

**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: INTELSAT 1R		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): 10 Years		j. Number of transponders offered on a common carrier basis:	
c. Construction Completion Date:		g. Total Number of Transponders: 72		k. Total Common Carrier Transponder Bandwidth: MHz	
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 2592 MHz		l. 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)		
5925	M	6425	M	R	Fixed Satellite Service
3700	M	4200	M	T	Fixed Satellite Service
13750	M	14500	M	R	Fixed Satellite Service
10950	M	11200	M	T	Fixed Satellite Service
11450	M	11700	M	T	Fixed Satellite Service
11700	M	11950	M	T	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 50.1 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance:		
d. Toward West: 0.05 Degrees	e. Toward East: 0.05 Degrees	0.05 Degrees		
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 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		UNITED STATES, CENTRAL AMERICA, SOUTH AMERICA
2	S		EUROPE, AFRICA
3	S		UNITED STATES, MEXICO, CARIBBEAN, CENTRAL AMERICA
4	S		SOUTH AMERICA
5	S		UNITED STATES, MEXICO, CARIBBEAN, CENTRAL AMERICA, EUROPE, AFRICA
6	S		GLOBAL

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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
ACH	R	29.1	19.1	0.1	0.24		N	0	1				1.4	-99.3	1	1	
ACV	R	28.4	18.4	0.1	0.24		N	90	1				1.3	-98.4	1	1	
ECV	R	28.8	20.8	0.1	0.24		N	90	2				1.2	-94.9	1	1	
GCH	R	19.6	15.6	0.1	0.24		N	0	6				-8.2	-88.8	1	1	
NKH	R	33.9	23.9	0.1	0.24		N	0	3				6.8	-104.8	1	1	
NKV	R	33.3	23.3	0.1	0.24		N	90	3				6.8	-104.2	1	1	
SKH	R	32.6	24.6	0.1	0.24		N	0	4				6.1	-104.1	1	1	
SKV	R	33.1	25.1	0.1	0.24		N	90	4				6.5	-104.6	1	1	
EKH	R	33.8	23.8	0.1	0.24		N	0	2				6.6	-104.9	1	1	
EKV	R	31.6	21.6	0.1	0.24		N	90	2				4.8	-102.9	1	1	
CKV	R	33.3	23.3	0.1	0.24		N	90	5				6.5	-104.3	1	1	
ACH	T	28	22	0.1	0.24		N	0	1			43.7					
ACV	T	27.8	21.8	0.1	0.24		N	90	1			43.4					
ECH	T	28.5	20.5	0.1	0.24		N	0	2			41.9					
GCV	T	19.3	15.3	0.1	0.24		N	90	6			34.6					
NKH	T	31.9	23.9	0.1	0.24		N	0	3			50.9					
NKV	T	31.6	23.6	0.1	0.24		N	90	3			50.3					
SKH	T	33.1	25.1	0.1	0.24		N	0	4			52.9					
S1KV	T	33.1	25.1	0.1	0.24		N	90	4			53					
S2KV	T	33.1	25.1	0.1	0.24		N	90	4			52.1					
EKH	T	32.8	24.8	0.1	0.24		N	0	2			52.3					
EKV	T	31.3	23.3	0.1	0.24		N	90	2			50.3					
CMD	R	33.9	23.9	0.1	0.24		N	0	3				-3	-122.9	1	1	
CMD	R	3.5	-0.5	0.1	0.24		N	90	6				-25.7	-100.1	1	1	
CMD	R	4.7	3.7	0.1	0.24		N	6					-22.5	-103	1	1	
TLMC	T	31.6	21.6	0.1	0.24		N	90	3			15					
TLMB	T	3.7	-0.3	0.1	0.24		N	0	6			11.8					
TLMP	T	4.5	3.5	0.1	0.24		N	6				10.7					
UPC	T	19	17	0.1	0.24		N	6				11.2					

