

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: NSS-806		e. Estimated Date of Placement into Service: 2/28/1998		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s): 17 Years		j. Number of transponders offered on a common carrier basis: 0	
c. Construction Completion Date:		g. Total Number of Transponders: 31		k. Total Common Carrier Transponder Bandwidth: 0 MHz	
d1. Est Launch Date Begin: 2/28/1998	d2. Est Launch Date End: 2/28/1998	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 1523 MHz		i. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> NGSO	

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper
Also indicate the nature of service(s) for each frequency band.

Frequency Band Limits				e. T/R Mode	Nature of Service(s): List all that apply to this band	f.
Lower Frequency (.Hz)		Upper Frequency (.Hz)				
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)			
3465	M	4200	M	T	Fixed Satellite Service	
5850	M	6425	M	R	Fixed Satellite Service	
6490	M	6650	M	R	Fixed Satellite Service	
11.7	G	11.95	G	T	Fixed Satellite Service	
14	G	14.25	G	R	Fixed Satellite Service	
3465	M	4200	M	T	Direct to Home in the Fixed Fixed Satellite Service	
11.7	G	11.95	G	T	Direct to Home in the Fixed Fixed Satellite Service	

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 47.5 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: This orbit location was selected to provide reasonable elevation angles to the desired service areas, and to increase the isolation to the two adjacent satellites.			
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance:				Range of orbital are in which adequate service can be provided (Optional): <u> </u> Degrees <u> </u> E/W	
d. Toward West:	0.1 Degrees	0.1 Degrees				g. Westernmost: h. Easternmost:	
e. Toward East:		0.1 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.
HA	S		North and South America, Western Europe
HB	S		North and South America, Western Europe
S1_A	S		United States, Caribbean
S1_B	S		United States, Caribbean
GLB	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				
										(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														
HAU	R	24.4	18.4	0.19	0.34	30	N		HA				562	-3.1	-93	20	2
HAD	T	24.9	18.9	0.19	0.34	30	N		HA	1.7	44.7	41.4					
HBU	R	24.4	18.4	0.19	0.34	30	N		HB				562	-3.1	-93	20	2
HBD	T	24.9	18.9	0.19	0.34	30	N		HB	1.7	44.7	41.4					
S1U	R	33.1	27.1	0.19	0.34	30	N	90	S1_B				631	5.1	-100	22	2
S1D	T	32.3	26.3	0.19	0.34	30	N	0	S1_B	1.7	91.2	51.9					
CMD	R	10.3	9.3	0.19	0.34	30	N		GLB				550	-17.1	-90		
TLM	T	11.3	10.3	0.19	0.34	30	N		GLB	3	1.2	12					
BNC	T	11.3	10.3	0.19	0.34	30	N		GLB	3	0.9	11					
BNK	T	32.3	26.3	0.19	0.34	30	N		S1_B	3	0.1	9					

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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
S1U	R	C	-47.5		NSS-806 S1U.gxt					
S1D	T	C	-47.5		NSS-806 S1D.gxt	-155.1	-153.7	-152	-150	-148.2
HAU	R	C	-47.5		NSS-806 HAU.gxt					
HAD	T	C	-47.5		NSS-806 HAD.gxt	-154.1	-154	-153.9	-153.7	-153.6
CMD	R	C	-47.5		NSS-806 CMD.gxt					
TLM	T	C	-47.5		NSS-806 TLM.gxt	-162.2	-162.1	-162	-161.9	-161.7
BNC	T	C	-47.5		NSS-806 BNC.gxt	-161.2	-161.1	-161	-160.9	-160.7
BNK	T	C	-47.5		NSS-806 BNK.gxt	-172.2	-170.9	-169.2	-167.2	-165.3
HBU	R	C	-47.5		NSS-806 HBU.gxt					
HBD	T	C	-47.5		NSS-806 HBD.gxt	-149.8	-149.6	-149.5	-149.4	-149.3

