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:		e. Estimated Date of Placement into Service:	i Will the space station(s) operate on a Common Carrier Basis:
INTELSAT 30		1/10/2014	N
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s):	j. Number of transponders offered on a common carrier basis:
2/9/2011		15 Years	
c. Construction Completion Date:		g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth:
1/5/2014		77	MHz
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth)	l. Orbit Type: Mark all boxes that apply:
1/7/2014	9/30/2014	2522.4 MHz	[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)		
3400	M	3700	M	T	Fixed Satellite Service
10950	M	11200	M	T	Fixed Satellite Service
11450	M	11700	M	T	Fixed Satellite Service
11700	M	12200	M	T	Fixed Satellite Service
6425	M	6725	M	R	Fixed Satellite Service
13750	M	14500	M	R	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W):	b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:
95.1 W			Provide service to North and South America
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.
1	S		Global
2	S		Northern South America
3	S		Southern South America
4	S		South America
5	S		Southwestern United States

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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
CGH	R	21	14	0.14	0.12		N	0	1				764	-7.8	-100	21	1
ABC	R	44.1	38.1	0.14	0.12		N	0	3				881	14.7	-101.4	20	1
ABC	R	44.1	38.1	0.14	0.12		N	90	3				881	14.7	-101.4	20	1
BBC	R	44.3	38.3	0.14	0.12		N	0	3				822	15.2	-100.2	20	1
BBC	R	44.3	38.3	0.14	0.12		N	90	3				822	15.2	-100.2	20	1
CBC	R	43.2	37.2	0.14	0.12		N	0	5				817	14.1	-99.3	20	1
CBC	R	43.2	37.2	0.14	0.12		N	90	5				817	14.1	-99.3	20	1
COB	R	44.3	38.3	0.14	0.12		N	0	2				793	15.3	-101.4	20	1
COB	R	44.3	38.3	0.14	0.12		N	90	2				793	15.3	-101.4	20	1
VBC	R	44.2	38.2	0.14	0.12		N	0	2				830	15	-103.3	20	1
VBC	R	44.2	38.2	0.14	0.12		N	90	2				830	15	-103.3	20	1
TCN	R	22	19.4	0.14	0.12		N	90	1				478	-4.8	-100.6	20	1
CBG	T	21	14	0.14	0.12		N	90	1	2.1	39.7	37					
R1RD	T	39.3	33.3	0.14	0.12		N		2	3.6	42.1	55.5					
R1LD	T	39.3	33.3	0.14	0.12		N		2	3.8	79.4	58.3					
R2RD	T	38.5	32.5	0.14	0.12		N		2	3.8	79.4	57.5					
R2LD	T	38.5	32.5	0.14	0.12		N		2	3.5	42.9	54.8					
R3RD	T	37.5	31.5	0.14	0.12		N		3	3.7	64.6	55.6					
R3LD	T	37.5	31.5	0.14	0.12		N		3	4	120.2	58.3					
R4RD	T	36.8	30.8	0.14	0.12		N		3	4	120.3	57.6					
R4LD	T	36.8	30.8	0.14	0.12		N		3	3.7	64.4	54.9					
PRR	T	39.3	33.3	0.14	0.12		N		4	3.2	70.8	57.8					
PRLD	T	39.3	33.3	0.14	0.12		N		4	3.7	125.9	60.3					
TCNL	T	39.3	33.3	0.14	0.12		N		4	4.7	31.8	54.3					
CBCL	T	42	36	0.14	0.12		N		5	14.6	3.3	47.2					
CMD	R	22	19.4	0.14	0.12		N	0	1				10266	-18.1	-108.4		
CMD	R	3	2	0.14	0.12		N		1				3710	-32.7	-94		
CMD	R	9	8	0.14	0.12		N		1				13164	-32.2	-94.5		
TLM	T	22	19.4	0.14	0.12		N	90	1	4.8	0.2	14.2					

TLMF	T	3	2	0.14	0.12		N		1	3.1	16.9	15.3					
TLMA	T	9	8	0.14	0.12		N		1	8.3	5.2	16.1					
UPK	T	24	21.4	0.14	0.12		N		1	3.2	0.2	17.8					
UPKL	T	24	21.4	0.14	0.12		N		1	3.2	0.2	17.8					

