

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

a. Space Station or Satellite Network Name: ICO G1		e. Estimated Date of Placement into Service: 2/15/2008		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date: 7/31/2005		f. Estimated Lifetime of Satellite(s): 15 Years		j. Number of transponders offered on a common carrier basis: 0	
c. Construction Completion Date: 11/15/2007		g. Total Number of Transponders: 106		k. Total Common Carrier Transponder Bandwidth: 0 MHz	
d1. Est Launch Date Begin: 12/15/2007	d2. Est Launch Date End: 1/15/2008	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 2120 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)		
2000	M	2020	M	R	Mobile-Satellite Service
2180	M	2200	M	T	Mobile-Satellite Service
18.55	G	18.8	G	T	Feeder Link for Mobile Satellite Service in FSS
19.7	G	20.2	G	T	Feeder Link for Mobile Satellite Service in FSS
29.25	G	30	G	R	Feeder Link for Mobile Satellite Service in FSS
5925	M	5930	M	R	Fixed Satellite Service
6420	M	6425	M	R	Fixed Satellite Service
3700	M	3705	M	T	Fixed Satellite Service
4195	M	4200	M	T	Fixed Satellite Service

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

a. Nominal Orbital Longitude (Degrees E/W): 92.85 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:  This orbital location provides high elevation angles to all of CONUS, which is very important for the link between the satellite and the user terminal in the MSS. The high elevation angle minimizes the risk of signal blockage due to buildings and foliage. This orbital location also eliminates any station-keeping volume overlap with that of the operator at 93W.
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance:		
d. Toward West:	0.05 Degrees	Range of orbital are in which adequate service can be provided (Optional): <u>Degrees</u> <u>E/W</u>		
e. Toward East:	0.05 Degrees	g. Westernmost: h. Easternmost:		
i. Reason for service are selection (Optional):				

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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:

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.
SA1	S		CONUS, Alaska, Hawaii, Puerto Rico, US Virgin Islands
SA2	S		-3 dB contour of beams KAUL, KAUR and KAUCL
SA3	S		-3 dB contour of beams KADL and KADR
SA4	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 Iso- lation (dB)	(h) Polar- ization Switch- able? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive			Input Attenuator (dB)	
										(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)	(q) Max. Value	(r) Step Size
		(c) Peak (dBi)	(d) Edge (dBi)														
SU	R	45.3	42.3	0.1	0.1		N		SA1				537	18	-133	25	1
SD	T	45.8	42.8	0.1	0.1		N		SA1	4.3	2000	78.8					
KAUL	R	49.4	46.4	0.1	0.1	24	N		SA2				1622	17.3	-85.5	15	1
KAU	R	49.4	46.4	0.1	0.1	24	N		SA2				1622	17.3	-85.5	15	1
KADL	T	49.5	46.5	0.1	0.1	27	N		SA3	3.8	100	69.5					
KAD	T	49.5	46.5	0.1	0.1	27	N		SA3	3.8	100	69.5					
GBL	R	21	18	0.1	0.1	23	N		SA4				1150	-9.6			
GBL	T	20	17	0.1	0.1	23	N		SA4	5.7	0.4	16					
KAU	R	49.4	46.4	0.1	0.1	24	N		SA2				1778	16.9			
OMN	R	0	-4	0.1	0.1	30	N	0	SA4				1000	-30			
OMN	R	0	-4	0.1	0.1	30	N	90	SA4				1000	-30			
OMN	T	0	-4	0.1	0.1	30	N	0	SA4	4.3	2.2	3.5					
OMN	T	0	-4	0.1	0.1	30	N	90	SA4	4.3	2.2	3.5					