UPCL	T	19	17	0.1	0.24	N		6			11.2				
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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
ACH	R	C	-50.1		achu.gxt					
ACV	R	C	-50.1		acvu.gxt					
ECV	R	C	-50.1		ecvu.gxt					
GCH	R	C	-50.1		gchu.gxt					
NKH	R	C	-50.1		nkhu.gxt					
NKV	R	C	-50.1		nkvu.gxt					
SKH	R	C	-50.1		skhu.gxt					
SKV	R	C	-50.1		skvu.gxt					
EKH	R	C	-50.1		ekhu.gxt					
EKV	R	C	-50.1		ekvu.gxt					
CKV	R	C	-50.1		ckvu.gxt					
ACH	T	C	-50.1		achd.gxt	-152	-149.5	-149.3	-149.2	-149.1
ACV	T	C	-50.1		acvd.gxt	-152	-149.8	-149.6	-149.5	-149.4
ECH	T	C	-50.1		echd.gxt	-152	-151.3	-151.1	-151	-150.9
GCV	T	C	-50.1		gcvd.gxt	-158.7	-158.6	-158.4	-158.3	-158.2
NKH	T	C	-50.1		nkhd.gxt	-150	-147.5	-145	-142.5	-141.9
NKV	T	C	-50.1		nkvd.gxt	-150	-147.5	-145	-142.6	-142.5
SKH	T	C	-50.1		skhd.gxt					
S1KV	T	C	-50.1		s1kv.gxt					
S2KV	T	C	-50.1		s2kv.gxt	-150	-147.5	-145	-142.5	-140.7
EKH	T	C	-50.1		ekhd.gxt	-150	-147.5	-145	-142.5	-140.5
EKV	T	C	-50.1		ekvd.gxt	-150	-147.5	-145	-142.6	-142.5
CMD	R	C	-50.1		cmdc.gxt					
CMD	R	C	-50.1							
CMD	R	C	-50.1		cmdp.gxt					
TLMC	T	C	-50.1		tlmc.gxt	-167	-166.9	-166.8	-166.7	-166.6
TLMB	T	C	-50.1			-170.2	-170.1	-170	-169.9	-169.8
TLMP	T	C	-50.1		tlmp.gxt	-171.3	-171.2	-171.1	-171	-170.9

UPC	T	C	-50.1		upcr.gxt	-160	-159.9	-159.8	-159.7	-159.6
UPCL	T	C	-50.1		upcl.gxt	-160	-159.9	-159.8	-159.7	-159.6

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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)
CU001	36000	R	5960	V	C
CU003	36000	R	6000	V	C
CU005	36000	R	6040	V	C
CU007	36000	R	6080	V	C
CU009	36000	R	6120	V	C
CU011	36000	R	6160	V	C
CU013	36000	R	6200	V	C
CU015	36000	R	6240	V	C
CU017	36000	R	6280	V	C
CU019	36000	R	6320	V	C
CU021	36000	R	6360	V	C
CU023	36000	R	6400	V	C
CU002	36000	R	5960	H	C
CU004	36000	R	6000	H	C
CU006	36000	R	6040	H	C
CU008	36000	R	6080	H	C
CU010	36000	R	6120	H	C
CU012	36000	R	6160	H	C
CU014	36000	R	6200	H	C
CU016	36000	R	6240	H	C
CU018	36000	R	6280	H	C
CU020	36000	R	6320	H	C
CU022	36000	R	6360	H	C
CU024	36000	R	6400	H	C
CD001	36000	T	3735	H	C
CD003	36000	T	3775	H	C
CD005	36000	T	3815	H	C
CD007	36000	T	3855	H	C
CD009	36000	T	3895	H	C
CD011	36000	T	3935	H	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
BL001	123	CU001	ACVU	CD001	ACHD
BL003	123	CU003	ACVU	CD003	ACHD
BL005	123	CU005	ACVU	CD005	ACHD
BL007	123	CU007	ACVU	CD007	ACHD
BL009	123	CU009	ACVU	CD009	ACHD
BL011	123	CU011	ACVU	CD011	ACHD
BL013	123	CU013	ACVU	CD013	ACHD
BL015	123	CU015	ACVU	CD015	ACHD
BL017	123	CU017	ACVU	CD017	ACHD
BL019	123	CU019	ACVU	CD019	ACHD
BL021	123	CU021	ACVU	CD021	ACHD
BL023	123	CU023	ACVU	CD023	ACHD
BN001	113.3	CU001	ACVU	CD001	ECHD
BN003	113.3	CU003	ACVU	CD003	ECHD
BN005	113.3	CU005	ACVU	CD005	ECHD
BN007	113.3	CU007	ACVU	CD007	ECHD
BN009	113.3	CU009	ACVU	CD009	ECHD
BN011	113.3	CU011	ACVU	CD011	ECHD
BN013	113.3	CU013	ACVU	CD013	ECHD
BN015	113.3	CU015	ACVU	CD015	ECHD
BN017	113.3	CU017	ACVU	CD017	ECHD
BN019	113.3	CU019	ACVU	CD019	ECHD
BN021	113.3	CU021	ACVU	CD021	ECHD
BN023	113.3	CU023	ACVU	CD023	ECHD
BO002	122.6	CU001	ACVU	CD002	GCVD
BO004	122.6	CU003	ACVU	CD004	GCVD
BO006	122.6	CU005	ACVU	CD006	GCVD
BO008	122.6	CU007	ACVU	CD008	GCVD
BO010	122.6	CU009	ACVU	CD010	GCVD
BO012	122.6	CU011	ACVU	CD012	GCVD

