

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
(Technical and Operational Description)

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: INTELSAT 801		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): Years		j. Number of transponders offered on a common carrier basis:	
c. Construction Completion Date:		g. Total Number of Transponders: 56		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) 2542 MHz		l. Orbit Type: Mark all boxes that apply: ☒ 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)		
5850	M	6425	M	R	Fixed Satellite Service
3625	M	4200	M	T	Fixed Satellite Service
14000	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
12500	M	12750	M	T	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 29.5 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: PROVIDE SERVICE TO THE VISIBLE PORTION OF NORTH AMERICA, SOUTH AMERICA, EUROPE, AFRICA AND THE VISIBLE PORTION OF ASIA
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): g. Westernmost: h. Easternmost:		
e. Toward East:	0.05 Degrees	1.4 Degrees		
i. Reason for service are selection (Optional):				

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Page 2: NGSO Orbits

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)
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NO NGSO DATA FILED

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Page 3: Service Areas

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		VISIBLE PORTION OF NORTH AMERICA, CENTRAL AMERICA, SOUTH AMERICA
3	S		AFRICA, EUROPE, VISIBLE PORTION OF ASIA
4	S		VISIBLE PORTION OF UNITED STATES AND CANADA
5	S		NORTH AFRICA, EUROPE, VISIBLE PORTION OF ASIA
6	S		SOUTHERN SOUTH AMERICA
7	S		SOUTHERN AFRICA, VISIBLE PORTION OF MIDDLE EAST

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Page 4: Antenna Beams

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
GAU	R	20	16	0.3	0.3		N		1					-8	-93.7	22	1
GBU	R	20	16	0.3	0.3		N		1					-8	-94.3	22	1
WHU	R	27.4	21.4	0.3	0.3		N		2					-0.5	-98.4	22	1
EHU	R	25.1	19.1	0.3	0.3		N		3					-3	-96.9	22	1
NWU	R	34.3	28.3	0.3	0.3		N		4					5	-98.6	22	1
NEU	R	30.7	24.7	0.3	0.3		N		5					1.5	-91	22	1
SWU	R	30.9	24.9	0.3	0.3		N		6					2	-99.6	22	1
SEUL	R	31.2	25.2	0.3	0.3		N		7					2.5	-100.5	22	1
S1UL	R	39	33	0.3	0.3		Y	0	1					10	-97.7	22	1
S2UL	R	37.7	31.7	0.3	0.3		Y	90	1					8.5	-98.4	22	1
GAD	T	19.9	15.9	0.3	0.3		N		1			32.5					
GBD	T	19.9	15.9	0.3	0.3		N		1			32.5					
WHD	T	26	20	0.3	0.3		N		2			39.5					
EHD	T	25.8	19.8	0.3	0.3		N		3			39.5					
NWD	T	35	29	0.3	0.3		N		4			44					
NED	T	30.8	24.8	0.3	0.3		N		5			41.5					
SWD	T	32.3	26.3	0.3	0.3		N		6			43.8					
SEDL	T	29.7	23.7	0.3	0.3		N		7			41					
S1DL	T	37.8	31.8	0.3	0.3		Y	90	1			52					
S2DL	T	36.9	30.9	0.3	0.3		Y	0	1			51					
CMD	R	1.6	0.6	0.3	0.3		N		1					-25.7	-105.9		
CMD	R	1.6	0.6	0.3	0.3		N		1					-25.9	-105.7		
CMD	R	19.1	16.5	0.3	0.3		N		1					-31.3	-99.9		
TLMT	T	1.5	0.5	0.3	0.3		N		1			6.3					
TLM	T	1.5	0.5	0.3	0.3		N		1			3.9					
TLM	T	13.9	11.3	0.3	0.3		N		1			6.5					
BNC	T	17.1	14.5	0.3	0.3		N	90	1			11					
BNK1	T	20.6	18	0.3	0.3		N		1			13.6					
BNK2	T	37.8	27.8	0.3	0.3		Y	90	1			19.8					

BNK3	T	36.9	26.9	0.3	0.3		Y		0	1			18.9				
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Page 5: Beam Diagrams

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
GAU	R		-29.5		gaul.gxt					
GBU	R		-29.5		gbul.gxt					
WHU	R		-29.5		whul.gxt					
EHU	R		-29.5		ehul.gxt					
NWU	R		-29.5		nwul.gxt					
NEU	R		-29.5		neul.gxt					
SWU	R		-29.5		swul.gxt					
SEUL	R		-29.5		seul.gxt					
S1UL	R		-29.5		s1ul.gxt					
S2UL	R		-29.5		s2ul.gxt					
GAD	T		-29.5		gadl.gxt	-160.8	-160.7	-160.5	-160.4	-160.3
GBD	T		-29.5		gbdl.gxt	-160.8	-160.7	-160.5	-160.4	-160.3
WHD	T		-29.5		whdl.gxt	-153.8	-153.7	-153.5	-153.4	-153.3
EHD	T		-29.5		ehdl.gxt	-153.8	-153.7	-153.5	-153.4	-153.3
NWD	T		-29.5		nwdl.gxt	-152	-149.5	-149	-148.9	-148.8
NED	T		-29.5		nedl.gxt	-152	-151.7	-151.5	-151.4	-151.3
SWD	T		-29.5		swdl.gxt	-152	-149.5	-149.2	-149.1	-149
SEDL	T		-29.5		sedl.gxt	-152.3	-152.2	-152	-151.9	-151.8
S1DL	T		-29.5		s1dl.gxt	-148	-145.5	-143	-140.9	-140.8
S2DL	T		-29.5		s2dl.gxt	-148	-145.5	-143	-141.9	-141.8
CMD	R		-29.5		cmdt.gxt					
CMD	R		-29.5		cmde.gxt					
CMD	R		-29.5		cmdo.gxt					
TLMT	T		-29.5		tlmt.gxt	-174.9	-174.8	-174.7	-174.6	-174.5
TLM	T		-29.5		tlme.gxt	-177.3	-177.2	-177.1	-177	-176.9
TLM	T		-29.5		tlmo.gxt	-174.7	-174.6	-174.5	-174.4	-174.3
BNC	T		-29.5		bnc.gxt	-160.2	-160.1	-160	-159.9	-159.8
BNK1	T		-29.5		bnk1.gxt	-157.6	-157.5	-157.4	-157.3	-157.2

BNK2	T		-29.5		bnk2.gxt	-151.4	-151.3	-151.2	-151.1	-151
BNK3	T		-29.5		bnk3.gxt	-152.3	-152.2	-152.1	-152	-151.9

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Page 6: Channels and Transponders

