

**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 35e		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): 15 Years	j. Number of transponders offered on a common carrier basis: 0
c. Construction Completion Date:		g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth: 0 MHz
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 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 operate. 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)		
3625	M	3700	M	T	Fixed Satellite Service
3700	M	4200	M	T	Fixed Satellite Service
5850	M	5925	M	R	Fixed Satellite Service
5925	M	6425	M	R	Fixed Satellite Service
10.95	G	11.2	G	T	Fixed Satellite Service
11.45	G	11.7	G	T	Fixed Satellite Service
13.75	G	14	G	R	Fixed Satellite Service
14	G	14.2	G	R	Fixed Satellite Service
14.2	G	14.47	G	R	Fixed Satellite Service
14.47	G	14.5	G	R	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 34.5 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	
Range of orbital arc in which adequate service can be provided (Optional): Degrees E/W		g. Westernmost: h. Easternmost:

i. Reason for service are selection (Optional):			

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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.
1	S		Caribbean
2	S		Europe and Mediterranean Area
3	S		Europe and West Africa
4	S		South America, Caribbean, Greenland, Europe, and West Africa
5	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 Isolation (dB)	(h) Polar- ization Switch- able? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive			
										(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													
CSLU	R	1	1	0.1	0.4	1	N		4				11	-108	1	1
CSR	R	1	1	0.1	0.4	1	N		4				11	-108	1	1
CGL	R	1	1	0.1	0.4	1	N		5				-5.1	-102.9	1	1
CGR	R	1	1	0.1	0.4	1	N		5				-5.1	-102.9	1	1
CSLD	T	1	1	0.1	0.4	1	N		4		51					
CSR	T	1	1	0.1	0.4	1	N		4		51					
CGL	T	1	1	0.1	0.4	1	N		5		37.3					
CGR	T	1	1	0.1	0.4	1	N		5		37.3					
KCH	R	1	1	0.1	0.4	1	N		01				10.4	-110.4	1	1
KCV	R	1	1	0.1	0.4	1	N		901				10.4	-110.4	1	1
KMH	R	1	1	0.1	0.4	1	N		02				10.8	-110.8	1	1
KMV	R	1	1	0.1	0.4	1	N		902				10.8	-110.8	1	1
KAH	R	1	1	0.1	0.4	1	N		03				5.7	-106.7	1	1
KCH	T	1	1	0.1	0.4	1	N		01		53.7					
KCV	T	1	1	0.1	0.4	1	N		901		56					
KMH	T	1	1	0.1	0.4	1	N		02		55.3					
KMV	T	1	1	0.1	0.4	1	N		902		55.7					
KAV	T	1	1	0.1	0.4	1	N		903		49.5					
CGV	R	1	1	0.1	0.4	1	N		905						1	1
CHLU	R	1	1	0.1	0.4	1	N		5						1	1
CPLU	R	1	1	0.1	0.4	1	N		5						1	1
TGH	T	1	1	0.1	0.4	1	N		05		10.1					
THLD	T	1	1	0.1	0.4	1	N		5		11.5					
CLVD	T	1	1	0.1	0.4	1	N		905		13					
KLRD	T	1	1	0.1	0.4	1	N		5		15.6					
TPLD	T	1	1	0.1	0.4	1	N		5		15.4					

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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
CSLU	R		-34.5							
CSR	R		-34.5							
CGL	R		-34.5							
CGR	R		-34.5							
CSLD	T		-34.5			-154.6	-154.5	-154.4	-154.3	-154.2
CSR	T		-34.5			-154.6	-154.5	-154.4	-154.3	-154.2
CGL	T		-34.5			-160.3	-160.2	-160.1	-160	-159.9
CGR	T		-34.5			-160.3	-160.2	-160.1	-160	-159.9
KCH	R		-34.5							
KCV	R		-34.5							
KMH	R		-34.5							
KMV	R		-34.5							
KAH	R		-34.5							
KCH	T		-34.5			-150	-149.9	-149.8	-149.7	-149.6
KCV	T		-34.5			-150	-149.9	-149.8	-149.7	-149.6
KMH	T		-34.5			-150	-149.9	-149.8	-149.7	-149.6
KMV	T		-34.5			-150	-149.9	-149.8	-149.7	-149.6
KAV	T		-34.5			-150	-149.9	-149.8	-149.7	-149.6
CGV	R		-34.5							
CHLU	R		-34.5							
CPLU	R		-34.5							
TGH	T		-34.5			-172	-171.9	-171.7	-171.6	-171.5
THLD	T		-34.5			-170.6	-170.5	-170.3	-170.2	-170.1
CLVD	T		-34.5			-158.3	-153.2	-152.1	-150.9	-150.8
KLRD	T		-34.5			-155.3	-155.2	-155.1	-154.9	-154.8
TPLD	T		-34.5			-166.7	-166.6	-166.4	-166.3	-166.2