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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
SU	R	C	-92.85		SU.gxt					
SD	T	C	-92.85		SD.gxt					
KAUL	R	C	-92.85		KAUL.gxt					
KAU	R	C	-92.85		KAUR.gxt					
KADL	T	C	-92.85		KADL.gxt	-118.5	-118.5	-118.5	-118.5	-118.5
KAD	T	C	-92.85		KADR.gxt	-118.5	-118.5	-118.5	-118.5	-118.5
GBL	R	C	-92.85		GBLU.gxt					
GBL	T	C	-92.85		GBLD.gxt	-150.7	-150.5	-150.2	-149.9	-149.6
KAU	R	C	-92.85		KAUCL.gxt					
OMN	T	C	-92.85			-171.3	-171.3	-171.3	-171.3	-171.3
OMN	T	C	-92.85			-171.3	-171.3	-171.3	-171.3	-171.3

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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)
U0001	20000	R	29315	L	C
U0002	20000	R	29340	L	C
U0003	20000	R	29365	L	C
U0004	20000	R	29390	L	C
U0005	20000	R	29415	L	C
U0006	20000	R	29440	L	C
U0007	20000	R	29465	L	C
U0008	20000	R	29490	L	C
U0009	20000	R	29515	L	C
U0010	20000	R	29540	L	C
U0011	20000	R	29565	L	C
U0012	20000	R	29590	L	C
U0013	20000	R	29665	L	C
U0014	20000	R	29690	L	C
U0015	20000	R	29715	L	C
U0016	20000	R	29740	L	C
U0017	20000	R	29765	L	C
U0018	20000	R	29790	L	C
U0019	20000	R	29815	L	C
U0020	20000	R	29840	L	C
U0021	20000	R	29865	L	C
U0022	20000	R	29890	L	C
U0023	20000	R	29915	L	C
U0024	20000	R	29940	L	C
U0025	20000	R	29327.5	R	C
U0026	20000	R	29352.5	R	C
U0027	20000	R	29377.5	R	C
U0028	20000	R	29402.5	R	C
U0029	20000	R	29427.5	R	C
U0030	20000	R	29452.5	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
FL001	120	U0001	KAUL	SD001	SD
FL002	120	U0002	KAUL	SD001	SD
FL003	120	U0003	KAUL	SD001	SD
FL004	120	U0004	KAUL	SD001	SD
FL005	120	U0005	KAUL	SD001	SD
FL006	120	U0006	KAUL	SD001	SD
FL007	120	U0007	KAUL	SD001	SD
FL008	120	U0008	KAUL	SD001	SD
FL009	120	U0009	KAUL	SD001	SD
FL010	120	U0010	KAUL	SD001	SD
FL011	120	U0011	KAUL	SD001	SD
FL012	120	U0012	KAUL	SD001	SD
FL013	120	U0013	KAUL	SD001	SD
FL014	120	U0014	KAUL	SD001	SD
FL015	120	U0015	KAUL	SD001	SD
FL016	120	U0016	KAUL	SD001	SD
FL017	120	U0017	KAUL	SD001	SD
FL018	120	U0018	KAUL	SD001	SD
FL019	120	U0019	KAUL	SD001	SD
FL020	120	U0020	KAUL	SD001	SD
FL021	120	U0021	KAUL	SD001	SD
FL022	120	U0022	KAUL	SD001	SD
FL023	120	U0023	KAUL	SD001	SD
FL024	120	U0024	KAUL	SD001	SD
FL025	120	U0025	KAUR	SD001	SD
FL026	120	U0026	KAUR	SD001	SD
FL027	120	U0027	KAUR	SD001	SD
FL028	120	U0028	KAUR	SD001	SD
FL029	120	U0029	KAUR	SD001	SD
FL030	120	U0030	KAUR	SD001	SD