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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
CGH	R	C	-95.1		CGHU.gxt					
ABC	R	C	-95.1							
ABC	R	C	-95.1		ABCV.gxt					
BBC	R	C	-95.1							
BBC	R	C	-95.1		BBCV.gxt					
CBC	R	C	-95.1		CBCH.gxt					
CBC	R	C	-95.1		CBCV.gxt					
COB	R	C	-95.1		COBH.gxt					
COB	R	C	-95.1		COBV.gxt					
VBC	R	C	-95.1		VBCH.gxt					
VBC	R	C	-95.1		VBCV.gxt					
TCN	R	C	-95.1		TCNU.gxt					
CBG	T	C	-95.1		CBGD.gxt	-156.2	-156.1	-155.9	-155.8	-155.7
R1RD	T	C	-95.1		R1RD.gxt	-150	-147.5	-146.3	-146.2	-146.1
R1LD	T	C	-95.1		R1LD.gxt	-150	-147.5	-145	-143.4	-143.3
R2RD	T	C	-95.1		R2RD.gxt	-150	-147.5	-145	-144.2	-144.1
R2LD	T	C	-95.1		R2LD.gxt	-150	-147.5	-147	-146.9	-146.8
R3RD	T	C	-95.1		R3RD.gxt	-150	-147.5	-146.2	-146.1	-146
R3LD	T	C	-95.1		R3LD.gxt	-150	-147.5	-145	-143.4	-143.3
R4RD	T	C	-95.1		R4RD.gxt	-150	-147.5	-145	-144.1	-144
R4LD	T	C	-95.1		R4LD.gxt	-150	-147.5	-146.9	-146.8	-146.7
PRR	T	C	-95.1		PRRD.gxt	-150	-147.5	-145	-142.5	-142
PRLD	T	C	-95.1		PRLD.gxt	-150	-147.5	-145	-142.5	-142
TCNL	T	C	-95.1		TCNL.gxt	-150	-147.5	-145	-142.5	-140.8
CBCL	T	C	-95.1		CBCL.gxt	-150	-148.2	-148.1	-148	-147.9
CMD	R	C	-95.1		CMDO.gxt					
CMD	R	C	-95.1		CMDF.gxt					
CMD	R	C	-95.1		CMDA.gxt					

TLM	T	C	-95.1		TLMO.gxt	-167.8	-167.7	-167.6	-167.5	-167.4
TLMF	T	C	-95.1		TLMF.gxt	-166.7	-166.6	-166.5	-166.4	-166.3
TLMA	T	C	-95.1		TLMA.gxt	-165.9	-165.8	-165.7	-165.6	165.5
UPK	T	C	-95.1		UPKR.gxt	-153.4	-153.3	-153.2	-153.1	-153
UPKL	T	C	-95.1		UPKL.gxt	-153.4	-153.3	-153.2	-153.1	-153

