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:
O3B		8/1/2014	N
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s):	j. Number of transponders offered on a common carrier basis:
12/15/2008		10 Years	0
c. Construction Completion Date:		g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth:
3/1/2012		20	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:
6/25/2013	6/1/2014	4320 MHz	[ ] **GSO** [X] **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)		
27600	M	28400	M	R	Fixed Satellite Service
19290	M	19300	M	T	Space Operations Service
29085	M	29100	M	R	Space Operations Service
17800	M	18600	M	T	Fixed Satellite Service
18800	M	19290	M	T	Fixed Satellite Service
28600	M	29085	M	T	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

FEDERAL COMMUNICATIONS COMMISSION
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: 8

S4b. Total Number of Orbital Planes in Network or System: 1

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.): E

S4d. Orbit Epoch Date: 1/1/2010

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
1	8	0	17280	8062	8062	0	0	0	360	

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)
1	1	0
1	2	45
1	3	90
1	4	135
1	5	180
1	6	225
1	7	270
1	8	315

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

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.
G1	S		Haleiwa, HI + Vernon, TX + Lima, Peru
U	S		Visible Earth down to a minimum elevation angle of 3 degrees

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

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
GT1	T	33.1	29.1	0.6	0.5	18.5	N		G1	1.5	45.9	49.7					
GT2	T	33.1	29.1	0.6	0.5	18.5	N		G1	1.5	45.9	49.7					
GR1	R	34.5	31.5	0.6	0.5	18.5	N		G1				1000	4	-98	14	0.5
GR2	R	34.5	31.5	0.6	0.5	18.5	N		G1				1000	4	-98	14	0.5
UT1	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT2	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT3	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT4	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT5	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT6	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT7	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT8	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT9	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UT10	T	33.1	29.1	0.6	0.5	18.5	N		U	1.5	45.9	49.7					
UR1	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR2	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR3	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR4	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR5	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR6	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR7	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR8	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR9	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
UR10	R	34.5	31.5	0.6	0.5	18.5	N		U				1000	4	-101	14	0.5
CMD	R	8	6	0.6	0.5	20	N		U				1000	-20	-92		
TLM	T	8	6	0.6	0.5	20	N		U	1	0.52	5.2					
TLMS	T	8	1	0.6	0.5	20	N		U	4.5	17.78	20.5					

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

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
GT1	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
GR1	R	C		Rx Antenna Formulae						
GR2	R	C		Rx Antenna Formulae						
UT1	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT2	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT3	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT4	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT5	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT6	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT7	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT8	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT9	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UT10	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UR1	R	C		Rx Antenna Formulae						
UR2	R	C		Rx Antenna Formulae						
UR3	R	C		Rx Antenna Formulae						
UR4	R	C		Rx Antenna Formulae						
UR5	R	C		Rx Antenna Formulae						
UR6	R	C		Rx Antenna Formulae						
UR7	R	C		Rx Antenna Formulae						
UR8	R	C		Rx Antenna Formulae						
UR9	R	C		Rx Antenna Formulae						
GT2	T	C		Tx Antenna Formulae		-119.19	-118.82	-118.46	-118.11	-117.77
UR10	R	C		Rx Antenna Formulae						
CMD	R	C		CMD.pdf						
TLM	T	C		TLMN.pdf		-147.7	-147.3	-146.9	-146.6	-146.2
TLMS	T	C		TLMS.pdf		-132.4	-132	-131.6	-131.3	-130.9

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

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)
R1L	216000	R	27760	L	C
R1R	216000	R	27760	R	C
R2L	216000	R	28020	L	C
R2R	216000	R	28020	R	C
R3L	216000	R	28280	L	C
R3R	216000	R	28280	R	C
R4L	216000	R	28709	L	C
R4R	216000	R	28709	R	C
R5L	216000	R	28963	L	C
R5R	216000	R	28963	R	C
T1L	216000	T	17960	L	C
T1R	216000	T	17960	R	C
T2L	216000	T	18220	L	C
T2R	216000	T	18220	R	C
T3L	216000	T	18480	L	C
T3R	216000	T	18480	R	C
T4L	216000	T	18909	L	C
T4R	216000	T	18909	R	C
T5L	216000	T	19163	L	C
T5R	216000	T	19163	R	C
TM1	1000	T	19296.6	R	T
TM2	1000	T	19296.8	R	T
TM3	1000	T	19297	R	T
TM4	1000	T	19297.2	R	T
TM5	1000	T	19297.4	R	T
TM6	1000	T	19297.6	R	T
TM7	1000	T	19297.8	R	T
TM8	1000	T	19298	R	T
TM9	1000	T	19298.2	R	T
TM10	1000	T	19298.4	R	T