U0031	20000	R	29477.5	R	C
U0032	20000	R	29502.5	R	C
U0033	20000	R	29527.5	R	C
U0034	20000	R	29552.5	R	C
U0035	20000	R	29577.5	R	C
U0036	20000	R	29602.5	R	C
U0037	20000	R	29677.5	R	C
U0038	20000	R	29702.5	R	C
U0039	20000	R	29727.5	R	C
U0040	20000	R	29752.5	R	C
U0041	20000	R	29777.5	R	C
U0042	20000	R	29802.5	R	C
U0043	20000	R	29827.5	R	C
U0044	20000	R	29852.5	R	C
U0045	20000	R	29877.5	R	C
U0046	20000	R	29902.5	R	C
U0047	20000	R	29927.5	R	C
U0048	20000	R	29952.5	R	C
D0001	20000	T	18566.25	L	C
D0002	20000	T	18591.25	L	C
D0003	20000	T	18616.25	L	C
D0004	20000	T	18641.25	L	C
D0005	20000	T	18666.25	L	C
D0006	20000	T	18691.25	L	C
D0007	20000	T	18716.25	L	C
D0008	20000	T	18741.25	L	C
D0009	20000	T	19722.5	L	C
D0010	20000	T	19747.5	L	C
D0011	20000	T	19772.5	L	C
D0012	20000	T	19797.5	L	C
D0013	20000	T	19822.5	L	C
D0014	20000	T	19847.5	L	C
D0015	20000	T	19872.5	L	C
D0016	20000	T	19897.5	L	C
D0017	20000	T	19972.5	L	C
D0018	20000	T	19997.5	L	C
D0019	20000	T	20022.5	L	C
D0020	20000	T	20047.5	L	C
D0021	20000	T	20072.5	L	C

FL031	120	U0031	KAUR	SD001	SD
FL032	120	U0032	KAUR	SD001	SD
FL033	120	U0033	KAUR	SD001	SD
FL034	120	U0034	KAUR	SD001	SD
FL035	120	U0035	KAUR	SD001	SD
FL037	120	U0037	KAUR	SD001	SD
FL038	120	U0038	KAUR	SD001	SD
FL039	120	U0039	KAUR	SD001	SD
FL040	120	U0040	KAUR	SD001	SD
FL041	120	U0041	KAUR	SD001	SD
FL042	120	U0042	KAUR	SD001	SD
FL036	120	U0036	KAUR	SD001	SD
FL043	120	U0043	KAUR	SD001	SD
FL044	120	U0044	KAUR	SD001	SD
FL045	120	U0045	KAUR	SD001	SD
FL046	120	U0046	KAUR	SD001	SD
FL047	120	U0047	KAUR	SD001	SD
FL048	120	U0048	KAUR	SD001	SD
RL001	136	SU001	SU	D0001	KADL
RL002	136	SU001	SU	D0002	KADL
RL003	136	SU001	SU	D0003	KADL
RL004	136	SU001	SU	D0004	KADL
RL005	136	SU001	SU	D0005	KADL
RL006	136	SU001	SU	D0006	KADL
RL007	136	SU001	SU	D0007	KADL
RL008	136	SU001	SU	D0008	KADL
RL009	136	SU001	SU	D0009	KADL
RL010	136	SU001	SU	D0010	KADL
RL011	136	SU001	SU	D0011	KADL
RL012	136	SU001	SU	D0012	KADL
RL013	136	SU001	SU	D0013	KADL
RL014	136	SU001	SU	D0014	KADL
RL015	136	SU001	SU	D0015	KADL
RL016	136	SU001	SU	D0016	KADL
RL017	136	SU001	SU	D0017	KADL
RL018	136	SU001	SU	D0018	KADL
RL019	136	SU001	SU	D0019	KADL
RL020	136	SU001	SU	D0020	KADL
RL021	136	SU001	SU	D0021	KADL