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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)
CU001	69600	R	6460.4	H	C
CU003	69600	R	6537	H	C
CU005	69600	R	6613.6	H	C
CU007	69600	R	6690.2	H	C
KU001	24000	R	13770.38	H	C
KU002	24000	R	13799.54	H	C
KU003	24000	R	13828.7	H	C
KU004	24000	R	13857.86	H	C
KU005	24000	R	13887.02	H	C
KU006	24000	R	13916.18	H	C
KU007	24000	R	13945.34	H	C
KU008	24000	R	13974.5	H	C
KU009	24000	R	13770.38	V	C
KU010	24000	R	13799.54	V	C
KU011	24000	R	13828.7	V	C
KU012	24000	R	13857.86	V	C
KU013	24000	R	13887.02	V	C
KU014	24000	R	13916.18	V	C
KU015	24000	R	13945.34	V	C
KU016	24000	R	13974.5	V	C
KU017	24000	R	14275	H	C
KU018	24000	R	14305	H	C
KU019	24000	R	14335	H	C
KU020	24000	R	14365	H	C
KU021	24000	R	14395	H	C
KU022	24000	R	14425	H	C
KU023	24000	R	14455	H	C
KU024	24000	R	14485	H	C
KU025	24000	R	14260	V	C
KU026	24000	R	14290	V	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
TC001	132.8	CU001	CGHU	CD001	CBGD
TC002	132.8	CU003	CGHU	CD003	CBGD
TC003	132.8	CU005	CGHU	CD005	CBGD
TC004	132.8	CU007	CGHU	CD007	CBGD
TK001	121.3	KU001	CBCH	KD001	PRLD
TK002	121.3	KU002	CBCH	KD002	PRLD
TK003	121.3	KU003	CBCH	KD003	PRLD
TK004	121.3	KU004	CBCH	KD004	PRLD
TK005	121.3	KU005	CBCH	KD005	PRLD
TK006	121.3	KU006	CBCH	KD006	PRLD
TK007	121.3	KU007	CBCH	KD007	PRLD
TK008	121.3	KU008	CBCH	KD008	PRLD
TK017	124.3	KU001	VBCH	KD001	PRLD
TK018	124.3	KU002	VBCH	KD002	PRLD
TK019	124.3	KU003	VBCH	KD003	PRLD
TK020	124.3	KU004	VBCH	KD004	PRLD
TK021	124.3	KU005	VBCH	KD005	PRLD
TK022	124.3	KU006	VBCH	KD006	PRLD
TK023	124.3	KU007	VBCH	KD007	PRLD
TK024	124.3	KU008	VBCH	KD008	PRLD
TK025	121.8	KU009	VBCV	KD009	PRRD
TK026	121.8	KU010	VBCV	KD010	PRRD
TK027	121.8	KU011	VBCV	KD011	PRRD
TK028	121.8	KU012	VBCV	KD012	PRRD
TK029	121.8	KU013	VBCV	KD013	PRRD
TK030	121.8	KU014	VBCV	KD014	PRRD
TK031	121.8	KU015	VBCV	KD015	PRRD
TK032	121.8	KU016	VBCV	KD016	PRRD
TK033	122.9	KU017	ABCH	KD017	PRLD
TK034	122.9	KU018	ABCH	KD018	PRLD

KU027	24000	R	14320	V	C
KU028	24000	R	14350	V	C
KU029	24000	R	14380	V	C
KU030	24000	R	14410	V	C
KU031	24000	R	14440	V	C
KU032	24000	R	14470	V	C
KU033	36000	R	13776	H	C
KU034	36000	R	13816	H	C
KU035	36000	R	13856	H	C
KU036	36000	R	13896	H	C
KU037	36000	R	13936	H	C
KU038	36000	R	13976	H	C
KU039	36000	R	13776	V	C
KU040	36000	R	13816	V	C
KU041	36000	R	13856	V	C
KU042	36000	R	13896	V	C
KU043	36000	R	13936	V	C
KU044	36000	R	13976	V	C
KU051	36000	R	14026	V	C
KU052	36000	R	14066	V	C
KU053	36000	R	14106	V	C
KU054	36000	R	14146	V	C
KU055	36000	R	14186	V	C
KU056	36000	R	14226	V	C
KU057	36000	R	14270	H	C
KU058	36000	R	14310	H	C
KU059	36000	R	14350	H	C
KU060	36000	R	14390	H	C
KU061	36000	R	14430	H	C
KU062	36000	R	14470	H	C
KU063	36000	R	14270	V	C
KU064	36000	R	14310	V	C
KU065	36000	R	14350	V	C
KU066	36000	R	14390	V	C
KU067	36000	R	14430	V	C
KU068	36000	R	14470	V	C
KD001	24000	T	11480.88	L	C
KD002	24000	T	11510.04	L	C
KD003	24000	T	11539.2	L	C