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)
HD2	72000	T	3825	L	C
HD3	34000	T	3886	L	C
HD4	34000	T	3924	L	C
HD6	72000	T	3995	L	C
HDA	36000	T	4055	L	C
ID1	72000	T	3745	L	C
ID2	72000	T	3825	L	C
ID3	34000	T	3886	L	C
ID4	34000	T	3924	L	C
ID6	72000	T	3995	L	C
IDA	36000	T	4055	L	C
GDE	77000	T	3742.5	L	C
JDE	77000	T	3742.5	L	C
HDE	77000	T	3742.5	L	C
IDE	77000	T	3742.5	L	C
ID5	72000	T	3905	L	C
S1D1	77000	T	10992.5	V	C
S1D2	72000	T	11075	V	C
S1D3	34000	T	11136	V	C
S1D4	34000	T	11174	V	C
S1D6	112000	T	11514	V	C
S1D7	112000	T	11638	V	C
U1D1	77000	T	10992.5	H	C
U1D2	72000	T	11075	H	C
U1D3	34000	T	11136	H	C
U1D4	34000	T	11174	H	C
U1D6	112000	T	11514	H	C
U1D7	112000	T	11638	H	C
S2D1	77000	T	12547.5	V	C
S2D2	72000	T	12630	V	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
AAAA	123.6	AUA	GAUL	ADA	GADL
AABB	123.6	AUB	GAUL	ADB	GADL
AACC	123.6	AUC	GAUL	ADC	GADL
AADD	123.6	AUD	GAUL	ADD	GADL
AEEA	124.5	AUA	GAUL	EDA	WHDL
BBAA	124.2	BUA	GBUL	BDA	GBDL
BBBB	124.2	BUB	GBUL	BDB	GBDL
BBCC	124.2	BUC	GBUL	BDC	GBDL
BBDD	124.2	BUD	GBUL	BDD	GBDL
BFAA	125.3	BUA	GBUL	FDA	EHDL
EE00	121.8	EU0	WHUL	ED0	WHDL
EE11	121.8	EU1	WHUL	ED1	WHDL
EE22	121.8	EU2	WHUL	ED2	WHDL
EE33	121.8	EU3	WHUL	ED3	WHDL
EE44	121.8	EU4	WHUL	ED4	WHDL
EE66	121.8	EU6	WHUL	ED6	WHDL
EEAA	121.8	EUA	WHUL	EDA	WHDL
EF00	122	EU0	WHUL	FD0	EHDL
EF11	122	EU1	WHUL	FD1	EHDL
EF22	122	EU2	WHUL	FD2	EHDL
EF33	122	EU3	WHUL	FD3	EHDL
EF44	122	EU4	WHUL	FD4	EHDL
EF66	122	EU6	WHUL	FD6	EHDL
EFAA	122	EUA	WHUL	FDA	EHDL
EG11	117.3	EU1	WHUL	GD1	NWDL
EG22	117.3	EU2	WHUL	GD2	NWDL
EG33	117.3	EU3	WHUL	GD3	NWDL
EG44	117.3	EU4	WHUL	GD4	NWDL
EG66	117.3	EU6	WHUL	GD6	NWDL
EGAA	117.3	EUA	WHUL	GDA	NWDL

S2D3	34000	T	12691	V	C
S2D4	34000	T	12729	V	C
S2D6	112000	T	11514	V	C
S2D7	112000	T	11638	V	C
U2D1	77000	T	12547.5	H	C
U2D2	72000	T	12630	H	C
U2D3	34000	T	12691	H	C
U2D4	34000	T	12729	H	C
U2D6	112000	T	11514	H	C
U2D7	112000	T	11638	H	C
S3D1	77000	T	11747.5	V	C
S3D2	72000	T	11830	V	C
S3D3	34000	T	11891	V	C
S3D4	34000	T	11929	V	C
S3D6	112000	T	11514	V	C
S3D7	112000	T	11638	V	C
U3D1	77000	T	11747.5	H	C
U3D2	72000	T	11830	H	C
U3D3	34000	T	11891	H	C
U3D4	34000	T	11929	H	C
U3D6	112000	T	11514	H	C
U3D7	112000	T	11638	H	C
S1DD	41000	T	11677.5	V	C
U1DD	41000	T	11677.5	H	C
S1DC	72000	T	10995	V	C
S1DE	72000	T	11495	V	C
U1DC	72000	T	10995	H	C
U1DE	72000	T	11495	H	C
S2DD	41000	T	11677.5	V	C
U2DD	41000	T	11677.5	H	C
S2DC	72000	T	12550	V	C
S2DE	72000	T	11495	V	C
U2DC	72000	T	12550	H	C
U2DE	72000	T	11495	H	C
S3DD	41000	T	11677.5	V	C
U3DD	41000	T	11677.5	H	C
S3DC	72000	T	11750	V	C
S3DE	72000	T	11495	V	C
U3DC	72000	T	11750	H	C

EJ11	119.6	EU1	WHUL	JD1	SEDL
EJ22	119.6	EU2	WHUL	JD2	SEDL
EJ33	119.6	EU3	WHUL	JD3	SEDL
EJ44	119.6	EU4	WHUL	JD4	SEDL
EJ66	119.6	EU6	WHUL	JD6	SEDL
EJAA	119.6	EUA	WHUL	JDA	SEDL
EH11	119	EU1	WHUL	HD1	NEDL
EH22	119	EU2	WHUL	HD2	NEDL
EH33	119	EU3	WHUL	HD3	NEDL
EH44	119	EU4	WHUL	HD4	NEDL
EH66	119	EU6	WHUL	HD6	NEDL
EHAA	119	EUA	WHUL	HDA	NEDL
EI11	119.8	EU1	WHUL	ID1	SWDL
EI22	119.8	EU2	WHUL	ID2	SWDL
EI33	119.8	EU3	WHUL	ID3	SWDL
EI44	119.8	EU4	WHUL	ID4	SWDL
EI66	119.8	EU6	WHUL	ID6	SWDL
EIAA	119.8	EUA	WHUL	IDA	SWDL
EA44	120.9	EUA	WHUL	ADA	GADL
FE00	122.6	FU0	EHUL	ED0	WHDL
FE11	122.6	FU1	EHUL	ED1	WHDL
FE22	122.6	FU2	EHUL	ED2	WHDL
FE33	122.6	FU3	EHUL	ED3	WHDL
FE44	122.6	FU4	EHUL	ED4	WHDL
FE66	122.6	FU6	EHUL	ED6	WHDL
FEAA	122.6	FUA	EHUL	EDA	WHDL
FF00	122.8	FU0	EHUL	FD0	EHDL
FF11	122.8	FU1	EHUL	FD1	EHDL
FF22	122.8	FU2	EHUL	FD2	EHDL
FF33	122.8	FU3	EHUL	FD3	EHDL
FF44	122.8	FU4	EHUL	FD4	EHDL
FF66	122.8	FU6	EHUL	FD6	EHDL
FFAA	122.8	FUA	EHUL	FDA	EHDL
FG11	118.1	FU1	EHUL	GD1	NWDL
FG22	118.1	FU2	EHUL	GD2	NWDL
FG33	118.1	FU3	EHUL	GD3	NWDL
FG44	118.1	FU4	EHUL	GD4	NWDL
FG66	118.1	FU6	EHUL	GD6	NWDL
FGAA	118.1	FUA	EHUL	GDA	NWDL

U3DE	72000	T	11495	H	C
CMD1	1000	R	6173.7	L	T
CMD2	1000	R	6176.3	R	T
CMD3	1000	R	6173.7	R	T
CMD4	1000	R	6176.3	L	T
CMD5	1000	R	6173.7	L	T
TLM1	500	T	3947.5	R	T
TLM2	500	T	3948	R	T
TLM3	500	T	3952	R	T
TLM4	500	T	3952.5	R	T
UPC1	25	T	3950	V	T
UPK1	25	T	11198	R	T
UPK2	25	T	11452	R	T
UPK3	25	T	11701	V	T
UPK4	25	T	11701	V	T
UPK5	25	T	12501	H	T
UPK6	25	T	12501	H	T
AUA	36000	R	6280	L	C
AUB	36000	R	6320	L	C
AUC	36000	R	6360	L	C
AUD	41000	R	6402.5	L	C
BUA	36000	R	6280	R	C
BUB	36000	R	6320	R	C
BUC	36000	R	6360	R	C
BUD	41000	R	6402.5	R	C
EU0	72000	R	5890	L	C
EU1	72000	R	5970	L	C
EU2	72000	R	6050	L	C
EU3	34000	R	6111	L	C
EU4	34000	R	6149	L	C
EU6	72000	R	6220	L	C
EUA	36000	R	6280	L	C
FU0	72000	R	5890	L	C
FU1	72000	R	5970	L	C
FU2	72000	R	6050	L	C
FU3	34000	R	6111	L	C
FU4	34000	R	6149	L	C
FU6	72000	R	6220	L	C
FUA	36000	R	6280	L	C