D0022	20000	T	20097.5	L	C
D0023	20000	T	20122.5	L	C
D0024	20000	T	20147.5	L	C
D0025	20000	T	18578.75	R	C
D0026	20000	T	18603.75	R	C
D0027	20000	T	18628.75	R	C
D0028	20000	T	18653.75	R	C
D0029	20000	T	18678.75	R	C
D0030	20000	T	18703.75	R	C
D0031	20000	T	18728.75	R	C
D0032	20000	T	18753.75	R	C
D0033	20000	T	19735	R	C
D0034	20000	T	19760	R	C
D0035	20000	T	19785	R	C
D0036	20000	T	19810	R	C
D0037	20000	T	19835	R	C
D0038	20000	T	19860	R	C
D0039	20000	T	19885	R	C
D0040	20000	T	19910	R	C
D0041	20000	T	19985	R	C
D0042	20000	T	20010	R	C
D0043	20000	T	20035	R	C
D0044	20000	T	20060	R	C
D0045	20000	T	20085	R	C
D0046	20000	T	20110	R	C
D0047	20000	T	20135	R	C
D0048	20000	T	20160	R	C
CF1	20000	R	29285	L	C
CF2	20000	R	29615	L	C
CF3	20000	R	29297.5	R	C
CF4	20000	R	29627.5	R	C
CR1	20000	T	18771.25	L	C
CR2	20000	T	19927.5	L	C
CR3	20000	T	20172.5	L	C
CR4	20000	T	18783.75	R	C
CR5	20000	T	19940	R	C
CR6	20000	T	20185	R	C
SU001	20000	R	2010	R	C
SD001	20000	T	2190	R	C

RL022	136	SU001	SU	D0022	KADL
RL023	136	SU001	SU	D0023	KADL
RL024	136	SU001	SU	D0024	KADL
RL025	136	SU001	SU	D0025	KADR
RL026	136	SU001	SU	D0026	KADR
RL027	136	SU001	SU	D0027	KADR
RL028	136	SU001	SU	D0028	KADR
RL029	136	SU001	SU	D0029	KADR
RL030	136	SU001	SU	D0030	KADR
RL031	136	SU001	SU	D0031	KADR
RL032	136	SU001	SU	D0032	KADR
RL033	136	SU001	SU	D0033	KADR
RL034	136	SU001	SU	D0034	KADR
RL035	136	SU001	SU	D0035	KADR
RL036	136	SU001	SU	D0036	KADR
RL037	136	SU001	SU	D0037	KADR
RL038	136	SU001	SU	D0038	KADR
RL039	136	SU001	SU	D0039	KADR
RL040	136	SU001	SU	D0040	KADR
RL041	136	SU001	SU	D0041	KADR
RL042	136	SU001	SU	D0042	KADR
RL043	136	SU001	SU	D0043	KADR
RL044	136	SU001	SU	D0044	KADR
RL045	136	SU001	SU	D0045	KADR
RL046	136	SU001	SU	D0046	KADR
RL047	136	SU001	SU	D0047	KADR
RL048	136	SU001	SU	D0048	KADR
CC001	99	U0001	KAUL	CR1	KADL
CC002	99	U0002	KAUL	CR1	KADL
CC003	99	U0003	KAUL	CR1	KADL
CC004	99	U0004	KAUL	CR1	KADL
CC005	99	U0005	KAUL	CR1	KADL
CC006	99	U0006	KAUL	CR1	KADL
CC007	99	U0007	KAUL	CR1	KADL
CC008	99	U0008	KAUL	CR1	KADL
CC009	99	U0009	KAUL	CR1	KADL
CC010	99	U0010	KAUL	CR1	KADL
CC011	99	U0011	KAUL	CR1	KADL
CC012	99	U0012	KAUL	CR1	KADL



CMD1	1000	R	29995.5	L	T
CMD2	1000	R	29999.5	L	T
CMD3	1000	R	5925.5	V	T
CMD4	1000	R	6424.5	H	T
TLM1	300	T	20196.5	L	T
TLM2	300	T	20198.5	L	T
TLM3	300	T	3701.5	H	T
TLM4	300	T	4198.5	V	T

