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:
WB-1		1/30/2007	N
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s):	j. Number of transponders offered on a common carrier basis:
11/2/1999		12 Years	0
c. Construction Completion Date:		g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth:
3/15/2005		41	0 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:
11/15/2006	12/15/2006	6000 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)		
28.35	G	28.6	G	R	Fixed Satellite Service
29.25	G	30	G	R	Fixed Satellite Service
18.3	G	18.8	G	T	Fixed Satellite Service
19.7	G	20.2	G	T	Fixed Satellite Service
5859.0	M	5860.0	M	R	Fixed Satellite Service
6423.0	M	6424.0	M	R	Fixed Satellite Service
3701.4	M	3701.6	M	T	Fixed Satellite Service
4197.9	M	4198.1	M	T	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:
111.1 W			This orbital location provides high elevation angles over all of CONUS. High elevation satellite visibility is important for a satellite network providing services directly to subscriber terminals, and operating at Ka-band frequencies where rain attenuation effects are significant and elevation angle dependent.
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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SATELLITE SPACE STATION AUTHORIZATIONS
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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.
NORTH_AMER	S		North America
GLOBAL	S		Visible Earth.

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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
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.5	20.9	59.4					
KSD4	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
OMN	R	0	-4	0.085	0.085	30	N	90	GLOBAL				1000	-30			
OMN	T	0	-4	0.085	0.085	30	N	0	GLOBAL	4.4	8.9	9.5					
TLML	T	28	24	0.085	0.085	30	N		NORTH_A	3.6	0.09	17					
OMN	R	0	-4	0.085	0.085	30	N	0	GLOBAL				1000	-30			
OMN	T	0	-4	0.085	0.085	30	N	90	GLOBAL	4.4	8.9	9.5					
KSD5	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD6	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD8	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD9	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.8	61.7	64.1					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.8	61.7	64.1					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.8	61.7	64.1					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD1	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.5	20.9	59.4					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.8	61.7	64.1					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					

KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.8	61.7	64.1					
KSD2	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.8	61.7	64.1					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.5	87.1	65.6					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	3.7	26.3	60.4					
KSD3	T	46.2	42.2	0.085	0.085	27	N		NORTH_A	1.8	61.7	64.1					
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU4	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU5	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU6	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU8	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU9	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU1	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU2	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1

KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KSU3	R	46.2	42.2	0.085	0.085	27	N		NORTH_A				690	17.8	-103	31	1
KGU	R	45.8	41.8	0.085	0.085	27	N		NORTH_A				950	16	-103	12	0.5
KGU	R	45.8	41.8	0.085	0.085	27	N		NORTH_A				950	16	-103	12	0.5
KGU	R	45.8	41.8	0.085	0.085	27	N		NORTH_A				950	16	-103	12	0.5
KGU	R	45.8	41.8	0.085	0.085	27	N		NORTH_A				950	16	-103	12	0.5
KGU	R	45.8	41.8	0.085	0.085	27	N		NORTH_A				950	16	-103	12	0.5
KGU	R	45.8	41.8	0.085	0.085	27	N		NORTH_A				950	16	-103	12	0.5
KGD	T	45.2	41.2	0.085	0.085	27	N		NORTH_A	3.6	40.7	61.3					
KGD	T	45.2	41.2	0.085	0.085	27	N		NORTH_A	3.6	40.7	61.3					
KGD	T	45.2	41.2	0.085	0.085	27	N		NORTH_A	3.6	40.7	61.3					
KGD	T	45.2	41.2	0.085	0.085	27	N		NORTH_A	3.6	40.7	61.3					
KGD	T	45.2	41.2	0.085	0.085	27	N		NORTH_A	3.6	40.7	61.3					
KGD	T	45.2	41.2	0.085	0.085	27	N		NORTH_A	3.6	40.7	61.3					

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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
KSD1	T	C	-111.1		KSD1.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD2.gxt	-118	-118	-118	-118	-118
KSD3	T	C	-111.1		KSD3.gxt	-118	-118	-118	-118	-118
KSD4	T	C	-111.1		KSD4.gxt	-118	-118	-118	-118	-118
KSD5	T	C	-111.1		KSD5.gxt	-118	-118	-118	-118	-118
KSD6	T	C	-111.1		KSD6.gxt	-118	-118	-118	-118	-118
KSD8	T	C	-111.1		KSD8.gxt	-118	-118	-118	-118	-118
KSD9	T	C	-111.1		KSD9.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD10.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD11.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD12.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD13.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD14.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD15.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD16.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD17.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD18.gxt	-118	-118	-118	-118	-118
KSD1	T	C	-111.1		KSD19.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD20.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD21.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD22.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD23.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD24.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD25.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD26.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD27.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD28.gxt	-118	-118	-118	-118	-118
KSD2	T	C	-111.1		KSD29.gxt	-118	-118	-118	-118	-118

