

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	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)		
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
11.7	G	11.95	G	T	Fixed Satellite Service
3465	M	4200	M	T	Direct to Home in the Fixed Fixed Satellite Service
5850	M	6425	M	R	Direct to Home in the Fixed Fixed Satellite Service
6490	M	6650	M	R	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
14	G	14.25	G	R	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): 40.5 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: NSS-806 is already authorised to operate from this orbital position. The reason for submission of Schedule S information is the re-pointing of the S1 steerable Ku-band beam on the spacecraft
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	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 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.
HA	S	Service Area HA.gxt	See attached GXT file
HB	S	Service Area HB.gxt	See attached GXT file
S1_A	S	Service Area S1_A.gxt	See attached GXT file (this is position 1)
S1_B	S	Service Area S1_B.gxt	See attached GXT file (this is position 2)
GLB	S	Service Area GLB.gxt	Global coverage, for TTC purposes

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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	20.4	0.19	0.34	30	N		HA				562	-3.1	-93	20	2
HAD	T	24.8	20.9	0.19	0.34	30	N		HA	1.7	45.7	41.4					
HBU	R	24.4	20.4	0.19	0.34	30	N		HB				562	-3.1	-93	20	2
HBD	T	24.8	20.9	0.19	0.34	30	N		HB	1.7	45.7	41.4					
S1U	R	33	29	0.19	0.34	30	N	90	S1_B				631	5	-100	22	2
S1D	T	32.2	28.3	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				3548	-25.2	-90		
TLM	T	11.3	10.3	0.19	0.34	30	N		GLB	3	1.3	10					
BNC	T	11.3	10.3	0.19	0.34	30	N		GLB	3	1.1	11					
BNK	T	32.2	28.3	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	-40.5		S1_A Rx.gxt					
S1D	T	C	-40.5		S1_A Tx.gxt	-150.6	-149.9	-148.7	-147.6	-146.4
HAU	R	C	-40.5		HA Rx.gxt					
HAD	T	C	-40.5		HA Tx.gxt	-153.9	-153.8	-153.6	-153.5	-153.4
CMD	R	C	-40.5		CMD Horn.gxt					
TLM	T	C	-40.5		TLM Horn.gxt					
BNC	T	C	-40.5		BNC Horn.gxt					
BNK	T	C	-40.5		BNK Beam.gxt	-167.8	-167.1	-165.9	-164.8	-163.6

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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)
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	124.6	HAUA	HAU	HADA	HAD
2	124.7	HAUB	HAU	HADB	HAD
3	123.7	HAUC	HAU	HADC	HAD
4	123.9	HAUD	HAU	HADD	HAD
5	124	HAUE	HAU	HADE	HAD
6	124	HAUF	HAU	HADF	HAD
7	124.1	HAUG	HAU	HADG	HAD
8	124.1	HAUH	HAU	HADH	HAD
9	124.2	HAUI	HAU	HADI	HAD
10	124.3	HAUJ	HAU	HADJ	HAD
11	124.3	HAUK	HAU	HADK	HAD
12	124.4	HAUL	HAU	HADL	HAD
13	124.4	HAUM	HAU	HADM	HAD
14	124.5	HAUN	HAU	HADN	HAD
15	124.6	HBUA	HBU	HBDA	HBD
16	124.7	HBUB	HBU	HBDB	HBD
17	123.7	HBUC	HBU	HBDC	HBD
18	123.9	HBUD	HBU	HBDD	HBD
19	124	HBUE	HBU	HBDE	HBD
20	124	HBUF	HBU	HBDF	HBD
21	124.1	HBUG	HBU	HB DG	HBD
22	124.1	HBUH	HBU	HB DH	HBD
23	124.2	HBUI	HBU	HB DI	HBD
24	124.3	HBUJ	HBU	HB DJ	HBD
25	124.3	HBUK	HBU	HB DK	HBD
26	124.4	HBUL	HBU	HB DL	HBD
27	124.4	HBUM	HBU	HB DM	HBD
28	124.5	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	129.6	S1UD	S1U	HADD	HAD
33	129.7	S1UE	S1U	HADF	HAD
34	129.7	S1UF	S1U	HADH	HAD
35	126.9	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	1M84G7W	1840	4	2048	0.75		9.3	21.5
D4	8M25G7W	8250	4	8448	0.692		6.9	19.1
D5	36M0G7W	36000	4	41470	0.692		6.9	19.1
D6	72M0G7W	72000	4	155000	0.816		12.7	24.9