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S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a) Channel No.	(B) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H, V, L, R)	(f) TTC or Comm Channel (T or C)
HBDL	36000	T	4095	L	C
HBDM	36000	T	4135	L	C
HBDN	41000	T	4177.5	L	C
S1UA	77000	R	14042.5	V	C
S1UB	72000	R	14125	V	C
S1UC	72000	R	14205	V	C
S1UD	72000	R	14042.5	V	C
S1UE	36000	R	14125	V	C
S1UF	36000	R	14205	V	C
S1DA	77000	T	11747.5	H	C
S1DB	72000	T	11830	H	C
S1DC	72000	T	11910	H	C
S1DD	72000	T	11747.5	H	C
S1DE	36000	T	11830	H	C
S1DF	36000	T	11910	H	C
TM1	300	T	3947.5	R	T
TM2	300	T	3948	R	T
TM3	300	T	3952.5	R	T
TM4	300	T	3952	R	T
CMD1	800	R	6173.7	L	T
CMD2	800	R	6176.3	L	T
BC1	25	T	3950	V	T
BK1	25	T	11701	H	T
HAUA	72000	R	6527	L	C
HAUB	72000	R	6607	L	C
HAUC	72000	R	5888	L	C
HAUD	72000	R	5968	L	C
HAUE	36000	R	6028	L	C
HAUF	36000	R	6068	L	C
HAUG	36000	R	6108	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
1	124.5	HAUA	HAU	HADA	HAD
2	124.6	HAUB	HAU	HADB	HAD
3	123.6	HAUC	HAU	HADC	HAD
4	123.7	HAUD	HAU	HADD	HAD
5	123.8	HAUE	HAU	HADE	HAD
6	123.9	HAUF	HAU	HADF	HAD
7	123.9	HAUG	HAU	HADG	HAD
8	124	HAUH	HAU	HADH	HAD
9	124.1	HAUI	HAU	HADI	HAD
10	124.1	HAUJ	HAU	HADJ	HAD
11	124.2	HAUK	HAU	HADK	HAD
12	124.2	HAUL	HAU	HADL	HAD
13	124.3	HAUM	HAU	HADM	HAD
14	124.3	HAUN	HAU	HADN	HAD
15	124.5	HBUA	HBU	HBDA	HBD
16	124.6	HBUB	HBU	HBDB	HBD
17	123.6	HBUC	HBU	HBDC	HBD
18	123.7	HBUD	HBU	HBDD	HBD
19	123.8	HBUE	HBU	HBDE	HBD
20	123.9	HBUF	HBU	HBDF	HBD
21	123.9	HBUG	HBU	HB DG	HBD
22	124	HBUH	HBU	HB DH	HBD
23	124.1	HBUI	HBU	HB DI	HBD
24	124.1	HBUJ	HBU	HB DJ	HBD
25	124.2	HBUK	HBU	HB DK	HBD
26	124.2	HBUL	HBU	HB DL	HBD
27	124.3	HBUM	HBU	HB DM	HBD
28	124.3	HBUN	HBU	HB DN	HBD
29	132.6	S1UA	S1U	S1DA	S1D
30	132.7	S1UB	S1U	S1DB	S1D

HAUH	36000	R	6148	L	C
HAUI	34000	R	6201	L	C
HAUJ	36000	R	6240	L	C
HAUK	36000	R	6280	L	C
HAUL	36000	R	6320	L	C
HAUM	36000	R	6360	L	C
HAUN	41000	R	6402.5	L	C
HADA	72000	T	3502	R	C
HADB	72000	T	3582	R	C
HADC	72000	T	3663	R	C
HADD	72000	T	3743	R	C
HADE	36000	T	3803	R	C
HADF	36000	T	3843	R	C
HADG	36000	T	3883	R	C
HADH	36000	T	3923	R	C
HADI	34000	T	3976	R	C
HADJ	36000	T	4015	R	C
HADK	36000	T	4055	R	C
HADL	36000	T	4095	R	C
HADM	36000	T	4135	R	C
HADN	41000	T	4177.5	R	C
HBUA	72000	R	6527	R	C
HBUB	72000	R	6607	R	C
HBUC	72000	R	5888	R	C
HBUD	72000	R	5968	R	C
HBUE	36000	R	6028	R	C
HBUF	36000	R	6068	R	C
HBUG	36000	R	6108	R	C
HBUH	36000	R	6148	R	C
HBUI	34000	R	6201	R	C
HBUJ	36000	R	6240	R	C
HBUK	36000	R	6280	R	C
HBUL	36000	R	6320	R	C
HBUM	36000	R	6360	R	C
HBUN	41000	R	6402.5	R	C
HBDA	72000	T	3502	L	C
HBDB	72000	T	3582	L	C
HBDC	72000	T	3663	L	C
HBDD	72000	T	3743	L	C