CD013	36000	T	3975	H	C
CD015	36000	T	4015	H	C
CD017	36000	T	4055	H	C
CD019	36000	T	4095	H	C
CD021	36000	T	4135	H	C
CD023	36000	T	4175	H	C
CD002	36000	T	3735	V	C
CD004	36000	T	3775	V	C
CD006	36000	T	3815	V	C
CD008	36000	T	3855	V	C
CD010	36000	T	3895	V	C
CD012	36000	T	3935	V	C
CD014	36000	T	3975	V	C
CD016	36000	T	4015	V	C
CD018	36000	T	4055	V	C
CD020	36000	T	4095	V	C
CD022	36000	T	4135	V	C
CD024	36000	T	4175	V	C
KU001	36000	R	13770	V	C
KU003	36000	R	13810	V	C
KU005	36000	R	13850	V	C
KU007	36000	R	13890	V	C
KU009	36000	R	13930	V	C
KU011	36000	R	13970	V	C
KU002	36000	R	13770	H	C
KU004	36000	R	13810	H	C
KU006	36000	R	13850	H	C
KU008	36000	R	13890	H	C
KU010	36000	R	13930	H	C
KU012	36000	R	13970	H	C
KU013	36000	R	14020	V	C
KU015	36000	R	14060	V	C
KU017	36000	R	14100	V	C
KU019	36000	R	14140	V	C
KU021	36000	R	14180	V	C
KU023	36000	R	14220	V	C
KU014	36000	R	14020	H	C
KU016	36000	R	14060	H	C
KU018	36000	R	14100	H	C

BO014	122.6	CU013	ACVU	CD014	GCVD
BO016	122.6	CU015	ACVU	CD016	GCVD
BO018	122.6	CU017	ACVU	CD018	GCVD
BO020	122.6	CU019	ACVU	CD020	GCVD
BO022	122.6	CU021	ACVU	CD022	GCVD
BO024	122.6	CU023	ACVU	CD024	GCVD
BM002	122.9	CU001	ACVU	CD002	ACVD
BM004	122.9	CU003	ACVU	CD004	ACVD
BM006	122.9	CU005	ACVU	CD006	ACVD
BM008	122.9	CU007	ACVU	CD008	ACVD
BM010	122.9	CU009	ACVU	CD010	ACVD
BM012	122.9	CU011	ACVU	CD012	ACVD
BM014	122.9	CU013	ACVU	CD014	ACVD
BM016	122.9	CU015	ACVU	CD016	ACVD
BM018	122.9	CU017	ACVU	CD018	ACVD
BM020	122.9	CU019	ACVU	CD020	ACVD
BM022	122.9	CU021	ACVU	CD022	ACVD
BM024	122.9	CU023	ACVU	CD024	ACVD
AM002	123.1	CU002	ACHU	CD002	ACVD
AM004	123.1	CU004	ACHU	CD004	ACVD
AM006	123.1	CU006	ACHU	CD006	ACVD
AM008	123.1	CU008	ACHU	CD008	ACVD
AM010	123.1	CU010	ACHU	CD010	ACVD
AM012	123.1	CU012	ACHU	CD012	ACVD
AM014	123.1	CU014	ACHU	CD014	ACVD
AM016	123.1	CU016	ACHU	CD016	ACVD
AM018	123.1	CU018	ACHU	CD018	ACVD
AM020	123.1	CU020	ACHU	CD020	ACVD
AM022	123.1	CU022	ACHU	CD022	ACVD
AM024	123.1	CU024	ACHU	CD024	ACVD
AO002	122.8	CU002	ACHU	CD002	GCVD
AO004	122.8	CU004	ACHU	CD004	GCVD
AO006	122.8	CU006	ACHU	CD006	GCVD
AO008	122.8	CU008	ACHU	CD008	GCVD
AO010	122.8	CU010	ACHU	CD010	GCVD
AO012	122.8	CU012	ACHU	CD012	GCVD
AO014	122.8	CU014	ACHU	CD014	GCVD
AO016	122.8	CU016	ACHU	CD016	GCVD
AO018	122.8	CU018	ACHU	CD018	GCVD