CC013	99	U0013	KAUL	CR2	KADL
CC014	99	U0014	KAUL	CR2	KADL
CC015	99	U0015	KAUL	CR2	KADL
CC016	99	U0016	KAUL	CR2	KADL
CC017	99	U0017	KAUL	CR2	KADL
CC018	99	U0018	KAUL	CR2	KADL
CC019	99	U0019	KAUL	CR2	KADL
CC020	99	U0020	KAUL	CR2	KADL
CC021	99	U0021	KAUL	CR2	KADL
CC022	99	U0022	KAUL	CR2	KADL
CC023	99	U0023	KAUL	CR2	KADL
CC024	99	U0024	KAUL	CR2	KADL
CC025	99	U0025	KAUR	CR4	KADR
CC026	99	U0026	KAUR	CR4	KADR
CC027	99	U0027	KAUR	CR4	KADR
CC028	99	U0028	KAUR	CR4	KADR
CC029	99	U0029	KAUR	CR4	KADR
CC030	99	U0030	KAUR	CR4	KADR
CC031	99	U0031	KAUR	CR4	KADR
CC032	99	U0032	KAUR	CR4	KADR
CC033	99	U0033	KAUR	CR4	KADR
CC034	99	U0034	KAUR	CR4	KADR
CC035	99	U0035	KAUR	CR4	KADR
CC036	99	U0036	KAUR	CR4	KADR
CC037	99	U0037	KAUR	CR5	KADR
CC038	99	U0038	KAUR	CR5	KADR
CC039	99	U0039	KAUR	CR5	KADR
CC040	99	U0040	KAUR	CR5	KADR
CC041	99	U0041	KAUR	CR5	KADR
CC042	99	U0042	KAUR	CR5	KADR
CC043	99	U0043	KAUR	CR5	KADR
CC044	99	U0044	KAUR	CR5	KADR
CC045	99	U0045	KAUR	CR5	KADR
CC046	99	U0046	KAUR	CR5	KADR
CC047	99	U0047	KAUR	CR5	KADR
CC048	99	U0048	KAUR	CR5	KADR
CC049	99	CF2	KAUL	CR3	KADL
CC050	99	CF4	KAUR	CR6	KADR
CC051	99	CF1	KAUL	D0001	KADL

CC052	99	CF1	KAUL	D0002	KADL
CC053	99	CF1	KAUL	D0003	KADL
CC054	99	CF1	KAUL	D0004	KADL
CC055	99	CF1	KAUL	D0005	KADL
CC056	99	CF1	KAUL	D0006	KADL
CC057	99	CF1	KAUL	D0007	KADL
CC058	99	CF1	KAUL	D0008	KADL
CC059	99	CF1	KAUL	D0009	KADL
CC060	99	CF1	KAUL	D0010	KADL
CC061	99	CF1	KAUL	D0011	KADL
CC062	99	CF1	KAUL	D0012	KADL
CC063	99	CF1	KAUL	D0013	KADL
CC064	99	CF1	KAUL	D0014	KADL
CC065	99	CF1	KAUL	D0015	KADL
CC066	99	CF1	KAUL	D0016	KADL
CC067	99	CF1	KAUL	D0017	KADL
CC068	99	CF1	KAUL	D0018	KADL
CC069	99	CF1	KAUL	D0019	KADL
CC070	99	CF1	KAUL	D0020	KADL
CC071	99	CF1	KAUL	D0021	KADL
CC072	99	CF1	KAUL	D0022	KADL
CC073	99	CF1	KAUL	D0023	KADL
CC074	99	CF1	KAUL	D0024	KADL
CC075	99	CF1	KAUL	D0025	KADR
CC076	99	CF1	KAUL	D0026	KADR
CC077	99	CF1	KAUL	D0027	KADR
CC078	99	CF1	KAUL	D0028	KADR
CC079	99	CF1	KAUL	D0029	KADR
CC080	99	CF1	KAUL	D0030	KADR
CC081	99	CF1	KAUL	D0031	KADR
CC082	99	CF1	KAUL	D0032	KADR
CC083	99	CF1	KAUL	D0033	KADR
CC084	99	CF1	KAUL	D0034	KADR
CC085	99	CF1	KAUL	D0035	KADR
CC086	99	CF1	KAUL	D0036	KADR
CC087	99	CF1	KAUL	D0037	KADR
CC088	99	CF1	KAUL	D0038	KADR
CC089	99	CF1	KAUL	D0039	KADR
CC090	99	CF1	KAUL	D0040	KADR