TK035	122.9	KU019	ABCH	KD019	PRLD
TK036	122.9	KU020	ABCH	KD020	PRLD
TK037	122.9	KU021	ABCH	KD021	PRLD
TK038	122.9	KU022	ABCH	KD022	PRLD
TK039	122.9	KU023	ABCH	KD023	PRLD
TK040	122.9	KU024	ABCH	KD024	PRLD
TK041	120.4	KU025	ABCV	KD025	PRRD
TK042	120.4	KU026	ABCV	KD026	PRRD
TK043	120.4	KU027	ABCV	KD027	PRRD
TK044	120.4	KU028	ABCV	KD028	PRRD
TK045	120.4	KU029	ABCV	KD029	PRRD
TK046	120.4	KU030	ABCV	KD030	PRRD
TK047	120.4	KU031	ABCV	KD031	PRRD
TK048	120.4	KU032	ABCV	KD032	PRRD
TK049	121.5	KU017	BBCH	KD017	PRLD
TK050	121.5	KU018	BBCH	KD018	PRLD
TK051	121.5	KU019	BBCH	KD019	PRLD
TK052	121.5	KU020	BBCH	KD020	PRLD
TK053	121.5	KU021	BBCH	KD021	PRLD
TK054	121.5	KU022	BBCH	KD022	PRLD
TK055	121.5	KU023	BBCH	KD023	PRLD
TK056	121.5	KU024	BBCH	KD024	PRLD
TK057	119	KU025	BBCV	KD025	PRRD
TK058	119	KU026	BBCV	KD026	PRRD
TK059	119	KU027	BBCV	KD027	PRRD
TK060	119	KU028	BBCV	KD028	PRRD
TK061	119	KU029	BBCV	KD029	PRRD
TK062	119	KU030	BBCV	KD030	PRRD
TK063	119	KU031	BBCV	KD031	PRRD
TK064	119	KU032	BBCV	KD032	PRRD
TK065	119.7	KU033	ABCH	KD033	R3LD
TK066	119.7	KU034	ABCH	KD034	R3LD
TK067	119.7	KU035	ABCH	KD035	R3LD
TK068	119.7	KU036	ABCH	KD036	R3LD
TK069	119.7	KU037	ABCH	KD037	R3LD
TK070	119.7	KU038	ABCH	KD038	R3LD
TK071	119.7	KU039	ABCV	KD039	R3RD
TK072	119.7	KU040	ABCV	KD040	R3RD
TK073	119.7	KU041	ABCV	KD041	R3RD

KD004	24000	T	11568.36	L	C
KD005	24000	T	11597.52	L	C
KD006	24000	T	11626.68	L	C
KD007	24000	T	11655.84	L	C
KD008	24000	T	11685	L	C
KD009	24000	T	11480.88	R	C
KD010	24000	T	11510.04	R	C
KD011	24000	T	11539.2	R	C
KD012	24000	T	11568.36	R	C
KD013	24000	T	11597.52	R	C
KD014	24000	T	11626.68	R	C
KD015	24000	T	11655.84	R	C
KD016	24000	T	11685	R	C
KD017	24000	T	11975	L	C
KD018	24000	T	12005	L	C
KD019	24000	T	12035	L	C
KD020	24000	T	12065	L	C
KD021	24000	T	12095	L	C
KD022	24000	T	12125	L	C
KD023	24000	T	12155	L	C
KD024	24000	T	12185	L	C
KD025	24000	T	11960	R	C
KD026	24000	T	11990	R	C
KD027	24000	T	12020	R	C
KD028	24000	T	12050	R	C
KD029	24000	T	12080	R	C
KD030	24000	T	12110	R	C
KD031	24000	T	12140	R	C
KD032	24000	T	12170	R	C
KD033	36000	T	10970	L	C
KD034	36000	T	11010	L	C
KD035	36000	T	11050	L	C
KD036	36000	T	11090	L	C
KD037	36000	T	11130	L	C
KD038	36000	T	11170	L	C
KD039	36000	T	10970	R	C
KD040	36000	T	11010	R	C
KD041	36000	T	11050	R	C
KD042	36000	T	11090	R	C