31	132.7	S1UC	S1U	S1DC	S1D
32	129.5	S1UD	S1U	HADD	HAD
33	129.6	S1UE	S1U	HADF	HAD
34	129.6	S1UF	S1U	HADH	HAD
35	126.8	HAUD	HAU	S1DD	S1D
36	127	HAUF	HAU	S1DE	S1D
37	127.1	HAUH	HAU	S1DF	S1D
38				TM1	TLM
39				TM2	TLM
40				TM3	TLM
41				TM4	TLM
42		CMD1	CMD		
43		CMD2	CMD		
44				BC1	BNC
45				BK1	BNK

HBDE	36000	T	3803	L	C
HBD F	36000	T	3843	L	C
HBDG	36000	T	3883	L	C
HBDH	36000	T	3923	L	C
HBDI	34000	T	3976	L	C
HBDJ	36000	T	4015	L	C
HBDK	36000	T	4055	L	C

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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	346KG7W	346	4	256	0.5		6	18.2
D2	461KG7W	461	4	512	0.75		9.3	21.5
D3	1M85G7W	1843	4	2048	0.75		9.3	21.5
D4	8M25G7W	8250	4	8448	0.692		6.9	19.1
D5	36M0G7W	35999	4	41470	0.692		6.9	19.1
D6	72M2G7W	72196	8	155000	0.816		12.7	24.9
D7	36M0G7W	35874	4	38000	0.691		8.9	21.1
D8	2M00G1W	1933	4	1365	0.461		5.6	17.8
D9	8M00G1W	7974	4	5631	0.461		5.6	17.8