KSD3	T	C	-111.1		KSD30.gxt	-118	-118	-118	-118	-118
KSD3	T	C	-111.1		KSD31.gxt	-118	-118	-118	-118	-118
KSD3	T	C	-111.1		KSD32.gxt	-118	-118	-118	-118	-118
KSD3	T	C	-111.1		KSD33.gxt	-118	-118	-118	-118	-118
KSD3	T	C	-111.1		KSD34.gxt	-118	-118	-118	-118	-118
KSD3	T	C	-111.1		KSD35.gxt	-118	-118	-118	-118	-118
KSD3	T	C	-111.1		KSD36.gxt	-118	-118	-118	-118	-118
KSU1	R	C	-111.1		KSU1.gxt					
KSU2	R	C	-111.1		KSU2.gxt					
KSU3	R	C	-111.1		KSU3.gxt					
KSU4	R	C	-111.1		KSU4.gxt					
KSU5	R	C	-111.1		KSU5.gxt					
KSU6	R	C	-111.1		KSU6.gxt					
KSU8	R	C	-111.1		KSU8.gxt					
KSU9	R	C	-111.1		KSU9.gxt					
KSU1	R	C	-111.1		KSU10.gxt					
KSU1	R	C	-111.1		KSU11.gxt					
KSU1	R	C	-111.1		KSU12.gxt					
KSU1	R	C	-111.1		KSU13.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)
AGU1	62500	R	28381.25	R	C
AGU2	62500	R	28443.75	R	C
BGU1	62500	R	28506.25	R	C
BGU2	62500	R	28568.75	R	C
CGU1	62500	R	29281.25	R	C
CGU2	62500	R	29343.75	R	C
DGU1	62500	R	29406.25	R	C
DGU2	62500	R	29468.75	R	C
ASU1	62500	R	29531.25	L	C
ASU2	62500	R	29593.75	L	C
BSU1	62500	R	29656.25	L	C
BSU2	62500	R	29718.75	L	C
CSU1	62500	R	29781.25	L	C
CSU2	62500	R	29843.75	L	C
DSU1	62500	R	29906.25	L	C
DSU2	62500	R	29968.75	L	C
AGU	125000	R	28412.50	R	C
BGU	125000	R	28537.50	R	C
CGU	125000	R	29312.50	R	C
DGU	125000	R	29437.50	R	C
ASU	125000	R	29562.50	L	C
BSU	125000	R	29687.50	L	C
CSU	125000	R	29812.50	L	C
DSU	125000	R	29937.50	L	C
AGD1	62500	T	18331.25	L	C
AGD2	62500	T	18393.75	L	C
BGD1	62500	T	18456.25	L	C
BGD2	62500	T	18518.75	L	C
CGD1	62500	T	18581.25	L	C
CGD2	62500	T	18643.75	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
F1	126.5	AGU	KGU1	ASD	KSD1
F2	124.3	BGU1	KGU1	BSD1	KSD2
F3	123.3	AGU2	KGU11	ASD2	KSD3
F4	124.3	BGU2	KGU1	BSD2	KSD4
F5	124.3	AGU1	KGU27	ASD1	KSD5
F6	124.3	BGU2	KGU11	BSD2	KSD6
F8	124.3	CGU2	KGU1	CSD2	KSD8
F9	125	DGU2	KGU1	DSD2	KSD9
F10	124.3	CGU1	KGU1	CSD1	KSD10
F11	125	DGU2	KGU11	DSD2	KSD11
F12	125	CGU2	KGU27	CSD2	KSD12
F13	126.5	DGU	KGU27	DSD	KSD13
F14	126.5	CGU	KGU35	CSD	KSD14
F15	126.5	DGU	KGU35	DSD	KSD15
F16	126.5	CGU	KGU16	CSD	KSD16
F17	126.5	DGU	KGU16	DSD	KSD17
F18	126.5	BGU	KGU27	BSD	KSD18
F19	123.3	AGU1	KGU11	ASD1	KSD19
F20	125	BGU2	KGU6	BSD2	KSD20
F21	126.5	AGU	KGU6	ASD	KSD21
F22	124.3	BGU1	KGU11	BSD1	KSD22
F23	126.5	AGU	KGU35	ASD	KSD23
F24	126.5	BGU	KGU35	BSD	KSD24
F25	126.5	AGU	KGU16	ASD	KSD25
F26	126.5	BGU	KGU16	BSD	KSD26
F27	126.5	CGU	KGU11	CSD	KSD27
F28	125	DGU2	KGU1	DSD2	KSD28
F29	125	CGU1	KGU27	CSD1	KSD29
F30	124.3	DGU1	KGU6	DSD1	KSD30
F31	124.3	CGU2	KGU6	CSD2	KSD31