TK074	119.7	KU042	ABCV	KD042	R3RD
TK075	119.7	KU043	ABCV	KD043	R3RD
TK076	119.7	KU044	ABCV	KD044	R3RD
TK077	118.3	KU033	BBCH	KD033	R3LD
TK078	118.3	KU034	BBCH	KD034	R3LD
TK079	118.3	KU035	BBCH	KD035	R3LD
TK080	118.3	KU036	BBCH	KD036	R3LD
TK081	118.3	KU037	BBCH	KD037	R3LD
TK082	118.3	KU038	BBCH	KD038	R3LD
TK083	118.3	KU039	BBCV	KD039	R3RD
TK084	118.3	KU040	BBCV	KD040	R3RD
TK085	118.3	KU041	BBCV	KD041	R3RD
TK086	118.3	KU042	BBCV	KD042	R3RD
TK087	118.3	KU043	BBCV	KD043	R3RD
TK088	118.3	KU044	BBCV	KD044	R3RD
TK089	119.9	KU045	ABCH	KD045	R3LD
TK090	119.9	KU046	ABCH	KD046	R3LD
TK091	119.9	KU047	ABCH	KD047	R3LD
TK092	119.9	KU048	ABCH	KD048	R3LD
TK093	119.9	KU049	ABCH	KD049	R3LD
TK094	119.9	KU050	ABCH	KD050	R3LD
TK095	119.9	KU051	ABCV	KD051	R3RD
TK096	119.9	KU052	ABCV	KD052	R3RD
TK097	119.9	KU053	ABCV	KD053	R3RD
TK098	119.9	KU054	ABCV	KD054	R3RD
TK099	119.9	KU055	ABCV	KD055	R3RD
TK100	119.9	KU056	ABCV	KD056	R3RD
TK101	118.5	KU045	BBCH	KD045	R3LD
TK102	118.5	KU046	BBCH	KD046	R3LD
TK103	118.5	KU047	BBCH	KD047	R3LD
TK104	118.5	KU048	BBCH	KD048	R3LD
TK105	118.5	KU049	BBCH	KD049	R3LD
TK106	118.5	KU050	BBCH	KD050	R3LD
TK107	118.5	KU051	BBCV	KD051	R3RD
TK108	118.5	KU052	BBCV	KD052	R3RD
TK109	118.5	KU053	BBCV	KD053	R3RD
TK110	118.5	KU054	BBCV	KD054	R3RD
TK111	118.5	KU055	BBCV	KD055	R3RD
TK112	118.5	KU056	BBCV	KD056	R3RD

KD043	36000	T	11130	R	C
KD044	36000	T	11170	R	C
KD045	36000	T	11730	L	C
KD046	36000	T	11770	L	C
KD047	36000	T	11810	L	C
KD048	36000	T	11850	L	C
KD049	36000	T	11890	L	C
KD050	36000	T	11930	L	C
KD051	36000	T	11726	R	C
KD052	36000	T	11766	R	C
KD053	36000	T	11806	R	C
KD054	36000	T	11846	R	C
KD055	36000	T	11886	R	C
KD056	36000	T	11926	R	C
CD001	69600	T	3435.4	V	C
CD003	69600	T	3512	V	C
CD005	69600	T	3588.6	V	C
CD007	69600	T	3665.2	V	C
KU045	36000	R	14030	H	C
KU046	36000	R	14070	H	C
KU047	36000	R	14110	H	C
KU048	36000	R	14150	H	C
KU049	36000	R	14190	H	C
KU050	36000	R	14230	H	C
KU069	8000	R	14495	V	T
KD057	8000	T	11460	L	T
CMD1	500	R	13750.5	H	T
CMD2	500	R	14003.5	H	T
CMD3	500	R	13750.5	L	T
CMD4	500	R	14003.5	L	T
TLM1	1000	T	11198	V	T
TLM2	1000	T	11198.5	V	T
TLM3	1000	T	11199.25	V	T
TLM4	1000	T	11199.75	V	T
TLM5	1000	T	11198	R	T
TLM6	1000	T	11198.5	R	T
TLM7	1000	T	11199.25	R	T
TLM8	1000	T	11199.75	R	T
UPK1	25	T	11704.5	L	T