KU020	36000	R	14140	H	C
KU022	36000	R	14180	H	C
KU024	36000	R	14220	H	C
KU025	36000	R	14270	V	C
KU027	36000	R	14310	V	C
KU029	36000	R	14350	V	C
KU031	36000	R	14390	V	C
KU033	36000	R	14430	V	C
KU035	36000	R	14470	V	C
KU026	36000	R	14270	H	C
KU028	36000	R	14310	H	C
KU030	36000	R	14350	H	C
KU032	36000	R	14390	H	C
KU034	36000	R	14430	H	C
KU036	36000	R	14470	H	C
KD001	36000	T	10970	H	C
KD003	36000	T	11010	H	C
KD005	36000	T	11050	H	C
KD007	36000	T	11090	H	C
KD009	36000	T	11130	H	C
KD011	36000	T	11170	H	C
KD002	36000	T	10970	V	C
KD004	36000	T	11010	V	C
KD006	36000	T	11050	V	C
KD008	36000	T	11090	V	C
KD010	36000	T	11130	V	C
KD012	36000	T	11170	V	C
KD013	36000	T	11470	H	C
KD015	36000	T	11510	H	C
KD017	36000	T	11550	H	C
KD019	36000	T	11590	H	C
KD021	36000	T	11630	H	C
KD023	36000	T	11670	H	C
KD014	36000	T	11470	V	C
KD016	36000	T	11510	V	C
KD018	36000	T	11550	V	C
KD020	36000	T	11590	V	C
KD022	36000	T	11630	V	C
KD024	36000	T	11670	V	C

AO020	122.8	CU020	ACHU	CD020	GCVD
AO022	122.8	CU022	ACHU	CD022	GCVD
AO024	122.8	CU024	ACHU	CD024	GCVD
AL001	123.2	CU002	ACHU	CD001	ACHD
AL003	123.2	CU004	ACHU	CD003	ACHD
AL005	123.2	CU006	ACHU	CD005	ACHD
AL007	123.2	CU008	ACHU	CD007	ACHD
AL009	123.2	CU010	ACHU	CD009	ACHD
AL011	123.2	CU012	ACHU	CD011	ACHD
AL013	123.2	CU014	ACHU	CD013	ACHD
AL015	123.2	CU016	ACHU	CD015	ACHD
AL017	123.2	CU018	ACHU	CD017	ACHD
AL019	123.2	CU020	ACHU	CD019	ACHD
AL021	123.2	CU022	ACHU	CD021	ACHD
AL023	123.2	CU024	ACHU	CD023	ACHD
CN001	116.8	CU001	ECVU	CD001	ECHD
CN003	116.8	CU003	ECVU	CD003	ECHD
CN005	116.8	CU005	ECVU	CD005	ECHD
CN007	116.8	CU007	ECVU	CD007	ECHD
CN009	116.8	CU009	ECVU	CD009	ECHD
CN011	116.8	CU011	ECVU	CD011	ECHD
CN013	116.8	CU013	ECVU	CD013	ECHD
CN015	116.8	CU015	ECVU	CD015	ECHD
CN017	116.8	CU017	ECVU	CD017	ECHD
CN019	116.8	CU019	ECVU	CD019	ECHD
CN021	116.8	CU021	ECVU	CD021	ECHD
CN023	116.8	CU023	ECVU	CD023	ECHD
DO002	121.8	CU002	GCHU	CD002	GCVD
DO004	121.8	CU004	GCHU	CD004	GCVD
DO006	121.8	CU006	GCHU	CD006	GCVD
DO008	121.8	CU008	GCHU	CD008	GCVD
DO010	121.8	CU010	GCHU	CD010	GCVD
DO012	121.8	CU012	GCHU	CD012	GCVD
DO014	121.8	CU014	GCHU	CD014	GCVD
DO016	121.8	CU016	GCHU	CD016	GCVD
DO018	121.8	CU018	GCHU	CD018	GCVD
DO020	121.8	CU020	GCHU	CD020	GCVD
DO022	121.8	CU022	GCHU	CD022	GCVD
DO024	121.8	CU024	GCHU	CD024	GCVD

KD025	36000	T	11720	H	C
KD027	36000	T	11760	H	C
KD029	36000	T	11800	H	C
KD031	36000	T	11840	H	C
KD033	36000	T	11880	H	C
KD035	36000	T	11920	H	C
KD026	36000	T	11720	V	C
KD028	36000	T	11760	V	C
KD030	36000	T	11800	V	C
KD032	36000	T	11840	V	C
KD034	36000	T	11880	V	C
KD036	36000	T	11920	V	C
CMD1	1000	R	13995	H	T
CMD2	1000	R	13995	V	T
CMD3	1000	R	14498.5	L	T
TLM1	500	T	11696	V	T
TLM2	500	T	11697	V	T
TLM3	500	T	11696	H	T
TLM4	500	T	11697	H	T
TLM5	500	T	11696	L	T
TLM6	500	T	11697	L	T
UPC1	25	T	11699	R	T
UPC2	25	T	11699	L	T