DGD1	62500	T	18706.25	L	C
DGD2	62500	T	18768.75	L	C
ASD1	62500	T	19731.25	R	C
ASD2	62500	T	19793.75	R	C
BSD1	62500	T	19856.25	R	C
BSD2	62500	T	19918.75	R	C
CSD1	62500	T	19981.25	R	C
CSD2	62500	T	20043.75	R	C
CMD1	1000	R	29999.50	R	T
CMD2	1000	R	5859.50	H	T
CMD4	1000	R	6423.50	V	T
TLM1	200	T	20196.0	L	T
TLM2	200	T	20199.5	L	T
TLM3	200	T	3701.5	V	T
TLM4	200	T	4198.0	H	T
ASD	125000	T	19762.50	R	C
BSD	125000	T	19887.50	R	C
CSD	125000	T	20012.50	R	C
DSD	125000	T	20137.50	R	C
AGD	125000	T	18362.50	L	C
BGD	125000	T	18487.50	L	C
CGD	125000	T	18612.50	L	C
DGD	125000	T	18737.50	L	C
DSD1	62500	T	20106.25	R	C
DSD2	62500	T	20168.75	R	C

F32	124.3	DGU2	KGU6	DSD2	KSD32
F33	124.3	CGU1	KGU6	CSD1	KSD33
F34	126.5	DGU1	KGU11	DSD1	KSD34
F35	124.3	AGU1	KGU27	ASD1	KSD35
R1	123.9	ASU	KSU1	AGD	KGD1
R2	123.9	BSU1	KSU2	BGD1	KGD1
R3	123.9	ASU2	KSU3	AGD2	KGD11
R4	123.9	BSU2	KSU4	BGD2	KGD1
R5	123.9	ASU2	KSU5	AGD2	KGD27
R6	123.9	BSU2	KSU6	BGD2	KGD11
R8	123.9	CSU2	KSU8	CGD2	KGD1
R9	123.9	DSU2	KSU9	DGD2	KGD1
R10	123.9	CSU1	KSU10	CGD1	KGD1
R11	123.9	DSU2	KSU11	DGD2	KGD11
R12	123.9	CSU2	KSU12	CGD2	KGD27
R13	123.9	DSU	KSU13	DGD	KGD27
R14	123.9	CSU	KSU14	CGD	KGD35
R15	123.9	DSU	KSU15	DGD	KGD35
R16	123.9	CSU	KSU16	CGD	KGD16
R17	123.9	DSU	KSU17	DGD	KGD16
R18	123.9	BSU	KSU18	BGD	KGD27
R19	123.9	ASU1	KSU19	AGD1	KGD11
R20	123.9	BSU2	KSU20	BGD2	KGD6
R21	123.9	ASU	KSU21	AGD	KGD6
R22	123.9	BSU1	KSU22	BGD1	KGD11
R23	123.9	ASU	KSU23	AGD	KGD35
R24	123.9	BSU	KSU24	BGD	KGD35
R25	123.9	ASU	KSU25	AGD	KGD16
R26	123.9	BSU	KSU26	BGD	KGD16
R27	123.9	CSU	KSU27	CGD	KGD11
R28	123.9	DSU1	KSU28	DGD1	KGD1
R29	123.9	CSU1	KSU29	CGD1	KGD27
R30	123.9	DSU1	KSU30	DGD1	KGD6
R31	123.9	CSU2	KSU31	CGD2	KGD6
R32	123.9	DSU2	KSU32	DGD2	KGD6
R33	123.9	CSU1	KSU33	CGD1	KGD6
R34	123.9	DSU1	KSU34	DGD1	KGD11
R35	123.9	ASU1	KSU35	AGD1	KGD6
CM01		CMD1	KSU2		

CM02		CMD2	OMNRL		
TM01				TLM1	TLML
TM02				TLM2	TLML
TM03				TLM3	OMNTL
R36	123.9	BSU1	KSU36	BGD1	KGD6
F36	125	BGU1	KGU6	BSD1	KSD36
CM04		CMD4	OMNRR		OMNTR
TM04				TLM4	OMNTR