TK113	119.7	KU033	ABCH	KD033	R4LD
TK114	119.7	KU034	ABCH	KD034	R4LD
TK115	119.7	KU035	ABCH	KD035	R4LD
TK116	119.7	KU036	ABCH	KD036	R4LD
TK117	119.7	KU037	ABCH	KD037	R4LD
TK118	119.7	KU038	ABCH	KD038	R4LD
TK119	122.4	KU039	ABCV	KD039	R4RD
TK120	122.4	KU040	ABCV	KD040	R4RD
TK121	122.4	KU041	ABCV	KD041	R4RD
TK122	122.4	KU042	ABCV	KD042	R4RD
TK123	122.4	KU043	ABCV	KD043	R4RD
TK124	122.4	KU044	ABCV	KD044	R4RD
TK125	118.3	KU033	BBCH	KD033	R4LD
TK126	118.3	KU034	BBCH	KD034	R4LD
TK127	118.3	KU035	BBCH	KD035	R4LD
TK128	118.3	KU036	BBCH	KD036	R4LD
TK129	118.3	KU037	BBCH	KD037	R4LD
TK130	118.3	KU038	BBCH	KD038	R4LD
TK131	121	KU039	BBCV	KD039	R4RD
TK132	121	KU040	BBCV	KD040	R4RD
TK133	121	KU041	BBCV	KD041	R4RD
TK134	121	KU042	BBCV	KD042	R4RD
TK135	121	KU043	BBCV	KD043	R4RD
TK136	121	KU044	BBCV	KD044	R4RD
TK137	119.9	KU045	ABCH	KD045	R4LD
TK138	119.9	KU046	ABCH	KD046	R4LD
TK139	119.9	KU047	ABCH	KD047	R4LD
TK140	119.9	KU048	ABCH	KD048	R4LD
TK141	119.9	KU049	ABCH	KD049	R4LD
TK142	119.9	KU050	ABCH	KD050	R4LD
TK143	122.6	KU051	ABCV	KD051	R4RD
TK144	122.6	KU052	ABCV	KD052	R4RD
TK145	122.6	KU053	ABCV	KD053	R4RD
TK146	122.6	KU054	ABCV	KD054	R4RD
TK147	122.6	KU055	ABCV	KD055	R4RD
TK148	122.6	KU056	ABCV	KD056	R4RD
TK149	118.5	KU045	BBCH	KD045	R4LD
TK150	118.5	KU046	BBCH	KD046	R4LD
TK151	118.5	KU047	BBCH	KD047	R4LD

UPK2	25	T	11193.5	R	T

TK152	118.5	KU048	BBCH	KD048	R4LD
TK153	118.5	KU049	BBCH	KD049	R4LD
TK154	118.5	KU050	BBCH	KD050	R4LD
TK155	121.2	KU051	BBCV	KD051	R4RD
TK156	121.2	KU052	BBCV	KD052	R4RD
TK157	121.2	KU053	BBCV	KD053	R4RD
TK158	121.2	KU054	BBCV	KD054	R4RD
TK159	121.2	KU055	BBCV	KD055	R4RD
TK160	121.2	KU056	BBCV	KD056	R4RD
TK161	117.9	KU057	COBH	KD033	R1LD
TK162	117.9	KU058	COBH	KD034	R1LD
TK163	117.9	KU059	COBH	KD035	R1LD
TK164	117.9	KU060	COBH	KD036	R1LD
TK165	117.9	KU061	COBH	KD037	R1LD
TK166	117.9	KU062	COBH	KD038	R1LD
TK167	117.9	KU063	COBV	KD039	R1RD
TK168	117.9	KU064	COBV	KD040	R1RD
TK169	117.9	KU065	COBV	KD041	R1RD
TK170	117.9	KU066	COBV	KD042	R1RD
TK171	117.9	KU067	COBV	KD043	R1RD
TK172	117.9	KU068	COBV	KD044	R1RD
TK173	119.9	KU057	VBCH	KD033	R1LD
TK174	119.9	KU058	VBCH	KD034	R1LD
TK175	119.9	KU059	VBCH	KD035	R1LD
TK176	119.9	KU060	VBCH	KD036	R1LD
TK177	119.9	KU061	VBCH	KD037	R1LD
TK178	119.9	KU062	VBCH	KD038	R1LD
TK179	119.9	KU063	VBCV	KD039	R1RD
TK180	119.9	KU064	VBCV	KD040	R1RD
TK181	119.9	KU065	VBCV	KD041	R1RD
TK182	119.9	KU066	VBCV	KD042	R1RD
TK183	119.9	KU067	VBCV	KD043	R1RD
TK184	119.9	KU068	VBCV	KD044	R1RD
TK185	117.8	KU045	COBH	KD045	R1LD
TK186	117.8	KU046	COBH	KD046	R1LD
TK187	117.8	KU047	COBH	KD047	R1LD
TK188	117.8	KU048	COBH	KD048	R1LD
TK189	117.8	KU049	COBH	KD049	R1LD
TK190	117.8	KU050	COBH	KD050	R1LD