DM002	122.1	CU002	GCHU	CD002	ACVD
DM004	122.1	CU004	GCHU	CD004	ACVD
DM006	122.1	CU006	GCHU	CD006	ACVD
DM008	122.1	CU008	GCHU	CD008	ACVD
DM010	122.1	CU010	GCHU	CD010	ACVD
DM012	122.1	CU012	GCHU	CD012	ACVD
DM014	122.1	CU014	GCHU	CD014	ACVD
DM016	122.1	CU016	GCHU	CD016	ACVD
DM018	122.1	CU018	GCHU	CD018	ACVD
DM020	122.1	CU020	GCHU	CD020	ACVD
DM022	122.1	CU022	GCHU	CD022	ACVD
DM024	122.1	CU024	GCHU	CD024	ACVD
DL001	122.2	CU002	GCHU	CD001	ACHD
DL003	122.2	CU004	GCHU	CD003	ACHD
DL005	122.2	CU006	GCHU	CD005	ACHD
DL007	122.2	CU008	GCHU	CD007	ACHD
DL009	122.2	CU010	GCHU	CD009	ACHD
DL011	122.2	CU012	GCHU	CD011	ACHD
DL013	122.2	CU014	GCHU	CD013	ACHD
DL015	122.2	CU016	GCHU	CD015	ACHD
DL017	122.2	CU018	GCHU	CD017	ACHD
DL019	122.2	CU020	GCHU	CD019	ACHD
DL021	122.2	CU022	GCHU	CD021	ACHD
DL023	122.2	CU024	GCHU	CD023	ACHD
DN001	112.6	CU002	GCHU	CD001	ECHD
DN003	112.6	CU004	GCHU	CD003	ECHD
DN005	112.6	CU006	GCHU	CD005	ECHD
DN007	112.6	CU008	GCHU	CD007	ECHD
DN009	112.6	CU010	GCHU	CD009	ECHD
DN011	112.6	CU012	GCHU	CD011	ECHD
DN013	112.6	CU014	GCHU	CD013	ECHD
DN015	112.6	CU016	GCHU	CD015	ECHD
DN017	112.6	CU018	GCHU	CD017	ECHD
DN019	112.6	CU020	GCHU	CD019	ECHD
DN021	112.6	CU022	GCHU	CD021	ECHD
DN023	112.6	CU024	GCHU	CD023	ECHD
FP001	129.2	KU001	NKVU	KD001	NKHD
FP003	129.2	KU003	NKVU	KD003	NKHD
FP005	129.2	KU005	NKVU	KD005	NKHD

FP007	129.2	KU007	NKVU	KD007	NKHD
FP009	129.2	KU009	NKVU	KD009	NKHD
FP011	129.2	KU011	NKVU	KD011	NKHD
FP013	134.3	KU013	NKVU	KD013	NKHD
FP015	134.3	KU015	NKVU	KD015	NKHD
FP017	134.3	KU017	NKVU	KD017	NKHD
FP019	134.3	KU019	NKVU	KD019	NKHD
FP021	134.3	KU021	NKVU	KD021	NKHD
FP023	134.3	KU023	NKVU	KD023	NKHD
FU013	134.8	KU013	NKVU	KD013	EKHD
FU015	134.8	KU015	NKVU	KD015	EKHD
FU017	134.8	KU017	NKVU	KD017	EKHD
FU019	134.8	KU019	NKVU	KD019	EKHD
FU021	134.8	KU021	NKVU	KD021	EKHD
FU023	134.8	KU023	NKVU	KD023	EKHD
FR025	135.1	KU025	NKVU	KD025	SKHD
FR027	135.1	KU027	NKVU	KD027	SKHD
FR029	135.1	KU029	NKVU	KD029	SKHD
FR031	135.1	KU031	NKVU	KD031	SKHD
FR033	135.1	KU033	NKVU	KD033	SKHD
FR035	135.1	KU035	NKVU	KD035	SKHD
JU013	135.2	KU013	EKVU	KD013	EKHD
JU015	135.2	KU015	EKVU	KD015	EKHD
JU017	135.2	KU017	EKVU	KD017	EKHD
JU019	135.2	KU019	EKVU	KD019	EKHD
JU021	135.2	KU021	EKVU	KD021	EKHD
JU023	135.2	KU023	EKVU	KD023	EKHD
JP013	134.7	KU013	EKVU	KD013	NKHD
JP015	134.7	KU015	EKVU	KD015	NKHD
JP017	134.7	KU017	EKVU	KD017	NKHD
JP019	134.7	KU019	EKVU	KD019	NKHD
JP021	134.7	KU021	EKVU	KD021	NKHD
JP023	134.7	KU023	EKVU	KD023	NKHD
JR025	135.7	KU025	EKVU	KD025	SKHD
JR027	135.7	KU027	EKVU	KD027	SKHD
JR029	135.7	KU029	EKVU	KD029	SKHD
JR031	135.7	KU031	EKVU	KD031	SKHD
JR033	135.7	KU033	EKVU	KD033	SKHD
JR035	135.7	KU035	EKVU	KD035	SKHD