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	105	R1R	GR1	T1L	UT1
F2	105	R2R	GR1	T2L	UT2
F3	105	R3R	GR1	T3L	UT3
F4	105	R4R	GR1	T4L	UT4
F5	105	R5R	GR1	T5L	UT5
F6	105	R1L	GR2	T1R	UT6
F7	105	R2L	GR2	T2R	UT7
F8	105	R3L	GR2	T3R	UT8
F9	105	R4L	GR2	T4R	UT9
F10	105	R5L	GR2	T5R	UT10
R1	108	R1L	UR1	T1R	GT1
R2	108	R2L	UR2	T2R	GT1
R3	108	R3L	UR3	T3R	GT1
R4	108	R4L	UR4	T4R	GT1
R5	108	R5L	UR5	T5R	GT1
R6	108	R1R	UR6	T1L	GT2
R7	108	R2R	UR7	T2L	GT2
R8	108	R3R	UR8	T3L	GT2
R9	108	R4R	UR9	T4L	GT2
R10	108	R5R	UR10	T5L	GT2
TC		TC1	CMD		
TMN1				TM1	TLMN
TMN2				TM2	TLMN
TMN3				TM3	TLMN
TMN4				TM4	TLMN
TMN5				TM5	TLMN
TMN6				TM6	TLMN
TMN7				TM7	TLMN
TMN8				TM8	TLMN
TMN9				TM9	TLMN

TM11	1000	T	19298.6	R	T
TM12	1000	T	19298.8	R	T
TM13	1000	T	19299	R	T
TM14	1000	T	19299.2	R	T
TM15	1000	T	19299.4	R	T
TM16	1000	T	19299.6	R	T
TC1	1200	R	29088.5	L	T
TMS1	1000	T	19296.6	L	T
TMS2	1000	T	19296.8	L	T
TMS3	1000	T	19297	L	T
TMS4	1000	T	19297.2	L	T
TMS5	1000	T	19297.4	L	T
TMS6	1000	T	19297.6	L	T
TMS7	1000	T	19297.8	L	T
TMS8	1000	T	19298	L	T
TMS9	1000	T	19298.2	L	T
TMS10	1000	T	19298.4	L	T
TMS11	1000	T	19298.6	L	T
TMS12	1000	T	19298.8	L	T
TMS13	1000	T	19299	L	T
TMS14	1000	T	19299.2	L	T
TMS15	1000	T	19299.4	L	T
TMS16	1000	T	19299.6	L	T

TMN10				TM10	TLMN
TMN11				TM11	TLMN
TMN12				TM12	TLMN
TMN13				TM13	TLMN
TMN14				TM14	TLMN
TMN15				TM15	TLMN
TMN16				TM16	TLMN
TMS1				TMS1	TLMS
TMS2				TMS2	TLMS
TMS3				TMS3	TLMS
TMS4				TMS4	TLMS
TMS5				TMS5	TLMS
TMS6				TMS6	TLMS
TMS7				TMS7	TLMS
TMS8				TMS8	TLMS
TMS9				TMS9	TLMS
TMS10				TMS10	TLMS
TMS11				TMS11	TLMS
TMS12				TMS12	TLMS
TMS13				TMS13	TLMS
TMS14				TMS14	TLMS
TMS15				TMS15	TLMS
TMS16				TMS16	TLMS
F11	105	R4R	UR6	T4L	UT4
F12	105	R5R	UR6	T5L	UT5
F13	105	R2L	UR6	T2R	UT7
F14	105	R3R	UR9	T3L	UT3
F15	105	R2L	UR9	T2R	UT7
F16	105	R3L	UR1	T3R	UT8
F17	105	R4R	UR3	T4L	UT4
R11	108	R4L	UR4	T4R	UT6
R12	108	R5L	UR5	T5R	UT6
R13	108	R2R	UR7	T2L	UT6
R14	108	R3L	UR3	T3R	UT9
R15	108	R2R	UR7	T2L	UT9
R16	108	R3R	UR8	T3L	UT1
R17	108	R4L	UR4	T4R	UT3
F18	105	R1L	UR1	T1L	UT1
F19	105	R3L	UR3	T3L	UT3