FJ11	120.4	FU1	EHUL	JD1	SEDL
FJ22	120.4	FU2	EHUL	JD2	SEDL
FJ33	120.4	FU3	EHUL	JD3	SEDL
FJ44	120.4	FU4	EHUL	JD4	SEDL
FJ66	120.4	FU6	EHUL	JD6	SEDL
FJAA	120.4	FUA	EHUL	JDA	SEDL
FH11	119.8	FU1	EHUL	HD1	NEDL
FH22	119.8	FU2	EHUL	HD2	NEDL
FH33	119.8	FU3	EHUL	HD3	NEDL
FH44	119.8	FU4	EHUL	HD4	NEDL
FH66	119.8	FU6	EHUL	HD6	NEDL
FHAA	119.8	FUA	EHUL	HDA	NEDL
FI11	120.6	FU1	EHUL	ID1	SWDL
FI22	120.6	FU2	EHUL	ID2	SWDL
FI33	120.6	FU3	EHUL	ID3	SWDL
FI44	120.6	FU4	EHUL	ID4	SWDL
FI66	120.6	FU6	EHUL	ID6	SWDL
FIAA	120.6	FUA	EHUL	IDA	SWDL
FBAA	121.7	FUA	EHUL	BDA	GBDL
GE11	115.1	GU1	NWUL	ED1	WHDL
GE22	115.1	GU2	NWUL	ED2	WHDL
GE33	115.1	GU3	NWUL	ED3	WHDL
GE44	115.1	GU4	NWUL	ED4	WHDL
GE66	115.1	GU6	NWUL	ED6	WHDL
GEAA	115.1	GUA	NWUL	EDA	WHDL
GF11	115.3	GU1	NWUL	FD1	EHDL
GF22	115.3	GU2	NWUL	FD2	EHDL
GF33	115.3	GU3	NWUL	FD3	EHDL
GF44	115.3	GU4	NWUL	FD4	EHDL
GF66	115.3	GU6	NWUL	FD6	EHDL
GFAA	115.3	GUA	NWUL	FDA	EHDL
GGEE	110.6	GUE	NWUL	GDE	NWDL
GG22	110.6	GU2	NWUL	GD2	NWDL
GG33	110.6	GU3	NWUL	GD3	NWDL
GG44	110.6	GU4	NWUL	GD4	NWDL
GG66	110.6	GU6	NWUL	GD6	NWDL
GGAA	110.6	GUA	NWUL	GDA	NWDL
GJEE	112.9	GUE	NWUL	JDE	SEDL
GJ22	112.9	GU2	NWUL	JD2	SEDL

GU1	72000	R	5970	R	C
GU2	72000	R	6050	R	C
GU3	34000	R	6111	R	C
GU4	34000	R	6149	R	C
GU6	72000	R	6220	R	C
GUA	36000	R	6280	R	C
GUE	77000	R	5967.5	R	C
JU1	72000	R	5970	R	C
JU2	72000	R	6050	R	C
JU3	34000	R	6111	R	C
JU4	34000	R	6149	R	C
JU6	72000	R	6220	R	C
JUA	36000	R	6280	R	C
JUE	77000	R	5967.5	R	C
HU1	72000	R	5970	R	C
HU2	72000	R	6050	R	C
HU3	34000	R	6111	R	C
HU4	34000	R	6149	R	C
HU6	72000	R	6220	R	C
HUA	36000	R	6280	R	C
HUE	77000	R	5967.5	R	C
HU5	72000	R	6130	R	C
IU1	72000	R	5970	R	C
IU2	72000	R	6050	R	C
IU3	34000	R	6111	R	C
IU4	34000	R	6149	R	C
IU6	72000	R	6220	R	C
IUA	36000	R	6280	R	C
IUE	77000	R	5967.5	R	C
SU1	77000	R	14042.5	H	C
SU2	72000	R	14125	H	C
SU3	34000	R	14186	H	C
SU4	34000	R	14224	H	C
SU6	112000	R	14314	H	C
SU7	112000	R	14438	H	C
UU1	77000	R	14042.5	V	C
UU2	72000	R	14125	V	C
UU3	34000	R	14186	V	C
UU4	34000	R	14224	V	C

GJ33	112.9	GU3	NWUL	JD3	SEDL
GJ44	112.9	GU4	NWUL	JD4	SEDL
GJ66	112.9	GU6	NWUL	JD6	SEDL
GJAA	112.9	GUA	NWUL	JDA	SEDL
GHEE	112.3	GUE	NWUL	HDE	NEDL
GH22	112.3	GU2	NWUL	HD2	NEDL
GH33	112.3	GU3	NWUL	HD3	NEDL
GH44	112.3	GU4	NWUL	HD4	NEDL
GH66	112.3	GU6	NWUL	HD6	NEDL
GHAA	112.3	GUA	NWUL	HDA	NEDL
GIEE	113.1	GUE	NWUL	IDE	SWDL
GI22	113.1	GU2	NWUL	ID2	SWDL
GI33	113.1	GU3	NWUL	ID3	SWDL
GI44	113.1	GU4	NWUL	ID4	SWDL
GI66	113.1	GU6	NWUL	ID6	SWDL
GIAA	113.1	GUA	NWUL	IDA	SWDL
JE11	120.1	JU1	SEUL	ED1	WHDL
JE22	120.1	JU2	SEUL	ED2	WHDL
JE33	120.1	JU3	SEUL	ED3	WHDL
JE44	120.1	JU4	SEUL	ED4	WHDL
JE66	120.1	JU6	SEUL	ED6	WHDL
JEAA	120.1	JUA	SEUL	EDA	WHDL
JF11	120.3	JU1	SEUL	FD1	EHDL
JF22	120.3	JU2	SEUL	FD2	EHDL
JF33	120.3	JU3	SEUL	FD3	EHDL
JF44	120.3	JU4	SEUL	FD4	EHDL
JF66	120.3	JU6	SEUL	FD6	EHDL
JFAA	120.3	JUA	SEUL	FDA	EHDL
JGEE	115.6	JUE	SEUL	GDE	NWDL
JG22	115.6	JU2	SEUL	GD2	NWDL
JG33	115.6	JU3	SEUL	GD3	NWDL
JG44	115.6	JU4	SEUL	GD4	NWDL
JG66	115.6	JU6	SEUL	GD6	NWDL
JGAA	115.6	JUA	SEUL	GDA	NWDL
JJEE	117.9	JUE	SEUL	JDE	SEDL
JJ22	117.9	JU2	SEUL	JD2	SEDL
JJ33	117.9	JU3	SEUL	JD3	SEDL
JJ44	117.9	JU4	SEUL	JD4	SEDL
JJ66	117.9	JU6	SEUL	JD6	SEDL