CC091	99	CF1	KAUL	D0041	KADR
CC092	99	CF1	KAUL	D0042	KADR
CC093	99	CF1	KAUL	D0043	KADR
CC094	99	CF1	KAUL	D0044	KADR
CC095	99	CF1	KAUL	D0045	KADR
CC096	99	CF1	KAUL	D0046	KADR
CC097	99	CF1	KAUL	D0047	KADR
CC098	99	CF1	KAUL	D0048	KADR
CC099	99	CF3	KAUR	D0001	KADL
CC100	99	CF3	KAUR	D0002	KADL
CC101	99	CF3	KAUR	D0003	KADL
CC102	99	CF3	KAUR	D0004	KADL
CC103	99	CF3	KAUR	D0005	KADL
CC104	99	CF3	KAUR	D0006	KADL
CC105	99	CF3	KAUR	D0007	KADL
CC106	99	CF3	KAUR	D0008	KADL
CC107	99	CF3	KAUR	D0009	KADL
CC108	99	CF3	KAUR	D0010	KADL
CC109	99	CF3	KAUR	D0011	KADL
CC110	99	CF3	KAUR	D0012	KADL
CC111	99	CF3	KAUR	D0013	KADL
CC112	99	CF3	KAUR	D0014	KADL
CC113	99	CF3	KAUR	D0015	KADL
CC114	99	CF3	KAUR	D0016	KADL
CC115	99	CF3	KAUR	D0017	KADL
CC116	99	CF3	KAUR	D0018	KADL
CC117	99	CF3	KAUR	D0019	KADL
CC118	99	CF3	KAUR	D0020	KADL
CC119	99	CF3	KAUR	D0021	KADL
CC120	99	CF3	KAUR	D0022	KADL
CC121	99	CF3	KAUR	D0023	KADL
CC122	99	CF3	KAUR	D0024	KADL
CC123	99	CF3	KAUR	D0025	KADR
CC124	99	CF3	KAUR	D0026	KADR
CC125	99	CF3	KAUR	D0027	KADR
CC126	99	CF3	KAUR	D0028	KADR
CC127	99	CF3	KAUR	D0029	KADR
CC128	99	CF3	KAUR	D0030	KADR
CC129	99	CF3	KAUR	D0031	KADR

CC130	99	CF3	KAUR	D0032	KADR
CC131	99	CF3	KAUR	D0033	KADR
CC132	99	CF3	KAUR	D0034	KADR
CC133	99	CF3	KAUR	D0035	KADR
CC134	99	CF3	KAUR	D0036	KADR
CC135	99	CF3	KAUR	D0037	KADR
CC136	99	CF3	KAUR	D0038	KADR
CC137	99	CF3	KAUR	D0039	KADR
CC138	99	CF3	KAUR	D0040	KADR
CC139	99	CF3	KAUR	D0041	KADR
CC140	99	CF3	KAUR	D0042	KADR
CC141	99	CF3	KAUR	D0043	KADR
CC142	99	CF3	KAUR	D0044	KADR
CC143	99	CF3	KAUR	D0045	KADR
CC144	99	CF3	KAUR	D0046	KADR
CC145	99	CF3	KAUR	D0047	KADR
CC146	99	CF3	KAUR	D0048	KADR
TC1		CMD1	KAUCL		
TC2		CMD2	KAUCL		
TC3		CMD1	GBLU		
TC4		CMD2	GBLU		
TC5		CMD3	OMNUV		
TC6		CMD4	OMNUH		
TM1				TLM1	GBLD
TM2				TLM2	GBLD
TM3				TLM3	OMNDH
TM4				TLM4	OMNDV

**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	200KG7W	200	4	118.75	0.5		3.4	15.6
D2	1M25G7W	1250	4	4.75	0.561	21.1	-18.9	-6.7
D3	8K00G7W	8	4	4.75	0.5		3.4	15.6
D4	8K00G7W	8	4	4.75	0.5		2.3	14.5
D5	41K6G7W	41.6	2		1		1.8	14
D6	41K6G7W	41.6	2		1		11.8	24
D7	156KG7W	156.25	4	110	0.508		2.4	14.6
D8	5M00G7W	5000	16	3730	0.25		3.1	15.3