TK191	117.8	KU051	COBV	KD051	R1RD
TK192	117.8	KU052	COBV	KD052	R1RD
TK193	117.8	KU053	COBV	KD053	R1RD
TK194	117.8	KU054	COBV	KD054	R1RD
TK195	117.8	KU055	COBV	KD055	R1RD
TK196	117.8	KU056	COBV	KD056	R1RD
TK197	119.8	KU045	VBCH	KD045	R1LD
TK198	119.8	KU046	VBCH	KD046	R1LD
TK199	119.8	KU047	VBCH	KD047	R1LD
TK200	119.8	KU048	VBCH	KD048	R1LD
TK201	119.8	KU049	VBCH	KD049	R1LD
TK202	119.8	KU050	VBCH	KD050	R1LD
TK203	119.8	KU051	VBCV	KD051	R1RD
TK204	119.8	KU052	VBCV	KD052	R1RD
TK205	119.8	KU053	VBCV	KD053	R1RD
TK206	119.8	KU054	VBCV	KD054	R1RD
TK207	119.8	KU055	VBCV	KD055	R1RD
TK208	119.8	KU056	VBCV	KD056	R1RD
TK209	117.9	KU045	COBH	KD045	R2LD
TK210	117.9	KU046	COBH	KD046	R2LD
TK211	117.9	KU047	COBH	KD047	R2LD
TK212	117.9	KU048	COBH	KD048	R2LD
TK213	117.9	KU049	COBH	KD049	R2LD
TK214	117.9	KU050	COBH	KD050	R2LD
TK215	120.6	KU051	COBV	KD051	R2RD
TK216	120.6	KU052	COBV	KD052	R2RD
TK217	120.6	KU053	COBV	KD053	R2RD
TK218	120.6	KU054	COBV	KD054	R2RD
TK219	120.6	KU055	COBV	KD055	R2RD
TK220	120.6	KU056	COBV	KD056	R2RD
TK221	119.9	KU045	VBCH	KD045	R2LD
TK222	119.9	KU046	VBCH	KD046	R2LD
TK223	119.9	KU047	VBCH	KD047	R2LD
TK224	119.9	KU048	VBCH	KD048	R2LD
TK225	119.9	KU049	VBCH	KD049	R2LD
TK226	119.9	KU050	VBCH	KD050	R2LD
TK227	122.6	KU051	VBCV	KD051	R2RD
TK228	122.6	KU052	VBCV	KD052	R2RD
TK229	122.6	KU053	VBCV	KD053	R2RD