UU6	112000	R	14314	V	C
UU7	112000	R	14438	V	C
SUF	72000	R	14045	H	C
SUG	72000	R	14295	H	C
SUH	41000	R	14477.5	H	C
TUF	72000	R	14045	V	C
TU2	72000	R	14125	V	C
TU3	34000	R	14186	V	C
TU4	34000	R	14224	V	C
TUG	72000	R	14295	V	C
TU1	77000	R	14042.5	V	C
TUH	41000	R	14477.5	V	C
ADA	36000	T	4055	R	C
ADB	36000	T	4095	R	C
ADC	36000	T	4135	R	C
ADD	41000	T	4177.5	R	C
EDA	36000	T	4055	R	C
BDA	36000	T	4055	L	C
BDB	36000	T	4095	L	C
BDC	36000	T	4135	L	C
BDD	41000	T	4177.5	L	C
FDA	36000	T	4055	R	C
ED0	72000	T	3665	R	C
ED1	72000	T	3745	R	C
ED2	72000	T	3825	R	C
ED3	34000	T	3886	R	C
ED4	34000	T	3924	R	C
ED6	72000	T	3995	R	C
FD0	72000	T	3665	R	C
FD1	72000	T	3745	R	C
FD2	72000	T	3825	R	C
FD3	34000	T	3886	R	C
FD4	34000	T	3924	R	C
FD6	72000	T	3995	R	C
GD1	72000	T	3745	L	C
GD2	72000	T	3825	L	C
GD3	34000	T	3886	L	C
GD4	34000	T	3924	L	C
GD6	72000	T	3995	L	C

JJAA	117.9	JUA	SEUL	JDA	SEDL
JHEE	117.3	JUE	SEUL	HDE	NEDL
JH22	117.3	JU2	SEUL	HD2	NEDL
JH33	117.3	JU3	SEUL	HD3	NEDL
JH44	117.3	JU4	SEUL	HD4	NEDL
JH66	117.3	JU6	SEUL	HD6	NEDL
JHAA	117.3	JUA	SEUL	HDA	NEDL
JIEE	118.1	JUE	SEUL	IDE	SWDL
JI22	118.1	JU2	SEUL	ID2	SWDL
JI33	118.1	JU3	SEUL	ID3	SWDL
JI44	118.1	JU4	SEUL	ID4	SWDL
JI66	118.1	JU6	SEUL	ID6	SWDL
JIAA	118.1	JUA	SEUL	IDA	SWDL
HE11	111.1	HU1	NEUL	ED1	WHDL
HE22	111.1	HU2	NEUL	ED2	WHDL
HE33	111.1	HU3	NEUL	ED3	WHDL
HE44	111.1	HU4	NEUL	ED4	WHDL
HE66	111.1	HU6	NEUL	ED6	WHDL
HEAA	111.1	HUA	NEUL	EDA	WHDL
HF11	111.3	HU1	NEUL	FD1	EHD
HF22	111.3	HU2	NEUL	FD2	EHD
HF33	111.3	HU3	NEUL	FD3	EHD
HF44	111.3	HU4	NEUL	FD4	EHD
HF66	111.3	HU6	NEUL	FD6	EHD
HFAA	111.3	HUA	NEUL	FDA	EHD
HGEE	106.6	HUE	NEUL	GDE	NWDL
HG22	106.6	HU2	NEUL	GD2	NWDL
HG33	106.6	HU3	NEUL	GD3	NWDL
HG44	106.6	HU4	NEUL	GD4	NWDL
HG66	106.6	HU6	NEUL	GD6	NWDL
HGAA	106.6	HUA	NEUL	GDA	NWDL
HJEE	108.7	HUE	NEUL	JDE	SEDL
HJ22	108.7	HU2	NEUL	JD2	SEDL
HJ33	108.7	HU3	NEUL	JD3	SEDL
HJ44	108.7	HU4	NEUL	JD4	SEDL
HJ66	108.7	HU6	NEUL	JD6	SEDL
HJAA	108.7	HUA	NEUL	JDA	SEDL
HHEE	108.3	HUE	NEUL	HDE	NEDL
HH22	108.3	HU2	NEUL	HD2	NEDL

GDA	36000	T	4055	L	C
JD1	72000	T	3745	L	C
JD2	72000	T	3825	L	C
JD3	34000	T	3886	L	C
JD4	34000	T	3924	L	C
JD6	72000	T	3995	L	C
JDA	36000	T	4055	L	C
HD1	72000	T	3745	L	C

HH33	108.3	HU3	NEUL	HD3	NEDL
HH44	108.3	HU4	NEUL	HD4	NEDL
HH66	108.3	HU6	NEUL	HD6	NEDL
HHAA	108.3	HUA	NEUL	HDA	NEDL
HIEE	109.1	HUE	NEUL	IDE	SWDL
HI22	109.1	HU2	NEUL	ID2	SWDL
HI33	109.1	HU3	NEUL	ID3	SWDL
HI44	109.1	HU4	NEUL	ID4	SWDL
HI55	109.1	HU5	NEUL	ID5	SWDL
HI66	109.1	HU6	NEUL	ID6	SWDL
HIAA	109.1	HUA	NEUL	IDA	SWDL
IE11	119.5	IU1	SWUL	ED1	WHDL
IE22	119.5	IU2	SWUL	ED2	WHDL
IE33	119.5	IU3	SWUL	ED3	WHDL
IE44	119.5	IU4	SWUL	ED4	WHDL
IE66	119.5	IU6	SWUL	ED6	WHDL
IEAA	119.5	IUA	SWUL	EDA	WHDL
IF11	119.7	IU1	SWUL	FD1	EHDl
IF22	119.7	IU2	SWUL	FD2	EHDl
IF33	119.7	IU3	SWUL	FD3	EHDl
IF44	119.7	IU4	SWUL	FD4	EHDl
IF66	119.7	IU6	SWUL	FD6	EHDl
IFAA	119.7	IUA	SWUL	FDA	EHDl
IGEE	115	IUE	SWUL	GDE	NWDL
IG22	115	IU2	SWUL	GD2	NWDL
IG33	115	IU3	SWUL	GD3	NWDL
IG44	115	IU4	SWUL	GD4	NWDL
IG66	115	IU6	SWUL	GD6	NWDL
IGAA	115	IUA	SWUL	GDA	NWDL
IJEE	117.3	IUE	SWUL	JDE	SEDL
IJ22	117.3	IU2	SWUL	JD2	SEDL
IJ33	117.3	IU3	SWUL	JD3	SEDL
IJ44	117.3	IU4	SWUL	JD4	SEDL
IJ66	117.3	IU6	SWUL	JD6	SEDL
IJAA	117.3	IUA	SWUL	JDA	SEDL
IHEE	116.7	IUE	SWUL	HDE	NEDL
IH22	116.7	IU2	SWUL	HD2	NEDL
IH33	116.7	IU3	SWUL	HD3	NEDL
IH44	116.7	IU4	SWUL	HD4	NEDL