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

**Page 8: Analog Modulation**

S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a) Analog Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) Signal Type	(e) Channels per Carrier	Multi-channel Telephony				(j) Video Standard NTSC, PAL, etc.	(k) Video Noise- Weighting (dB)	(l) Video and SCPC/FM Modulation Index	(m) SCPC/FM Compander, Preemphasis, and Noise Weighting (dB)	(n) Total C/N Performance Objective (dB)	(o) Single Entry C/I Objective (dB)
					(f) Ave. Companded Talker Level (dBm0)	(g) Bottom Baseband Freq. (MHz)	(h) Top Baseband Freq. (MHz)	(i) RMS Modulation Index						
A1	1M00F2D	1000											10	22.2
A2	300KG2D	300											10	22.2

**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 (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)		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.									
FL001	FL048	D1		100	200	PA TDMA FL.d		69.6	-25.5	-8.5	47.6	50.6		-27
FL001	FL048	D2		16	1250	PA CDMA FL.d		69.6	-39.8	-22.8	33.3	36.3		-27
FL001	FL048	D3		10	200	PA HPN FL.doc		69.6	-12.6	4.4	60.5	63.5		-27
FL001	FL048	D1		100	200	HT TDMA FL.d		69.6	-15.8	1.2	57.3	60.3		-22
FL001	FL048	D2		16	1250	HT CDMA FL.d		69.6	-30.1	-13.1	43	46		-22
FL001	FL048	D3		10	200	HT HPN FL.doc		69.6	-12.6	4.4	60.5	63.5		-22
RL001	RL048	D4		2500	8	HT FDMA RL.d		0	0	0	19.1	22.1	-119	42.3
RL001	RL048	D2		16	1250	HT CDMA RL.d		0	-1	-1	22.7	25.7	-137.3	42.3
RL001	RL048	D4		2500	8	PA FDMA RL.d		3	3	3	19.1	22.1	-119	42.3
RL001	RL048	D2		16	1250	PA CDMA RL.d		3	2	2	22.6	25.6	-137.4	42.3
RL001	RL048	D6		1		PBS LB.doc		24.4	0.6	0.6	19.7	22.7	-139.4	42.3
CC001	CC146	D5		48	60	CC LB.doc		69.6	-29.6	-2.6	21	24	-138.1	42.3
FL001	FL048	D7		100	160	GMRF.doc		69.6	-24.1	-7.1	49	52		-27
RL001	RL048	D7		100	160	GMRR.doc		3	3	3	32.5	35.5	-118.5	42.3
FL001	FL048	D8		1		DVB-SH.doc		69.6	-9.1	7.9	64	67		-22
TC1	TC2		A1	1		Ka-band CMD.		69.6	-19.6	3.3				
TC3	TC4		A1	1		Ka-band CMD-I		69.6	0.4	15.3				
TC5	TC6		A1	1		C-Band CMD.d		57.1	19.2	25.9				
TM1	TM2		A2	1		Ka-Band TLM.d					12	16	-146.1	42.3
TM3	TM4		A2	1		C-Band TLM.do					-0.5	3.5	-171.3	31.8

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

**Page 10: TT and C**

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



**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): 3463	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 3146		
S15c. Mass of spacecraft and fuel at launch (kg): 6609	S15f. Length (m): 32.4	S15i. Payload: 0.8906
S15d. Mass of fuel, in orbit, at beginning of life (kg): 418	S15g. Width (m): 7.3	S15j. Bus: 0.859
S15e. Deployed Area of Solar Array (square meters): 91.73	S15h. Height (m): 19.6	S15k. Total: 0.7651

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): 10250	(f): 10250	(k): 10250	(p): 10250
Bus (Watts):	(b): 2852	(g): 1271	(l): 2852	(q): 1271
Total (Watts):	(c): 13102	(h): 11521	(m): 13102	(r): 11521
Solar Array (Watts):	(d): 17356	(i): 15479	(n): 15683	(s): 14085
Depth of Battery Discharge (%):	(e) 71.5 %	(j) %	(o) 71.5 %	(t) %

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 type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" 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.**