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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/m2/Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
29	31	D1		184	391	Link Budget SP		51	-2.9	1.1	22.4	26.3	-154.3	25.3
29	31	D2		105	685	Link Budget SP		52.8	-2.4	1.6	24.8	28.7	-153.2	27.8
29	31	D3		37	1945	Link Budget SP		52.8	2.2	6.2	29.3	33.2	-154.6	29.8
29	31	D4		6	12000	Link Budget SP		51	11.5	15.5	36.8	40.7	-153.6	25.3
29	31	D6		1		Link Budget SP		52.8	22.8	26.8	48	51.9	-152.6	31.6
29	31		A1	2	36000	Link Budget SP	2000	59.1	9.7	13.7	40.6	44.5	-144.9	27.8
32	32	D1		200	360	Link Budget SP		50.9	-1.6	2.4	11.2	15.1	-165.5	21.8
32	32	D2		112	642	Link Budget SP		52.8	-0.9	3.1	13.7	17.6	-164.2	25.2
32	32	D3		28	2571	Link Budget SP		52.8	5.2	9.2	19.5	23.7	-164.2	25.2
32	32	D4		8	9000	Link Budget SP		50.9	12.3	16.3	25.1	29	-165.4	23.3
32	32	D6		1		Link Budget SP		56.4	20.3	24.3	37.5	41.4	-163.1	27.1
32	32		A1	2	36000	Link Budget SP	2000	59.1	14.4	18.4	33.9	37.8	-151.7	21.8
33	34	D1		104	346	Link Budget SP		51	-0.5	3.5	14.3	18.2	-162.4	20
33	34	D2		69	521	Link Budget SP		52.8	-0.6	3.4	16.1	20	-161.8	22
33	34	D3		17	2117	Link Budget SP		52.8	5.5	9.5	22.1	26	-161.8	22
33	34	D4		4	9000	Link Budget SP		51	13.2	17.2	28	31.9	-162.4	20
33	34	D5		1		Link Budget SP		52.8	20.1	24.1	35.7	39.6	-161.6	20
33	34		A1	1		Link Budget SP	2000	59.1	14.4	18.4	33.9	37.8	-151.7	22
35	35	D1		171	421	Link Budget HE		45.3	2.5	6.5	22.7	26.6	-153.9	25.3
35	35	D2		126	571	Link Budget HE		47.1	2.1	6.1	24	27.9	-153.9	29.7
35	35	D3		39	1846	Link Budget HE		47.1	7.1	11.1	29	32.9	-154.9	31.7
35	35	D4		7	10285	Link Budget HE		45.3	15.8	19.8	36	39.9	-154.4	27.8
35	35	D6		1		Link Budget HE		54.9	21.2	25.2	48	51.9	-152.6	37.1
35	35		A1	2	36000	Link Budget HE	2000	51.8	17.1	21.1	41.3	45.2	-144.3	29.7
36	37	D1		104	346	Link Budget HE		45.5	3.7	7.7	24.1	28	-152.5	25.3
36	37	D2		78	461	Link Budget HE		47.2	3.4	7.4	25.5	29.4	-152.5	27.8
36	37	D3		19	1894	Link Budget HE		47.2	9.2	13.2	31.3	35.2	-152.7	29.8
36	37	D4		4	9000	Link Budget HE		45.5	17.5	21.5	37.9	41.8	-152.5	25.3
36	37	D5		1		Link Budget HE		49.1	22.8	26.8	44.8	48.7	-152.5	25.3

36	37		A1	1	Link Budget HE	2000	51.8	17.1	21.1	41.3	45.2	-144.3	29.8
45	45		TTC3	1	Link Budget Be					5.1	9	-161.5	29.4

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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): E000152	

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.