IH66	116.7	IU6	SWUL	HD6	NEDL
IHAA	116.7	IUA	SWUL	HDA	NEDL
IIEE	117.5	IUE	SWUL	IDE	SWDL
IJ22	117.5	IU2	SWUL	ID2	SWDL
IJ33	117.5	IU3	SWUL	ID3	SWDL
IJ44	117.5	IU4	SWUL	ID4	SWDL
IJ66	117.5	IU6	SWUL	ID6	SWDL
IJAA	117.5	IUA	SWUL	IDA	SWDL
SS11	117.4	SU1	S1UL	S1D1	S1DL
SS12	117.4	SU2	S1UL	S1D2	S1DL
SS13	117.4	SU3	S1UL	S1D3	S1DL
SS14	117.4	SU4	S1UL	S1D4	S1DL
SS16	117.4	SU6	S1UL	S1D6	S1DL
SS17	117.4	SU7	S1UL	S1D7	S1DL
SU11	117.3	SU1	S1UL	U1D1	S2DL
SU12	117.3	SU2	S1UL	U1D2	S2DL
SU13	117.3	SU3	S1UL	U1D3	S2DL
SU14	117.3	SU4	S1UL	U1D4	S2DL
SU16	117.3	SU6	S1UL	U1D6	S2DL
SU17	117.3	SU7	S1UL	U1D7	S2DL
US11	119.4	UU1	S2UL	S1D1	S1DL
US12	119.4	UU2	S2UL	S1D2	S1DL
US13	119.4	UU3	S2UL	S1D3	S1DL
US14	119.4	UU4	S2UL	S1D4	S1DL
US16	119.4	UU6	S2UL	S1D6	S1DL
US17	119.4	UU7	S2UL	S1D7	S1DL
UU11	119.3	UU1	S2UL	U1D1	S2DL
UU12	119.3	UU2	S2UL	U1D2	S2DL
UU13	119.3	UU3	S2UL	U1D3	S2DL
UU14	119.3	UU4	S2UL	U1D4	S2DL
UU16	119.3	UU6	S2UL	U1D6	S2DL
UU17	119.3	UU7	S2UL	U1D7	S2DL
SS21	117.4	SU1	S1UL	S2D1	S1DL
SS22	117.4	SU2	S1UL	S2D2	S1DL
SS23	117.4	SU3	S1UL	S2D3	S1DL
SS24	117.4	SU4	S1UL	S2D4	S1DL
SS26	117.4	SU6	S1UL	S2D6	S1DL
SS27	117.4	SU7	S1UL	S2D7	S1DL
SU21	117.3	SU1	S1UL	U2D1	S2DL

SU22	117.3	SU2	S1UL	U2D2	S2DL
SU23	117.3	SU3	S1UL	U2D3	S2DL
SU24	117.3	SU4	S1UL	U2D4	S2DL
SU26	117.3	SU6	S1UL	U2D6	S2DL
SU27	117.3	SU7	S1UL	U2D7	S2DL
US21	119.4	UU1	S2UL	S2D1	S1DL
US22	119.4	UU2	S2UL	S2D2	S1DL
US23	119.4	UU3	S2UL	S2D3	S1DL
US24	119.4	UU4	S2UL	S2D4	S1DL
US26	119.4	UU6	S2UL	S2D6	S1DL
US27	119.4	UU7	S2UL	S2D7	S1DL
UU21	119.3	UU1	S2UL	U2D1	S2DL
UU22	119.3	UU2	S2UL	U2D2	S2DL
UU23	119.3	UU3	S2UL	U2D3	S2DL
UU24	119.3	UU4	S2UL	U2D4	S2DL
UU26	119.3	UU6	S2UL	U2D6	S2DL
UU27	119.3	UU7	S2UL	U2D7	S2DL
SS31	117.4	SU1	S1UL	S3D1	S1DL
SS32	117.4	SU2	S1UL	S3D2	S1DL
SS33	117.4	SU3	S1UL	S3D3	S1DL
SS34	117.4	SU4	S1UL	S3D4	S1DL
SS36	117.4	SU6	S1UL	S3D6	S1DL
SS37	117.4	SU7	S1UL	S3D7	S1DL
SU31	117.3	SU1	S1UL	U3D1	S2DL
SU32	117.3	SU2	S1UL	U3D2	S2DL
SU33	117.3	SU3	S1UL	U3D3	S2DL
SU34	117.3	SU4	S1UL	U3D4	S2DL
SU36	117.3	SU6	S1UL	U3D6	S2DL
SU37	117.3	SU7	S1UL	U3D7	S2DL
US31	119.4	UU1	S2UL	S3D1	S1DL
US32	119.4	UU2	S2UL	S3D2	S1DL
US33	119.4	UU3	S2UL	S3D3	S1DL
US34	119.4	UU4	S2UL	S3D4	S1DL
US36	119.4	UU6	S2UL	S3D6	S1DL
US37	119.4	UU7	S2UL	S3D7	S1DL
UU31	119.3	UU1	S2UL	U3D1	S2DL
UU32	119.3	UU2	S2UL	U3D2	S2DL
UU33	119.3	UU3	S2UL	U3D3	S2DL
UU34	119.3	UU4	S2UL	U3D4	S2DL

UU36	119.3	UU6	S2UL	U3D6	S2DL
UU37	119.3	UU7	S2UL	U3D7	S2DL
SEF1	116.7	SUF	S1UL	ED1	WHDL
SE22	116.7	SU2	S1UL	ED2	WHDL
SE33	116.7	SU3	S1UL	ED3	WHDL
SE44	116.7	SU4	S1UL	ED4	WHDL
SEG6	116.7	SUG	S1UL	ED6	WHDL
SFF1	116.9	SUF	S1UL	FD1	EHDl
SF22	116.9	SU2	S1UL	FD2	EHDl
SF33	116.9	SU3	S1UL	FD3	EHDl
SF44	116.9	SU4	S1UL	FD4	EHDl
SFG6	116.9	SUG	S1UL	FD6	EHDl
SG1E	112.2	SU1	S1UL	GDE	NWDL
SG22	112.2	SU2	S1UL	GD2	NWDL
SG33	112.2	SU3	S1UL	GD3	NWDL
SG44	112.2	SU4	S1UL	GD4	NWDL
SGG6	112.2	SUG	S1UL	GD6	NWDL
SJ1E	114.5	SU1	S1UL	JDE	SEDL
SJ22	114.5	SU2	S1UL	JD2	SEDL
SJ33	114.5	SU3	S1UL	JD3	SEDL
SJ44	114.5	SU4	S1UL	JD4	SEDL
SJG6	114.5	SUG	S1UL	JD6	SEDL
SH1E	113.9	SU1	S1UL	HDE	NEDL
SH22	113.9	SU2	S1UL	HD2	NEDL
SH33	113.9	SU3	S1UL	HD3	NEDL
SH44	113.9	SU4	S1UL	HD4	NEDL
SHG6	113.9	SUG	S1UL	HD6	NEDL
SI1E	114.7	SU1	S1UL	IDE	SWDL
SI22	114.7	SU2	S1UL	ID2	SWDL
SI33	114.7	SU3	S1UL	ID3	SWDL
SI44	114.7	SU4	S1UL	ID4	SWDL
SIG6	114.7	SUG	S1UL	ID6	SWDL
SAHD	115.8	SUH	S1UL	ADD	GADL
SBHD	115.8	SUH	S1UL	BDD	GBDL
TEF1	118.7	TUF	S2UL	ED1	WHDL
TE22	118.7	TU2	S2UL	ED2	WHDL
TE33	118.7	TU3	S2UL	ED3	WHDL
TE44	118.7	TU4	S2UL	ED4	WHDL
TEG6	118.7	TUG	S2UL	ED6	WHDL

