH
T0019	129.1	U0006	RXG	D0006	TXM
T0020	129.1	U0008	RXG	D0008	TXCH
T0021	129.1	U0010	RXG	D0010	TXM
T0022	129.1	U0012	RXG	D0012	TXCH
T0023	129.1	U0014	RXG	D0014	TXM
T0024	129.1	U0016	RXG	D0016	TXCH
T0025	129.1	U0018	RXG	D0018	TXM
T0026	129.1	U0020	RXG	D0020	TXCH
T0027	129.1	U0022	RXG	D0022	TXM
T0028	129.1	U0024	RXG	D0024	TXCH
T0029	129.1	U0026	RXG	D0026	TXM
T0030	129.1	U0028	RXG	D0028	TXCH
T0031	129.1	U0030	RXG	D0030	TXM
T0032	129.1	U0032	RXG	D0032	TXCH
T0033	126.6	U0001	RXG	D0001	TXCM

T0034	126.6	U0003	RXG	D0003	TXCM
T0035	126.6	U0005	RXG	D0005	TXCM
T0036	126.6	U0007	RXG	D0007	TXCM
T0037	126.6	U0009	RXG	D0009	TXCM
T0066	126.6	U0003	RXC	D0003	TXM
T0067	126.6	U0005	RXC	D0005	TXCH
T0068	126.6	U0007	RXC	D0007	TXM
T0069	126.6	U0009	RXC	D0009	TXCH
T0038	126.6	U0011	RXG	D0011	TXCM
T0039	126.6	U0013	RXG	D0013	TXCM
T0040	126.6	U0015	RXG	D0015	TXCM
T0041	126.6	U0017	RXG	D0017	TXCM
T0042	126.6	U0019	RXG	D0019	TXCM
T0043	126.6	U0021	RXG	D0021	TXCM
T0044	126.6	U0023	RXG	D0023	TXCM
T0045	126.6	U0025	RXG	D0025	TXCM
T0046	126.6	U0027	RXG	D0027	TXCM
T0047	126.6	U0029	RXG	D0029	TXCM
T0048	126.6	U0031	RXG	D0031	TXCM
T0049	126.6	U0002	RXG	D0002	TXCM
T0050	126.6	U0004	RXG	D0004	TXCM
T0051	126.6	U0006	RXG	D0006	TXCM
T0052	126.6	U0008	RXG	D0008	TXCM
T0053	126.6	U0010	RXG	D0010	TXCM
T0054	126.6	U0012	RXG	D0012	TXCM
T0055	126.6	U0014	RXG	D0014	TXCM
T0056	126.6	U0016	RXG	D0016	TXCH
T0057	126.6	U0018	RXG	D0018	TXCM
T0058	126.6	U0020	RXG	D0020	TXCM
T0059	126.6	U0022	RXG	D0022	TXCM
T0060	126.6	U0024	RXG	D0024	TXCM
T0061	126.6	U0026	RXG	D0026	TXCM
T0062	126.6	U0028	RXG	D0028	TXCM
T0063	126.6	U0030	RXG	D0030	TXCM
T0064	126.6	U0032	RXG	D0032	TXCM
T0065	126.6	U0001	RXC	D0001	TXCH
T0070	126.6	U0011	RXC	D0011	TXM
T0071	126.6	U0013	RXC	D0013	TXCH
T0072	126.6	U0015	RXC	D0015	TXM

T0073	126.6	U0017	RXC	D0017	TXCH
T0074	126.6	U0019	RXC	D0019	TXM
T0075	126.6	U0021	RXC	D0021	TXCH
T0076	126.6	U0023	RXC	D0023	TXM
T0077	126.6	U0025	RXC	D0025	TXCH
T0078	126.6	U0027	RXC	D0027	TXM
T0079	126.6	U0029	RXC	D0029	TXCH
T0080	126.6	U0031	RXC	D0031	TXM
T0081	126.6	U0002	RXC	D0002	TXM
T0082	126.6	U0004	RXC	D0004	TXCH

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	24M0G7W	24000	4	27647	0.691		5.7	17.9
D2	24M0G7W	24000	4	30719	0.768		6.6	18.8
D3	25M8G7W	25800	8	41200	0.639		7.5	19.7

FEDERAL COMMUNICATIONS COMMISSION **Page 8: Analog Modulation**

SATELLITE SPACE STATION AUTHORIZATIONS

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

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						
CMD	800KG2D	800		1									9	21.2
TLM	800KG2D	800		1									9	21.2

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		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.		
T0001	T0128	D1		1		DBS_CONUS_		65.7	-0.2	19.5	52	57.1		13.2
C001	C001		CMD	1		CMD1 LB.doc		65	-14.5	9.5				
T001	T002		TLM	1		TLM LB.doc					10	16		36.7
T0001	T0128	D2		1		DBS_CONUS_		65.7	-0.2	19.5	52	57.1		13.2
T0001	T0128	D3		1		DBS_CONUS_		65.7	-0.2	19.5	52	57.1		13.2
T0001	T0128	D1		1		DBS_CONUS_		65.7	-0.2	19.5	49	54.6		13.2
T0001	T0128	D2		1		DBS_CONUS_		65.7	-0.2	19.5	49	54.6		13.2
T0001	T0128	D3		1		DBS_CONUS_		65.7	-0.2	19.5	49	54.6		13.2
C002	C003		CMD	1		CMD2 LB.doc		65	-14.5	9.5				
T0001	T0128	D1		1		DBS_MEXICO_		65.7	-0.2	19.5	50	54.8		13.2
T0001	T0128	D2		1		DBS_MEXICO_		65.7	-0.2	19.5	50	54.8		13.2
T0001	T0128	D3		1		DBS_MEXICO_		65.7	-0.2	19.5	50	54.8		13.2

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

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: 530 Echostar Drive			
S14b. City: Cheyenne	S14c. County: Laramie	S14d. State/Country WY	S14e. Zip Code: 82007
S14f. Telephone Number: 307-633-5460	S14g. Call Sign of Control Station (if appropriate):		

Remote Control (TT C) Location(s):

S14a: Street Address: 801 North Dish Drive			
S14b. City: Gilbert	S14c. County: Maricopa	S14d. State/Country AZ	S14e. Zip Code: 85233
S14f. Telephone Number: 480-558-2778	S14g. Call Sign of Control Station (if appropriate):		

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

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a: Mass of spacecraft without fuel (kg): 1807	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 2711		
S15c. Mass of spacecraft and fuel at launch (kg): 4518	S15f. Length (m): 31.1	S15i. Payload: 0.92
S15d. Mass of fuel, in orbit, at beginning of life (kg): 994.6	S15g. Width (m): 5.8	S15j. Bus: 0.83
S15e. Deployed Area of Solar Array (square meters): 60.7	S15h. Height (m): 8.8	S15k. Total: 0.76

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): 7579	(f): 7619	(k): 7579	(p): 7619
Bus (Watts):	(b): 2377	(g): 1320	(l): 2377	(q): 1320
Total (Watts):	(c): 9956	(h): 8939	(m) 9956	(r): 8939
Solar Array (Watts):	(d): 11628	(i): 10331	(n): 10643	(s): 9478
Depth of Battery Discharge (%):	(e) 76.13 %	(j) %	(o) 76.13 %	(t) %

S17. CERTIFICATIONS:

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