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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)
CGU01	36000	R	6357	L	C
CGU02	36000	R	6357	R	C
CGU03	36000	R	6397	L	C
CGU04	36000	R	6397	R	C
CU001	108000	R	5916	L	C
CU002	108000	R	5916	R	C
CU003	108000	R	6036	L	C
CU004	108000	R	6036	R	C
CU005	108000	R	6156	L	C
CU006	108000	R	6156	R	C
CU007	108000	R	6276	L	C
CU008	108000	R	6276	R	C
CU009	216000	R	5976	L	C
CU010	216000	R	5976	R	C
CU011	216000	R	6216	R	C
CGD01	36000	T	4132	L	C
CGD02	36000	T	4132	R	C
CGD03	36000	T	4172	L	C
CGD04	36000	T	4172	R	C
CD001	108000	T	3691	L	C
CD002	108000	T	3691	R	C
CD003	108000	T	3811	L	C
CD004	108000	T	3811	R	C
CD005	108000	T	3931	L	C
CD006	108000	T	3931	R	C
CD007	108000	T	4051	L	C
CD008	108000	T	4051	R	C
CD009	216000	T	3751	L	C
CD010	216000	T	3751	R	C
CD011	216000	T	3991	L	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
TCG01	1	CGU01	CGLU		
TCG02	1	CGU02	CGRU		
TCG03	1	CGU03	CGLU		
TCG04	1	CGU04	CGRU		
TCS01	1	CU001	CSLU		
TCS02	1	CU002	CSRU		
TCS03	1	CU003	CSLU		
TCS04	1	CU004	CSRU		
TCS05	1	CU005	CSLU		
TCS06	1	CU006	CSRU		
TCS07	1	CU007	CSLU		
TCS08	1	CU008	CSRU		
TCS09	1	CU009	CSLU		
TCS10	1	CU010	CSRU		
TCS11	1	CU011	CSLU		
TCG05	1			CGD01	CGLD
TCG06	1			CGD02	CGRD
TCG07	1			CGD03	CGLD
TCG08	1			CGD04	CGRD
TCS12	1			CD001	CSLD
TCS13	1			CD002	CSRD
TCS14	1			CD003	CSLD
TCS15	1			CD004	CSRD
TCS16	1			CD005	CSLD
TCS17	1			CD006	CSRD
TCS18	1			CD007	CSLD
TCS19	1			CD008	CSRD
TCS20	1			CD009	CSLD
TCS21	1			CD010	CSRD
TCS22	1			CD011	CSRD

KUU01	54000	R	14030	V	C
KUU02	54000	R	14030	H	C
KUU03	54000	R	14090	V	C
KUU04	54000	R	14090	H	C
KUU05	54000	R	14150	V	C
KUU06	54000	R	14150	H	C
KUU07	54000	R	14210	V	C
KUU08	54000	R	14210	H	C
KUU09	54000	R	14285	V	C
KUU10	54000	R	14285	H	C
KUU11	54000	R	14345	V	C
KUU12	54000	R	14345	H	C
KUU13	36000	R	14395	V	C
KUU14	54000	R	14405	H	C
KUU15	36000	R	14435	V	C
KUU16	54000	R	14465	H	C
KUU17	36000	R	14475	V	C
KUU18	54000	R	13780	H	C
KUU19	54000	R	13785	V	C
KUU20	54000	R	13840	H	C
KUU21	54000	R	13845	V	C
KUU22	54000	R	13900	H	C
KUU23	36000	R	13895	V	C
KUU24	54000	R	13960	H	C
KUU25	36000	R	13935	V	C
KUU26	54000	R	14150	H	C
KUU27	36000	R	13975	V	C
KUU28	54000	R	14210	H	C
KUU29	54000	R	14030	V	C
KUU31	54000	R	14090	V	C
KUU33	54000	R	14150	V	C
KUU35	54000	R	14210	V	C
KUU37	54000	R	14285	V	C
KUU39	54000	R	14345	V	C
KUU41	36000	R	14395	V	C
KUU43	36000	R	14435	V	C
KUU45	36000	R	14475	V	C
KUD01	54000	T	10980	H	C
KUD02	54000	T	10980	V	C