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	27M0G7W	27000	8	53777	0.7967		10.4	22.4
D2	27M0G7W	27000	8	51523	0.7633		8.5	20.5
D3	27M0G7W	27000	8	47250	0.7		7.9	19.9
D4	27M0G7W	27000	8	46103	0.683		7.4	19.4
D5	27M0G7W	27000	8	42977	0.6367		6.5	18.5
D6	27M0G7W	27000	4	37350	0.83		6.2	18.2
D7	27M0G7W	27000	4	35550	0.79		5.8	17.8
D8	27M0G7W	27000	4	29700	0.66		5.3	17.3
D9	27M0G7W	27000	4	28350	0.63		4.8	16.8
D10	27M0G7W	27000	4	21150	0.47		4.2	16.2
D11	18M0G7W	18000	8	43022	0.7967		9.4	21.4
D12	18M0G7W	18000	8	41218	0.7633		7.5	19.5
D13	18M0G7W	18000	8	37800	0.7		6.9	18.9
D14	18M0G7W	18000	8	36882	0.683		6.4	18.4
D15	18M0G7W	18000	8	34382	0.6367		5.5	17.5
D16	18M0G7W	18000	4	29880	0.83		5.2	17.2
D17	18M0G7W	18000	4	28440	0.79		4.8	16.8
D18	18M0G7W	18000	4	23760	0.66		4.3	16.3
D19	18M0G7W	18000	4	22680	0.63		3.8	15.8
D20	18M0G7W	18000	4	16920	0.47		3.2	15.2
D21	3M20G7W	3200	4	2520	0.492		6.5	19
D22	1M60G2W	1600	4	1260	0.492		6.5	19
D23	800KG7W	800	4	630	0.492		6.5	19
D24	400KG7W	400	4	315	0.492		6.5	19
D25	200KG7W	200	4	157	0.492		6.5	19

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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						
CMD1	1M00F2D	1000		1									9	21.2
CMD2	1M00F2D	1000		1									9	21.2
TLM1	200KF2D	200		1									9	21.2
TLM2	200KF2D	200		1									9	21.2

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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.		
F1	F36	D1		2	28500	TBS link.doc		65.4	-0.43	8.6	52.6	58.6	-118	16.8
F1	F36	D3		2	28500	TBS link.doc		65.4	-0.43	8.6	49.4	58.6	-118	16.8
F1	F36	D2		2	28500	TBS link.doc		65.4	-0.43	8.6	31.8	58.6	-118	16.8
F1	F36	D4		2	28500	TBS link.doc		65.4	-0.43	8.6	34.8	58.6	-118	16.8
CM01	CM01		CMD1	1		CMD1 LB.doc		65.4	-15.7	-11.7				
CM02	CM02		CMD2	1		CMD2 LB.doc		52.3	21.1	25.1				
TM01	TM02		TLM1	1		TLM1 LB.doc					13	17.5	-144.5	34.5
TM03	TM03		TLM2	1		TLM2 LB.doc					7.6	9.5	-153	25.6
F1	F36	D5		2	28500	TBS link.doc		65.4	-0.43	8.6	52.6	58.6	-118	16.8
F1	F36	D6		2	28500	F1.doc		65.4	-0.43	8.6	52.6	58.6	-118	16.8
F1	F36	D7		2	28500	TBS link.doc		65.4	-0.43	8.6	52.6	58.6	-118	16.8
F1	F36	D8		2	28500	TBS link.doc		65.4	-0.43	8.6	52.6	58.6	-118	16.8
F1	F36	D9		2	28500	TBS link.doc		65.4	-0.43	8.6	52.6	58.6	-118	16.8
F1	F36	D10		2	28500	TBS link.doc		65.4	-0.43	8.6	52.6	58.6	-118	16.8
F1	F36	D11		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D12		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D13		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D14		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D15		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D16		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D17		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D18		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
F1	F36	D20		3	19000	TBS link.doc		65.4	-1.93	10.3	52.6	58.6	-118	16.8
R1	R36	D21		132	3200	TBS link.doc		44	-3.5	2.8	53.3	57.3	-118	36.9
R1	R36	D22		264	1600	TBS link.doc		44	-3.5	2.8	53.3	57.3	-118	36.9
R1	R36	D23		528	800	R800.doc		44	-3.5	2.8	53.3	57.3	-118	36.9
R1	R36	D24		1056	400	R400.doc		44	-3.5	2.8	53.3	57.3	-118	36.9
R1	R36	D25		2112	200	TBS link.doc		44	-3.5	2.8	53.3	57.3	-118	36.9

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): 2100	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 2526		
S15c. Mass of spacecraft and fuel at launch (kg): 4626	S15f. Length (m): 32	S15i. Payload: 0.9
S15d. Mass of fuel, in orbit, at beginning of life (kg): 666	S15g. Width (m): 2.6	S15j. Bus: 0.9
S15e. Deployed Area of Solar Array (square meters): 60	S15h. Height (m): 5.6	S15k. Total: 0.84

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): 5373	(f): 5373	(k): 5373	(p): 5373
Bus (Watts):	(b): 2134	(g): 1276	(l): 2134	(q): 1276
Total (Watts):	(c): 7507	(h): 6649	(m) 7507	(r): 6649
Solar Array (Watts):	(d): 9648	(i): 8658	(n): 8178	(s): 7478
Depth of Battery Discharge (%):	(e) 70 %	(j) 70 %	(o) 70 %	(t) 70 %

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.