TFF1	118.9	TUF	S2UL	FD1	EHDl
TF22	118.9	TU2	S2UL	FD2	EHDl
TF33	118.9	TU3	S2UL	FD3	EHDl
TF44	118.9	TU4	S2UL	FD4	EHDl
TFG6	118.9	TUG	S2UL	FD6	EHDl
TG1E	114.2	TU1	S2UL	GDE	NWDL
TG22	114.2	TU2	S2UL	GD2	NWDL
TG33	114.2	TU3	S2UL	GD3	NWDL
TG44	114.2	TU4	S2UL	GD4	NWDL
TGG6	114.2	TUG	S2UL	GD6	NWDL
TJ1E	116.5	TU1	S2UL	JDE	SEDL
TJ22	116.5	TU2	S2UL	JD2	SEDL
TJ33	116.5	TU3	S2UL	JD3	SEDL
TJ44	116.5	TU4	S2UL	JD4	SEDL
TJG6	116.5	TUG	S2UL	JD6	SEDL
TH1E	115.9	TU1	S2UL	HDE	NEDL
TH22	115.9	TU2	S2UL	HD2	NEDL
TH33	115.9	TU3	S2UL	HD3	NEDL
TH44	115.9	TU4	S2UL	HD4	NEDL
THG6	115.9	TUG	S2UL	HD6	NEDL
TI1E	116.7	TU1	S2UL	IDE	SWDL
TI22	116.7	TU2	S2UL	ID2	SWDL
TI33	116.7	TU3	S2UL	ID3	SWDL
TI44	116.7	TU4	S2UL	ID4	SWDL
TIG6	116.7	TUG	S2UL	ID6	SWDL
TAHD	117.8	TUH	S2UL	ADD	GADL
TBHD	117.8	TUH	S2UL	BDD	GBDL
AS1D	125.2	AUD	GAUL	S1DD	S1DL
AU1D	125.1	AUD	GAUL	U1DD	S2DL
BS1D	125.8	BUD	GBUL	S1DD	S1DL
BU1D	125.7	BUD	GBUL	U1DD	S2DL
ES1C	122.5	EU1	WHUL	S1DC	S1DL
ES12	122.5	EU2	WHUL	S1D2	S1DL
ES13	122.5	EU3	WHUL	S1D3	S1DL
ES14	122.5	EU4	WHUL	S1D4	S1DL
ES1E	122.5	EU6	WHUL	S1DE	S1DL
EU1C	122.4	EU1	WHUL	U1DC	S2DL
EU12	122.4	EU2	WHUL	U1D2	S2DL
EU13	122.4	EU3	WHUL	U1D3	S2DL

EU14	122.4	EU4	WHUL	U1D4	S2DL
EU1E	122.4	EU6	WHUL	U1DE	S2DL
FS1C	123.3	FU1	EHUL	S1DC	S1DL
FS12	123.3	FU2	EHUL	S1D2	S1DL
FS13	123.3	FU3	EHUL	S1D3	S1DL
FS14	123.3	FU4	EHUL	S1D4	S1DL
FS1E	123.3	FU6	EHUL	S1DE	S1DL
FU1C	123.2	FU1	EHUL	U1DC	S2DL
FU12	123.2	FU2	EHUL	U1D2	S2DL
FU13	123.2	FU3	EHUL	U1D3	S2DL
FU14	123.2	FU4	EHUL	U1D4	S2DL
FU1E	123.2	FU6	EHUL	U1DE	S2DL
GS11	115.8	GUE	NWUL	S1D1	S1DL
GS12	115.8	GU2	NWUL	S1D2	S1DL
GS13	115.8	GU3	NWUL	S1D3	S1DL
GS14	115.8	GU4	NWUL	S1D4	S1DL
GS1E	115.8	GU6	NWUL	S1DE	S1DL
GU11	115.7	GUE	NWUL	U1D1	S2DL
GU12	115.7	GU2	NWUL	U1D2	S2DL
GU13	115.7	GU3	NWUL	U1D3	S2DL
GU14	115.7	GU4	NWUL	U1D4	S2DL
GU1E	115.7	GU6	NWUL	U1DE	S2DL
JS11	120.8	JUE	SEUL	S1D1	S1DL
JS12	120.8	JU2	SEUL	S1D2	S1DL
JS13	120.8	JU3	SEUL	S1D3	S1DL
JS14	120.8	JU4	SEUL	S1D4	S1DL
JS1E	120.8	JU6	SEUL	S1DE	S1DL
JU11	120.7	JUE	SEUL	U1D1	S2DL
JU12	120.7	JU2	SEUL	U1D2	S2DL
JU13	120.7	JU3	SEUL	U1D3	S2DL
JU14	120.7	JU4	SEUL	U1D4	S2DL
JU1E	120.7	JU6	SEUL	U1DE	S2DL
HS11	111.8	HUE	NEUL	S1D1	S1DL
HS12	111.8	HU2	NEUL	S1D2	S1DL
HS13	111.8	HU3	NEUL	S1D3	S1DL
HS14	111.8	HU4	NEUL	S1D4	S1DL
HS1E	111.8	HU6	NEUL	S1DE	S1DL
HU11	111.7	HUE	NEUL	U1D1	S2DL
HU12	111.7	HU2	NEUL	U1D2	S2DL

HU13	111.7	HU3	NEUL	U1D3	S2DL
HU14	111.7	HU4	NEUL	U1D4	S2DL
HU1E	111.7	HU6	NEUL	U1DE	S2DL
IS11	120.2	IUE	SWUL	S1D1	S1DL
IS12	120.2	IU2	SWUL	S1D2	S1DL
IS13	120.2	IU3	SWUL	S1D3	S1DL
IS14	120.2	IU4	SWUL	S1D4	S1DL
IS1E	120.2	IU6	SWUL	S1DE	S1DL
IU11	120.1	IUE	SWUL	U1D1	S2DL
IU12	120.1	IU2	SWUL	U1D2	S2DL
IU13	120.1	IU3	SWUL	U1D3	S2DL
IU14	120.1	IU4	SWUL	U1D4	S2DL
IU1E	120.1	IU6	SWUL	U1DE	S2DL
AS2D	125.2	AUD	GAUL	S2DD	S1DL
AU2D	125.1	AUD	GAUL	U2DD	S2DL
BS2D	125.8	BUD	GBUL	S2DD	S1DL
BU2D	125.7	BUD	GBUL	U2DD	S2DL
ES2C	122.5	EU1	WHUL	S2DC	S1DL
ES22	122.5	EU2	WHUL	S2D2	S1DL
ES23	122.5	EU3	WHUL	S2D3	S1DL
ES24	122.5	EU4	WHUL	S2D4	S1DL
ES2E	122.5	EU6	WHUL	S2DE	S1DL
EU2C	122.4	EU1	WHUL	U2DC	S2DL
EU22	122.4	EU2	WHUL	U2D2	S2DL
EU23	122.4	EU3	WHUL	U2D3	S2DL
EU24	122.4	EU4	WHUL	U2D4	S2DL
EU2E	122.4	EU6	WHUL	U2DE	S2DL
FS2C	123.3	FU1	EHUL	S2DC	S1DL
FS22	123.3	FU2	EHUL	S2D2	S1DL
FS23	123.3	FU3	EHUL	S2D3	S1DL
FS24	123.3	FU4	EHUL	S2D4	S1DL
FS2E	123.3	FU6	EHUL	S2DE	S1DL
FU2C	123.2	FU1	EHUL	U2DC	S2DL
FU22	123.2	FU2	EHUL	U2D2	S2DL
FU23	123.2	FU3	EHUL	U2D3	S2DL
FU24	123.2	FU4	EHUL	U2D4	S2DL
FU2E	123.2	FU6	EHUL	U2DE	S2DL
GS21	115.8	GUE	NWUL	S2D1	S1DL
GS22	115.8	GU2	NWUL	S2D2	S1DL