HP001	129.6	KU001	SKVU	KD001	NKHD
HP003	129.6	KU003	SKVU	KD003	NKHD
HP005	129.6	KU005	SKVU	KD005	NKHD
HP007	129.6	KU007	SKVU	KD007	NKHD
HP009	129.6	KU009	SKVU	KD009	NKHD
HP011	129.6	KU011	SKVU	KD011	NKHD
HR025	135.9	KU025	SKVU	KD025	SKHD
HR027	135.9	KU027	SKVU	KD027	SKHD
HR029	135.9	KU029	SKVU	KD029	SKHD
HR031	135.9	KU031	SKVU	KD031	SKHD
HR033	135.9	KU033	SKVU	KD033	SKHD
HR035	135.9	KU035	SKVU	KD035	SKHD
GV002	129.6	KU002	SKHU	KD002	EKVD
GV004	129.6	KU004	SKHU	KD004	EKVD
GV006	129.6	KU006	SKHU	KD006	EKVD
GV008	129.6	KU008	SKHU	KD008	EKVD
GV010	129.6	KU010	SKHU	KD010	EKVD
GV012	129.6	KU012	SKHU	KD012	EKVD
GV014	134.9	KU014	SKHU	KD014	EKVD
GV016	134.9	KU016	SKHU	KD016	EKVD
GV018	134.9	KU018	SKHU	KD018	EKVD
GV020	134.9	KU020	SKHU	KD020	EKVD
GV022	134.9	KU022	SKHU	KD022	EKVD
GV024	134.9	KU024	SKHU	KD024	EKVD
GQ002	129.3	KU002	SKHU	KD002	NKVD
GQ004	129.3	KU004	SKHU	KD004	NKVD
GQ006	129.3	KU006	SKHU	KD006	NKVD
GQ008	129.3	KU008	SKHU	KD008	NKVD
GQ010	129.3	KU010	SKHU	KD010	NKVD
GQ012	129.3	KU012	SKHU	KD012	NKVD
GT014	134.9	KU014	SKHU	KD014	S2KV
GT016	134.9	KU016	SKHU	KD016	S2KV
GT018	134.9	KU018	SKHU	KD018	S2KV
GT020	134.9	KU020	SKHU	KD020	S2KV
GT022	134.9	KU022	SKHU	KD022	S2KV
GT024	134.9	KU024	SKHU	KD024	S2KV
GS026	136	KU026	SKHU	KD026	S1KV
GS028	136	KU028	SKHU	KD028	S1KV
GS030	136	KU030	SKHU	KD030	S1KV

GS032	136	KU032	SKHU	KD032	S1KV
GS034	136	KU034	SKHU	KD034	S1KV
GS036	136	KU036	SKHU	KD036	S1KV
IT014	134.5	KU014	EKHU	KD014	S2KV
IT016	134.5	KU016	EKHU	KD016	S2KV
IT018	134.5	KU018	EKHU	KD018	S2KV
IT020	134.5	KU020	EKHU	KD020	S2KV
IT022	134.5	KU022	EKHU	KD022	S2KV
IT024	134.5	KU024	EKHU	KD024	S2KV
IV014	134.5	KU014	EKHU	KD014	EKVD
IV016	134.5	KU016	EKHU	KD016	EKVD
IV018	134.5	KU018	EKHU	KD018	EKVD
IV020	134.5	KU020	EKHU	KD020	EKVD
IV022	134.5	KU022	EKHU	KD022	EKVD
IV024	134.5	KU024	EKHU	KD024	EKVD
IS026	135.4	KU026	EKHU	KD026	S1KV
IS028	135.4	KU028	EKHU	KD028	S1KV
IS030	135.4	KU030	EKHU	KD030	S1KV
IS032	135.4	KU032	EKHU	KD032	S1KV
IS034	135.4	KU034	EKHU	KD034	S1KV
IS036	135.4	KU036	EKHU	KD036	S1KV
ES026	135.4	KU026	NKHU	KD026	S1KV
ES028	135.4	KU028	NKHU	KD028	S1KV
ES030	135.4	KU030	NKHU	KD030	S1KV
ES032	135.4	KU032	NKHU	KD032	S1KV
ES034	135.4	KU034	NKHU	KD034	S1KV
ES036	135.4	KU036	NKHU	KD036	S1KV
KU013	134.9	KU013	CKVU	KD013	EKHD
KU015	134.9	KU015	CKVU	KD015	EKHD
KU017	134.9	KU017	CKVU	KD017	EKHD
KU019	134.9	KU019	CKVU	KD019	EKHD
KU021	134.9	KU021	CKVU	KD021	EKHD
KU023	134.9	KU023	CKVU	KD023	EKHD
KP013	134.4	KU013	CKVU	KD013	NKHD
KP015	134.4	KU015	CKVU	KD015	NKHD
KP017	134.4	KU017	CKVU	KD017	NKHD
KP019	134.4	KU019	CKVU	KD019	NKHD
KP021	134.4	KU021	CKVU	KD021	NKHD
KP023	134.4	KU023	CKVU	KD023	NKHD