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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)	(o) Assoc. Stn Rec. G/T (dB/K)
29	31	D1		184	391	NSS-806_Link		51	-4.9	1.1	20.3	26.3	-153.8	25.3
29	31	D2		105	685	Please see NS		52.8	-4.4	1.6	22.7	28.7	-152.7	27.8
29	31	D3		37	1945	Please see NS		52.8	0.2	6.2	27.2	33.2	-154.2	29.8
29	31	D4		6	12000	Please see NS		51	9.5	15.5	34.7	40.7	-153.2	25.3
29	31	D6		1		Please see NS		52.8	20.8	26.8	45.9	51.9	-152.2	31.6
29	31		A1	2	36000	Please see NS	2000	59.1	7.7	13.7	38.5	44.5	-144.5	27.8
32	32	D1		200	360	Please see NS		50.9	-3.6	2.4	9.1	15.1	-165	21.8
32	32	D2		112	642	Please see NS		52.8	-2.9	3.1	11.6	17.6	-163.7	25.2
32	32	D3		28	2571	Please see NS		52.8	3.2	9.2	17.7	23.7	-163.7	25.2
32	32	D4		8	9000	Please see NS		50.9	10.3	16.3	23	29	-164.9	23.3
32	32	D6		1		Please see NS		56.4	18.3	24.3	35.4	41.4	-162.6	27.1
32	32		A1	2	36000	Please see NS	2000	59.1	12.4	18.4	31.8	37.8	-151.3	21.8
33	34	D1		104	346	Please see NS		51	-2.5	3.5	12.2	18.2	-161.9	20
33	34	D2		69	521	Please see NS		52.8	-2.6	3.4	14	20	-161.4	22
33	34	D3		17	2117	Please see NS		52.8	3.5	9.5	20	26	-161.4	22
33	34	D4		4	9000	Please see NS		51	11.2	17.2	25.9	31.9	-162	20
33	34	D5		1		Please see NS		52.8	18.1	24.1	33.6	39.6	-161.2	20
33	34		A1	1		Please see NS	2000	59.1	12.4	18.4	31.8	37.8	-151.3	22
35	35	D1		171	421	Please see NS		45.3	0.5	6.5	20.6	26.6	-153.5	25.3
35	35	D2		126	571	Please see NS		47.1	0.1	6.1	21.9	27.9	-153.5	29.7
35	35	D3		39	1846	Please see NS		47.1	5.1	11.1	26.9	32.9	-154.5	31.7
35	35	D4		7	10285	Please see NS		45.3	13.8	19.8	33.9	39.9	-154	27.8
35	35	D6		1		Please see NS		54.9	19.2	25.2	45.9	51.9	-152.2	37.1
35	35		A1	2	36000	Please see NS	2000	51.8	15.1	21.1	39.2	45.2	-143.9	29.7
36	37	D1		104	346	Please see NS		45.5	1.7	7.7	22	28	-152.1	25.3
36	37	D2		78	461	Please see NS		47.2	1.4	7.4	23.4	29.4	-152	27.8
36	37	D3		19	1894	Please see NS		47.2	7.2	13.2	29.2	35.2	-152.2	29.8
36	37	D4		4	9000	Please see NS		45.5	15.5	21.5	35.8	41.8	-152.1	25.3
36	37	D5		1		Please see NS		49.1	20.8	26.8	42.7	48.7	-152.1	25.3

36	37		A1	1		Please see NS	2000	51.8	15.1	21.1	39.2	45.2	-143.9	29.8
45	45		TTC3	1		Please see NS					3	9	-161	38.4
42	43		TTC1	1		Please see NS		54	12	18				
38	41		TTC2	1		Please see NS					6	12	-168.8	30
1	28	D7		1		Please see NS		45.5	26	32	32.5	38.5	-162	20.5
1	28	D8		18	2000	Please see NS		45.5	7.5	13.5	15.7	21.7	-166	18.7
1	28	D9		4	8000	Please see NS		45.5	13.6	19.6	21.9	27.9	-166	18.7

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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: Manassas Teleport			
S14b. City: Bristow	S14c. County:	S14d. State/Country VA	S14e. Zip Code: 20136
S14f. Telephone Number: +1 703 367 7300		S14g. Call Sign of Control Station (if appropriate): E980076	

Remote Control (TT C) Location(s):

S14a: Street Address: Arqiva Chalfont			
S14b. City: Gerrards Cross	S14c. County:	S14d. State/Country	S14e. Zip Code: SL9 8TW
S14f. Telephone Number: +44 8708 798 787		S14g. Call Sign of Control Station (if appropriate):	

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Characteristics and
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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 1550	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 1725		
S15c. Mass of spacecraft and fuel at launch (kg): 3275	S15f. Length (m): 23.94	S15i. Payload: 0.864
S15d. Mass of fuel, in orbit, at beginning of life (kg): 454	S15g. Width (m): 2.46	S15j. Bus: 0.891
S15e. Deployed Area of Solar Array (square meters): 51.3	S15h. Height (m): 4.77	S15k. Total: 0.769

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): 4302	(f): 3935	(k): 4302	(p): 3935
Bus (Watts):	(b): 581	(g): 557	(l): 581	(q): 557
Total (Watts):	(c): 4883	(h): 4492	(m): 4883	(r): 4492
Solar Array (Watts):	(d): 6294	(i): 6004	(n): 5399	(s): 4826
Depth of Battery Discharge (%):	(e) 70 %	(j) %	(o) 70 %	(t) %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> N/A
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (3) met?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A

In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R § 25.114.