GS23	115.8	GU3	NWUL	S2D3	S1DL
GS24	115.8	GU4	NWUL	S2D4	S1DL
GS2E	115.8	GU6	NWUL	S2DE	S1DL
GU21	115.7	GUE	NWUL	U2D1	S2DL
GU22	115.7	GU2	NWUL	U2D2	S2DL
GU23	115.7	GU3	NWUL	U2D3	S2DL
GU24	115.7	GU4	NWUL	U2D4	S2DL
GU2E	115.7	GU6	NWUL	U2DE	S2DL
JS21	120.8	JUE	SEUL	S2D1	S1DL
JS22	120.8	JU2	SEUL	S2D2	S1DL
JS23	120.8	JU3	SEUL	S2D3	S1DL
JS24	120.8	JU4	SEUL	S2D4	S1DL
JS2E	120.8	JU6	SEUL	S2DE	S1DL
JU21	120.7	JUE	SEUL	U2D1	S2DL
JU22	120.7	JU2	SEUL	U2D2	S2DL
JU23	120.7	JU3	SEUL	U2D3	S2DL
JU24	120.7	JU4	SEUL	U2D4	S2DL
JU2E	120.7	JU6	SEUL	U2DE	S2DL
HS21	111.8	HUE	NEUL	S2D1	S1DL
HS22	111.8	HU2	NEUL	S2D2	S1DL
HS23	111.8	HU3	NEUL	S2D3	S1DL
HS24	111.8	HU4	NEUL	S2D4	S1DL
HS2E	111.8	HU6	NEUL	S2DE	S1DL
HU21	111.7	HUE	NEUL	U2D1	S2DL
HU22	111.7	HU2	NEUL	U2D2	S2DL
HU23	111.7	HU3	NEUL	U2D3	S2DL
HU24	111.7	HU4	NEUL	U2D4	S2DL
HU2E	111.7	HU6	NEUL	U2DE	S2DL
IS21	120.2	IUE	SWUL	S2D1	S1DL
IS22	120.2	IU2	SWUL	S2D2	S1DL
IS23	120.2	IU3	SWUL	S2D3	S1DL
IS24	120.2	IU4	SWUL	S2D4	S1DL
IS2E	120.2	IU6	SWUL	S2DE	S1DL
IU21	120.1	IUE	SWUL	U2D1	S2DL
IU22	120.1	IU2	SWUL	U2D2	S2DL
IU23	120.1	IU3	SWUL	U2D3	S2DL
IU24	120.1	IU4	SWUL	U2D4	S2DL
IU2E	120.1	IU6	SWUL	U2DE	S2DL
AS3D	125.2	AUD	GAUL	S3DD	S1DL

AU3D	125.1	AUD	GAUL	U3DD	S2DL
BS3D	125.8	BUD	GBUL	S3DD	S1DL
BU3D	125.7	BUD	GBUL	U3DD	S2DL
ES3C	122.5	EU1	WHUL	S3DC	S1DL
ES32	122.5	EU2	WHUL	S3D2	S1DL
ES33	122.5	EU3	WHUL	S3D3	S1DL
ES34	122.5	EU4	WHUL	S3D4	S1DL
ES3E	122.5	EU6	WHUL	S3DE	S1DL
EU3C	122.4	EU1	WHUL	U3DC	S2DL
EU32	122.4	EU2	WHUL	U3D2	S2DL
EU33	122.4	EU3	WHUL	U3D3	S2DL
EU34	122.4	EU4	WHUL	U3D4	S2DL
EU3E	122.4	EU6	WHUL	U3DE	S2DL
FS3C	123.3	FU1	EHUL	S3DC	S1DL
FS32	123.3	FU2	EHUL	S3D2	S1DL
FS33	123.3	FU3	EHUL	S3D3	S1DL
FS34	123.3	FU4	EHUL	S3D4	S1DL
FS3E	123.3	FU6	EHUL	S3DE	S1DL
FU3C	123.2	FU1	EHUL	U3DC	S2DL
FU32	123.2	FU2	EHUL	U3D2	S2DL
FU33	123.2	FU3	EHUL	U3D3	S2DL
FU34	123.2	FU4	EHUL	U3D4	S2DL
FU3E	123.2	FU6	EHUL	U3DE	S2DL
GS31	115.8	GUE	NWUL	S3D1	S1DL
GS32	115.8	GU2	NWUL	S3D2	S1DL
GS33	115.8	GU3	NWUL	S3D3	S1DL
GS34	115.8	GU4	NWUL	S3D4	S1DL
GS3E	115.8	GU6	NWUL	S3DE	S1DL
GU31	115.7	GUE	NWUL	U3D1	S2DL
GU32	115.7	GU2	NWUL	U3D2	S2DL
GU33	115.7	GU3	NWUL	U3D3	S2DL
GU34	115.7	GU4	NWUL	U3D4	S2DL
GU3E	115.7	GU6	NWUL	U3DE	S2DL
JS31	120.8	JUE	SEUL	S3D1	S1DL
JS32	120.8	JU2	SEUL	S3D2	S1DL
JS33	120.8	JU3	SEUL	S3D3	S1DL
JS34	120.8	JU4	SEUL	S3D4	S1DL
JS3E	120.8	JU6	SEUL	S3DE	S1DL
JU31	120.7	JUE	SEUL	U3D1	S2DL

JU32	120.7	JU2	SEUL	U3D2	S2DL
JU33	120.7	JU3	SEUL	U3D3	S2DL
JU34	120.7	JU4	SEUL	U3D4	S2DL
JU3E	120.7	JU6	SEUL	U3DE	S2DL
HS31	111.8	HUE	NEUL	S3D1	S1DL
HS32	111.8	HU2	NEUL	S3D2	S1DL
HS33	111.8	HU3	NEUL	S3D3	S1DL
HS34	111.8	HU4	NEUL	S3D4	S1DL
HS3E	111.8	HU6	NEUL	S3DE	S1DL
HU31	111.7	HUE	NEUL	U3D1	S2DL
HU32	111.7	HU2	NEUL	U3D2	S2DL
HU33	111.7	HU3	NEUL	U3D3	S2DL
HU34	111.7	HU4	NEUL	U3D4	S2DL
HU3E	111.7	HU6	NEUL	U3DE	S2DL
IS31	120.2	IUE	SWUL	S3D1	S1DL
IS32	120.2	IU2	SWUL	S3D2	S1DL
IS33	120.2	IU3	SWUL	S3D3	S1DL
IS34	120.2	IU4	SWUL	S3D4	S1DL
IS3E	120.2	IU6	SWUL	S3DE	S1DL
IU31	120.1	IUE	SWUL	U3D1	S2DL
IU32	120.1	IU2	SWUL	U3D2	S2DL
IU33	120.1	IU3	SWUL	U3D3	S2DL
IU34	120.1	IU4	SWUL	U3D4	S2DL
IU3E	120.1	IU6	SWUL	U3DE	S2DL

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Page 7: Digital Modulation

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	112MG7W	112000	4	76436	0.5		3.36	15.1
D2	77M0G7W	77000	4	52550	0.5		3.36	19.2
D3	72M0G7W	72000	4	49138	0.5		3.36	20.2
D4	41M0G7W	41000	4	27981	0.5		3.36	22.6
D5	36M0G7W	36000	4	24575	0.5		3.36	14.9
D6	10M3G7W	10300	4	6000	0.5		3.87	19.6
D7	100KG7W	100	4	64	0.5		2.99	18.9
D8	1M45G7W	1450	2	512	0.5		3.4	13.9
D9	400KG7W	400	2	128	0.5		3.4	12.7

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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	36M0F3F	36000	TV/FM	1					NTSC	15.6	1.5		10	26.3