CV002	127.4	CU013	ECVU	KD002	EKVD
CV004	127.4	CU015	ECVU	KD004	EKVD
CV006	127.4	CU017	ECVU	KD006	EKVD
CV008	127.4	CU019	ECVU	KD008	EKVD
CV010	127.4	CU021	ECVU	KD010	EKVD
CV012	127.4	CU023	ECVU	KD012	EKVD
CQ002	127.1	CU013	ECVU	KD002	NKVD
CQ004	127.1	CU015	ECVU	KD004	NKVD
CQ006	127.1	CU017	ECVU	KD006	NKVD
CQ008	127.1	CU019	ECVU	KD008	NKVD
CQ010	127.1	CU021	ECVU	KD010	NKVD
CQ012	127.1	CU023	ECVU	KD012	NKVD
BV002	125.2	CU013	ACVU	KD002	EKVD
BV004	125.2	CU015	ACVU	KD004	EKVD
BV006	125.2	CU017	ACVU	KD006	EKVD
BV008	125.2	CU019	ACVU	KD008	EKVD
BV010	125.2	CU021	ACVU	KD010	EKVD
BV012	125.2	CU023	ACVU	KD012	EKVD
BQ002	124.9	CU013	ACVU	KD002	NKVD
BQ004	124.9	CU015	ACVU	KD004	NKVD
BQ006	124.9	CU017	ACVU	KD006	NKVD
BQ008	124.9	CU019	ACVU	KD008	NKVD
BQ010	124.9	CU021	ACVU	KD010	NKVD
BQ012	124.9	CU023	ACVU	KD012	NKVD
FL001	125.9	KU013	NKVU	CD001	ACHD
FL003	125.9	KU015	NKVU	CD003	ACHD
FL005	125.9	KU017	NKVU	CD005	ACHD
FL007	125.9	KU019	NKVU	CD007	ACHD
FL009	125.9	KU021	NKVU	CD009	ACHD
FL011	125.9	KU023	NKVU	CD011	ACHD
FN001	121.6	KU013	NKVU	CD001	ECHD
FN003	121.6	KU015	NKVU	CD003	ECHD
FN005	121.6	KU017	NKVU	CD005	ECHD
FN007	121.6	KU019	NKVU	CD007	ECHD
FN009	121.6	KU021	NKVU	CD009	ECHD
FN011	121.6	KU023	NKVU	CD011	ECHD
JM002	125.2	CU013	EKVU	CD002	ACVD
JM004	125.2	CU015	EKVU	CD004	ACVD
JM006	125.2	CU017	EKVU	CD006	ACVD

JM008	125.2	CU019	EKVU	CD008	ACVD
JM010	125.2	CU021	EKVU	CD010	ACVD
JM012	125.2	CU023	EKVU	CD012	ACVD
JO002	124.9	CU013	EKVU	CD002	GCVD
JO004	124.9	CU015	EKVU	CD004	GCVD
JO006	124.9	CU017	EKVU	CD006	GCVD
JO008	124.9	CU019	EKVU	CD008	GCVD
JO010	124.9	CU021	EKVU	CD010	GCVD
JO012	124.9	CU023	EKVU	CD012	GCVD

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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			
D2	10M3G7W	10300	4	6000	0.5			
D3	100KG7W	100	4	64	0.5			
D4	1M45G7W	1450	2	512	0.5			
D5	400KG7W	400	2	128	0.5			