F20	105	R5L	UR5	T5L	UT5
F21	105	R3R	UR8	T3R	UT8

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	216MX7D	216000	32	725506	0.833		18.1	30.3
D2	216MX7D	216000	16	520901	0.75		13.6	25.8
D3	216MX7D	216000	8	348127	0.667		8.8	21
D4	216MX7D	216000	4	232147	0.667		5.3	17.5
D5	216MX7D	216000	4	86071	0.25		-1.2	11
D6	40M0X7D	40000	16	134352	0.833		18.1	30.3
D7	40M0X7D	40000	8	96463	0.75		13.6	25.8
D8	40M0X7D	40000	4	64467	0.667		8.8	21
D9	40M0X7D	40000	8	42990	0.667		5.3	17.5
D10	40M0X7D	40000	4	15939	0.25		-1.2	11
D11	307KX7D	1000	32	859	0.833		18.1	30.3
D12	307KX7D	1000	16	617	0.75		13.6	25.8
D13	307KX7D	1000	8	412	0.667		8.8	21
CMD2	500KG2D	1200	2	10	1		10	22.2
TLM2	300KG1D	1000	2	8.192	1		10	22.2
D14	307KX7D	40000	4	275	0.667		5.3	17.5
D15	307KX7D	40000	4	102	0.25		-1.2	11

FEDERAL COMMUNICATIONS COMMISSION **Page 8: Analog Modulation**

SATELLITE SPACE STATION AUTHORIZATIONS

FCC Form 312 - Schedule S: (Technical and Operational Description)

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						

FEDERAL COMMUNICATIONS COMMISSION **Page 9: Typical Emissions**
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		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	F21	D3		1		Link_1.doc		65	13.5	22	40.5	47.7	-125	32
R1	R17	D3		1		Link_2.doc		59	18.1	21.1	31.8	36.9	-127	37
F1	F21	D1		1		Link_3.doc		65	12.5	22	40.6	47.7	-125	32
R1	R17	D1		1		Link_4.doc		59	17.1	21.1	32.8	37.9	-127	37
F1	F21	D5		1		Link_5.doc		65	12.5	22	40.5	47.7	-125	32
R1	R17	D5		1		Link_6.doc		59	19.1	22.1	32.8	37.9	-127	37
F1	F21	D4		1		Link_7.doc		65	11.5	22	40.6	47.7	-125	32
R1	R17	D4		1		Link_8.doc		59	19.1	22.1	32.3	37.9	-127	37
F1	F21	D2		1		Link_9.doc		65	12.5	22	37.9	47.7	-125	32
R1	R17	D2		1		Link_10.doc		59	19.1	22.1	32.8	37.9	-127	37
F4	F5	D7		1		Link_11.doc		65	12.5	22	37.4	47.7	-118	32
R4	R5	D7		1		Link_12.doc		59	19.6	22.6	32.8	37.9	-127	37
F9	F10	D6		1		Link_13.doc		65	12.5	22	40.4	47.7	-118	32
R9	R10	D6		1		Link_14.doc		59	18.1	22.1	32.8	37.9	-127	37
F4	F5	D10		1		Link_15.doc		65	12.5	22	40.3	47.7	-118	26
F9	F10	D8		1		Link_16.doc		65	12.5	22	40.5	47.7	-118	26
F1	F21	D15		703		Link_17.doc		65	-16	-13	6.4	19.2	-125	26
R1	R17	D15		703		Link_18.doc		51	4.4	9.4	-1.7	2.3	-127	37
F1	F21	D13		703		Link_19.doc		65	-16	-13	9.5	19.2	-125	26
R1	R17	D13		703		Link_20.doc		51	4.4	9.4	-1.7	2.3	-127	37
R4	R5	D10		1		Link_21.doc		51	1.6	4.6	32.8	37.9	-127	37
R9	R10	D8		1		Link_22.doc		51	12.4	15.4	32.8	37.9	-127	37
TC	TC	CMD2		1		Link_TLC.doc		65	17.2	20.2				
TMN1	TMN16	TLM2		1		Link_TLMN.doc					-1	5.2	-143	37
TMS1	TMS16	TLM2		1		Link_TLMS.doc					6.6	20.5	-128	37

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

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: 58-350 Kamehameha Hwy			
S14b. City: Haleiwa	S14c. County: Honolulu	S14d. State/Country HI	S14e. Zip Code: 96712
S14f. Telephone Number: (808) 638-0389	S14g. Call Sign of Control Station (if appropriate):		

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): 557	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 143		
S15c. Mass of spacecraft and fuel at launch (kg): 700	S15f. Length (m): 3.19	S15i. Payload: 0.993
S15d. Mass of fuel, in orbit, at beginning of life (kg): 143	S15g. Width (m): 7.72	S15j. Bus: 0.866
S15e. Deployed Area of Solar Array (square meters): 7	S15h. Height (m): 0.8	S15k. Total: 0.86

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): 1140	(f): 1140	(k): 727	(p): 727
Bus (Watts):	(b): 220	(g): 220	(l): 213	(q): 213
Total (Watts):	(c): 1360	(h): 1360	(m) 940	(r): 940
Solar Array (Watts):	(d): 1529	(i): 1697	(n): 1036	(s): 1159
Depth of Battery Discharge (%):	(e) 32.9 %	(j) 15 %	(o) 19.7 %	(t) 9 %

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**	X	**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?	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.