TK230	122.6	KU054	VBCV	KD054	R2RD
TK231	122.6	KU055	VBCV	KD055	R2RD
TK232	122.6	KU056	VBCV	KD056	R2RD
TK233	118	KU057	COBH	KD033	R2LD
TK234	118	KU058	COBH	KD034	R2LD
TK235	118	KU059	COBH	KD035	R2LD
TK236	118	KU060	COBH	KD036	R2LD
TK237	118	KU061	COBH	KD037	R2LD
TK238	118	KU062	COBH	KD038	R2LD
TK239	120.7	KU063	COBV	KD039	R2RD
TK240	120.7	KU064	COBV	KD040	R2RD
TK241	120.7	KU065	COBV	KD041	R2RD
TK242	120.7	KU066	COBV	KD042	R2RD
TK243	120.7	KU067	COBV	KD043	R2RD
TK244	120.7	KU068	COBV	KD044	R2RD
TK245	120	KU057	VBCH	KD033	R2LD
TK246	120	KU058	VBCH	KD034	R2LD
TK247	120	KU059	VBCH	KD035	R2LD
TK248	120	KU060	VBCH	KD036	R2LD
TK249	120	KU061	VBCH	KD037	R2LD
TK250	120	KU062	VBCH	KD038	R2LD
TK251	122.7	KU063	VBCV	KD039	R2RD
TK252	122.7	KU064	VBCV	KD040	R2RD
TK253	122.7	KU065	VBCV	KD041	R2RD
TK254	122.7	KU066	VBCV	KD042	R2RD
TK255	122.7	KU067	VBCV	KD043	R2RD
TK256	122.7	KU068	VBCV	KD044	R2RD
TK257	138.3	KU069	TCNU	KD057	PRLD
TK258	128.5	KU069	TCNU	KD057	CBCL

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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	36M0G7W	36000	4	24575	0.5		3.36	12.7
D2	69M6G7W	69600	4	47511	0.5		3.36	11.9
D3	24M0G7W	24000	4	16383	0.5		3.36	12.8
D4	8M00G7W	8000	4	5461	0.5		3.36	18.2
D5	10M3G7W	10300	4	6000	0.5		3.87	11.7
D6	100KG7W	100	4	64	0.5		2.99	10.8

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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	30M0F3F	30000	TV/FM	1					PAL	15.6	1.5		10	18.1

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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)			
(a) Start	(b) End	(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/m2/Hz)	(o)Assoc. Stn Rec. G/T (dB/K)
									(j) Min.	(k) Max.	(l) Min.	(m) Max.		
TC001	TK258	D1		1	36000	IS30 SCHEDUL		56.82347	10.9	16.9	42.8	48.8	-152.1	28.3
TC001	TK258	D3		1	24000	NOTE.txt		56.82347	6.2	12.2	41	47	-152.1	26.4
TC001	TK258	D3		1	24000	NOTE.txt		56.82347	6.2	12.2	41	47	-152.1	24.7
TC001	TK258	D6		534	100	NOTE.txt		49.94518	-8.5	-1.5	-0.8	6.2	-168.7	25.3
TC001	TK258	D5		4	10300	NOTE.txt		49.94518	11.9	18.9	19.6	26.6	-167.8	25.3
TC001	TK258		A1	1	30000	NOTE.txt	4000	58.94518	16.8	23.8	26.5	33.5	-158.6	30.1
TC001	TK258	D2		1	69600	NOTE.txt		55.94518	17	24	30	37	-166.8	22.7
TC001	TK258	D4		1	8000	NOTE.txt		57.04807	14.5	17.1	36.3	42.3	-152.1	21.9
TC001	TK258	D4		1	8000	NOTE.txt		57.04807	7.4	10	36.2	42.2	-152.2	24.6

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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: 3400 International Drive			
S14b. City: Washington	S14c. County:	S14d. State/Country DC	S14e. Zip Code: 20008
S14f. Telephone Number: 202-944-7701	S14g. Call Sign of Control Station (if appropriate):		

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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a: Mass of spacecraft without fuel (kg): 3412	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 2888		
S15c. Mass of spacecraft and fuel at launch (kg): 6300	S15f. Length (m): 32.4	S15i. Payload: 0.814
S15d. Mass of fuel, in orbit, at beginning of life (kg): 445	S15g. Width (m): 8.5	S15j. Bus: 0.852
S15e. Deployed Area of Solar Array (square meters): 89.2	S15h. Height (m): 8.3	S15k. Total: 0.693

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): 14658	(f): 14658	(k): 14658	(p): 14658
Bus (Watts):	(b): 3456	(g): 1921	(l): 3456	(q): 1921
Total (Watts):	(c): 18114	(h): 16579	(m) 18114	(r): 16579
Solar Array (Watts):	(d): 19552	(i): 17612	(n): 19462	(s): 17530
Depth of Battery Discharge (%):	(e) 65.8 %	(j) %	(o) 69.7 %	(t) %

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?		**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.