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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 ² /Hz)
BL001	JO012	D1									34.6		
BL001	JO012	D2									27.2		
BL001	JO012	D3									6.8		
BL001	JO012	D1									41.9		
BL001	JO012	D2									34.5		
BL001	JO012	D3									14.1		
BL001	JO012	D1									43.4		
BL001	JO012	D2									35.9		
BL001	JO012	D3									15.5		
BL001	JO012	D1									41.9		
BL001	JO012	D2									34.7		
BL001	JO012	D3									14.2		
BL001	JO012	D1									34.6		
BL001	JO012	D2									27.3		
BL001	JO012	D3									6.8		
BL001	JO012	D1									41.9		
BL001	JO012	D2									34.6		
BL001	JO012	D3									14.1		
BL001	JO012	D1									43.4		
BL001	JO012	D2									35.6		
BL001	JO012	D3									15.1		
BL001	JO012	D1									48.8		
BL001	JO012	D2									40.8		
BL001	JO012	D3									22.8		
BL001	JO012	D4									34.8		
BL001	JO012	D5									22		
BL001	JO012	D1									48.8		
BL001	JO012	D2									41.1		
BL001	JO012	D3									20.9		

BL001	JO012	D4												32.9		
BL001	JO012	D5												23.9		
BL001	JO012	D1												48.8		
BL001	JO012	D2												41.5		
BL001	JO012	D3												21.3		
BL001	JO012	D4												30.9		
BL001	JO012	D5												19.4		
BL001	JO012	D1												48.8		
BL001	JO012	D2												40.5		
BL001	JO012	D3												22.8		
BL001	JO012	D4												32.3		
BL001	JO012	D5												20		
BL001	JO012	D1												48.8		
BL001	JO012	D2												40.9		
BL001	JO012	D3												20.7		
BL001	JO012	D4												32.8		
BL001	JO012	D5												23.7		
BL001	JO012	D1												48.8		
BL001	JO012	D2												40.9		
BL001	JO012	D3												20.8		
BL001	JO012	D4												32.8		
BL001	JO012	D5												23.1		
BL001	JO012	D1												48.8		
BL001	JO012	D2												41		
BL001	JO012	D3												21		
BL001	JO012	D4												33		
BL001	JO012	D5												23.2		
BL001	JO012	D1												48.8		
BL001	JO012	D2												42.1		
BL001	JO012	D3												22		
BL001	JO012	D4												34		
BL001	JO012	D5												24.2		
BL001	JO012	D1												48.8		
BL001	JO012	D2												40.9		
BL001	JO012	D4												32.8		
BL001	JO012	D1												48.8		
BL001	JO012	D2												41.1		
BL001	JO012	D3												21		
BL001	JO012	D4												33		

BL001	JO012	D5											23.5						
BL001	JO012	D1											48.8						
BL001	JO012	D2											41.2						
BL001	JO012	D3											21						
BL001	JO012	D4											33						
BL001	JO012	D5											24.2						
BL001	JO012	D1											48.8						
BL001	JO012	D2											41.4						
BL001	JO012	D3											21.1						
BL001	JO012	D1											48.8						
BL001	JO012	D2											41.5						
BL001	JO012	D3											21.2						
BL001	JO012	D1											48.8						
BL001	JO012	D2											41.5						
BL001	JO012	D3											21.2						
BL001	JO012	D1											48.8						
BL001	JO012	D2											41.5						
BL001	JO012	D3											21.2						
BL001	JO012	D1											48.8						
BL001	JO012	D2											41.5						
BL001	JO012	D3											21.2						
BL001	JO012	D1											48.8						
BL001	JO012	D2											41.5						
BL001	JO012	D3											21.2						
BL001	JO012	D1											34.6						
BL001	JO012	D2											25.6						
BL001	JO012	D3											5.5						
BL001	JO012	D1											43.4						
BL001	JO012	D2											34.4						
BL001	JO012	D3											14.3						
BL001	JO012	D1											43.4						
BL001	JO012	D2											34.5						
BL001	JO012	D3											14.5						
BL001	JO012	D1											41.9						
BL001	JO012	D2											33.1						
BL001	JO012	D3											13						
BL001	JO012	D1											48.8						
BL001	JO012	D2											39.6						
BL001	JO012	D4											31.4						
BL001	JO012	D1											48.8						
BL001	JO012	D2											40.9						
BL001	JO012	D4											31.7						

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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: 7900 Tysons One Place			
S14b. City: McLean	S14c. County: Fairfax	S14d. State/Country VA	S14e. Zip Code: 22102
S14f. Telephone Number: 703-559-7701		S14g. Call Sign of Control Station (if appropriate):	

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Characteristics and
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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

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.						

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