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Page 9: Typical Emissions

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)				
		(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/m ² /Hz)	(o) Assoc. Stn Rec. G/T (dB/K)	
(a) Start	(b) End								(j) Min.	(k) Max.	(l) Min.	(m) Max.			
AAAA	IU3E		A1	1	36000	IS801 SCHEDU	4000	58.4	18.2	22.2	28.5	32.5	-159.6	34.5	
AAAA	IU3E	D5		1	36000	NOTE.txt		51	20.6	24.6	28.5	32.5	-168.4	26.2	
AAAA	IU3E	D6		2	10300	NOTE.txt		51	17.1	21.1	21.3	25.3	-169.1	26.6	
AAAA	IU3E	D7		258	100	NOTE.txt		51	-3.3	0.7	0.9	4.9	-170	26.6	
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	55.4	19.2	23.2	33.5	39.5	-152.6	26.2	
AAAA	IU3E	D5		1	36000	NOTE.txt		51	19.6	23.6	33.5	39.5	-161.4	19.2	
AAAA	IU3E	D6		2	10300	NOTE.txt		51	12.1	16.1	26.3	32.3	-162.1	19.2	
AAAA	IU3E	D7		257	100	NOTE.txt		51	-8.3	-4.3	5.9	11.9	-163	19.2	
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	58.4	19.2	23.2	45	51	-141.1	25	
AAAA	IU3E	D4		1	41000	NOTE.txt		58.4	19.2	23.2	43.4	49.4	-152.1	18.8	
AAAA	IU3E	D6		2	10300	NOTE.txt		51	9.8	13.8	35.3	41.3	-153.1	22.3	
AAAA	IU3E	D7		309	100	NOTE.txt		51	-10.5	-6.5	15	21	-153.9	22.3	
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	58.4	17.1	23.1	28.5	32.5	-159.6	34.5	
AAAA	IU3E	D5		1	36000	NOTE.txt		51	18.5	24.5	28.5	32.5	-168.4	26.2	
AAAA	IU3E	D6		2	10300	NOTE.txt		51	16	22	21.3	25.3	-169.1	26.6	
AAAA	IU3E	D7		260	100	NOTE.txt		51	-4.5	1.5	0.9	4.9	-170	26.6	
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	54.1	18.4	24.4	33.5	39.5	-152.6	26.2	
AAAA	IU3E	D5		1	36000	NOTE.txt		51	15.5	21.5	33.5	39.5	-161.4	19.2	
AAAA	IU3E	D6		2	10300	NOTE.txt		51	10.9	16.9	26.2	32.2	-162.2	19.2	
AAAA	IU3E	D7		263	100	NOTE.txt		51	-9.5	-3.5	5.8	11.8	-163.1	19.2	
AAAA	IU3E		A1	2	36000	NOTE.txt	4000	55.4	17.9	23.9	38.8	44.8	-147.3	33.1	
AAAA	IU3E	D2		1	77000	NOTE.txt		51	17.5	23.5	45	51	-153.2	22.3	
AAAA	IU3E	D6		5	10300	NOTE.txt		51	8.1	14.1	32.8	38.8	-155.6	25	
AAAA	IU3E	D7		558	100	NOTE.txt		51	-12.2	-6.2	12.4	18.4	-156.5	25	
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	56.4	18.1	24.1	35	41	-151.1	23.6	
AAAA	IU3E	D5		1	36000	NOTE.txt		51	15.5	21.5	35	41	-159.9	19.2	
AAAA	IU3E	D6		2	10300	NOTE.txt		51	9.7	15.7	27.5	33.5	-160.9	19.2	
AAAA	IU3E	D7		277	100	NOTE.txt		51	-10.7	-4.7	7.1	13.1	-161.8	19.2	
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	56.9	17.6	23.6	28.5	32.5	-159.6	28.4	

AAAA	IU3E	D4		1	41000	NOTE.txt		56.9	17.6	23.6	28.5	32.5	-169	23.6
AAAA	IU3E	D6		2	10300	NOTE.txt		56.9	1.3	7.3	20.6	24.6	-169.8	23.6
AAAA	IU3E	D7		280	100	NOTE.txt		56.9	-18.7	-12.7	0.5	4.5	-170.4	23.6
AAAA	IU3E		A1	2	36000	NOTE.txt	4000	56.9	12.8	18.8	27.5	33.5	-158.6	31
AAAA	IU3E	D3		1	72000	NOTE.txt		56.9	16.6	22.6	33.5	39.5	-164.4	21
AAAA	IU3E	D6		4	10300	NOTE.txt		56.9	6.1	12.1	23.3	29.3	-165.1	20.9
AAAA	IU3E	D7		480	100	NOTE.txt		56.9	-14	-8	3.2	9.2	-165.7	20.9
AAAA	IU3E		A1	3	36000	NOTE.txt	4000	56.9	16.6	22.6	36.7	42.7	-149.4	36.6
AAAA	IU3E	D1		1	112000	NOTE.txt		56.9	15.6	21.6	45	51	-154.8	22.3
AAAA	IU3E	D6		7	10300	NOTE.txt		56.9	2.5	8.5	31	37	-157.4	25
AAAA	IU3E	D7		825	100	NOTE.txt		56.9	-17.8	-11.8	10.7	16.7	-158.2	25
AAAA	IU3E	D8		51	1450	NOTE.txt		56.9	-5.7	0.3	22.8	28.8	-158.2	25
AAAA	IU3E	D9		280	400	NOTE.txt		49	-10.3	-4.3	10.3	16.3	-164.7	33.1
AAAA	IU3E		A1	2	36000	NOTE.txt	4000	56.9	13.8	19.8	29	35	-157.1	29.4
AAAA	IU3E	D2		1	77000	NOTE.txt		56.9	16.6	22.6	35	41	-163.2	19.2
AAAA	IU3E	D6		5	10300	NOTE.txt		56.9	-1.2	4.8	24.5	30.5	-163.9	21
AAAA	IU3E	D7		524	100	NOTE.txt		56.9	-21.4	-15.4	4.3	10.3	-164.6	21
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	58.4	18	24	33.5	39.5	-152.6	23.6
AAAA	IU3E	D5		1	36000	NOTE.txt		51	16.4	22.4	33.5	39.5	-161.4	19.2
AAAA	IU3E	D6		2	10300	NOTE.txt		51	10.8	16.8	26.2	32.2	-162.2	19.2
AAAA	IU3E	D7		266	100	NOTE.txt		51	-9.7	-3.7	5.8	11.8	-163.1	19.2
AAAA	IU3E		A1	2	36000	NOTE.txt	4000	54.1	18.1	24.1	38.8	44.8	-147.3	33.1
AAAA	IU3E	D2		1	77000	NOTE.txt		51	17.4	23.4	45	51	-153.2	22.3
AAAA	IU3E	D6		5	10300	NOTE.txt		51	8	14	32.7	38.7	-155.7	25
AAAA	IU3E	D7		569	100	NOTE.txt		51	-12.4	-6.4	12.4	18.4	-156.5	25
AAAA	IU3E		A1	1	36000	NOTE.txt	4000	55.4	18	24	35	41	-151.1	23.6
AAAA	IU3E	D5		1	36000	NOTE.txt		51	16.4	22.4	35	41	-159.9	19.2
AAAA	IU3E	D6		2	10300	NOTE.txt		51	8.9	14.9	27.8	33.8	-160.6	19.2
AAAA	IU3E	D7		259	100	NOTE.txt		51	-11.5	-5.5	7.4	13.4	-161.5	19.2

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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

Remote Control (TT C) Location(s):

S14a. Street Address: 3400 INTERNATIONAL DRIVE, N.W.			
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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Characteristics and
Certifications**

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?:	☒	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	☒	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?	☐	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.						