KUC01		1	KUU01	KCVU		
KUC02		1	KUU02	KCHU		
KUC03		1	KUU03	KCVU		
KUC04		1	KUU04	KCHU		
KUC05		1	KUU05	KCVU		
KUC06		1	KUU06	KCHU		
KUC07		1	KUU07	KCVU		
KUC08		1	KUU08	KCHU		
KUC09		1	KUU09	KCVU		
KUC10		1	KUU10	KCHU		
KUC11		1	KUU11	KCVU		
KUC12		1	KUU12	KCHU		
KUC13		1	KUU13	KCVU		
KUC14		1	KUU14	KCHU		
KUC15		1	KUU15	KCVU		
KUC16		1	KUU16	KCHU		
KUC17		1	KUU17	KCVU		
KUE10		1	KUU10	KMHU		
KUE12		1	KUU12	KMHU		
KUE14		1	KUU14	KMHU		
KUE16		1	KUU16	KMHU		
KUE18		1	KUU18	KMHU		
KUE19		1	KUU19	KMVU		
KUE20		1	KUU20	KMHU		
KUE21		1	KUU21	KMVU		
KUE22		1	KUU22	KMHU		
KUE23		1	KUU23	KMVU		
KUE24		1	KUU24	KMHU		
KUE25		1	KUU25	KMVU		
KUE27		1	KUU27	KMVU		
KUE29		1	KUU29	KMVU		
KUE31		1	KUU31	KMVU		
KUE33		1	KUU33	KMVU		
KUE35		1	KUU35	KMVU		
KUE37		1	KUU37	KMVU		
KUE39		1	KUU39	KMVU		
KUE41		1	KUU41	KMVU		
KUE43		1	KUU43	KMVU		
KUE45		1	KUU45	KMVU		

KUD03	54000	T	11040	H	C
KUD04	54000	T	11040	V	C
KUD05	54000	T	11100	H	C
KUD06	54000	T	11100	V	C
KUD07	54000	T	11160	H	C
KUD08	54000	T	11160	V	C
KUD09	54000	T	11485	H	C
KUD10	54000	T	11485	V	C
KUD11	54000	T	11545	H	C
KUD12	54000	T	11545	V	C
KUD13	36000	T	11595	H	C
KUD14	54000	T	11605	V	C
KUD15	36000	T	11635	H	C
KUD16	54000	T	11665	V	C
KUD17	36000	T	11675	H	C
KUD26	54000	T	11100	V	C
KUD28	54000	T	11160	V	C
KUD29	54000	T	10980	H	C
KUD31	54000	T	11040	H	C
KUD33	54000	T	11100	H	C
KUD35	54000	T	11160	H	C
KUD37	54000	T	11485	H	C
KUD39	54000	T	11545	H	C
KUD41	36000	T	11595	H	C
KUD43	36000	T	11635	H	C
KUD45	36000	T	11675	H	C
TLM1	270	T	4197.73	V	T
TLM2	270	T	4198.75	H	T
TLM3	270	T	4199.75	V	T
TLM4	270	T	4199.25	H	T
CMDH	960	R	6424.5	V	T
CMDHE	960	R	6424.5	H	T
CMDP	960	R	5853	H	T
BCNC	25	T	4199.75	V	T
BCNK1	25	T	11198	H	T
BCNK2	25	T	11451.5	V	T

KUA02		1	KUU02	KAHU		
KUA04		1	KUU04	KAHU		
KUA26		1	KUU06	KAHU		
KUA28		1	KUU08	KAHU		
KUA10		1	KUU10	KAHU		
KUA12		1	KUU12	KAHU		
KUA14		1	KUU14	KAHU		
KUA16		1	KUU16	KAHU		
KDC01		1			KUD01	KCHD
KDC02		1			KUD02	KCVD
KDC03		1			KUD03	KCHD
KDC04		1			KUD04	KCVD
KDC05		1			KUD05	KCHD
KDC06		1			KUD06	KCVD
KDC07		1			KUD07	KCHD
KDC08		1			KUD08	KCVD
KDC09		1			KUD09	KCHD
KDC10		1			KUD10	KCVD
KDC11		1			KUD11	KCHD
KDC12		1			KUD12	KCVD
KDC13		1			KUD13	KCHD
KDC14		1			KUD14	KCVD
KDC15		1			KUD15	KCHD
KDC16		1			KUD16	KCVD
KDC17		1			KUD17	KCHD
KDE10		1			KUD10	KMVD
KDE12		1			KUD12	KMVD
KDE14		1			KUD14	KMVD
KDE16		1			KUD16	KMVD
KDE29		1			KUD29	KMHD
KDE31		1			KUD31	KMHD
KDE33		1			KUD33	KMHD
KDE35		1			KUD35	KMHD
KDE37		1			KUD37	KMHD
KDE39		1			KUD39	KMHD
KDE41		1			KUD41	KMHD
KDE43		1			KUD43	KMHD
KDE45		1			KUD45	KMHD
KDA02		1			KUD02	KAVD

KDA04	1			KUD04	KAVD
KDA26	1			KUD06	KAVD
KDA28	1			KUD08	KAVD
KDA10	1			KUD10	KAVD
KDA12	1			KUD12	KAVD
KDA14	1			KUD14	KAVD
KDA16	1			KUD16	KAVD

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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						
D2	8M25G7W	8250						
D3	1M74G7W	1733						
D4	382KG7W	382						

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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

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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?:	<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.						

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting estimate for this collection of information includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PER, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PERM@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.