

E_TSUM Requested by: CARLOS.F		Date: 07.06.2024	1:32:18 PM	DB: API_349506.MDB	Plan Id.:	Notice type: NONGEO
A	A1a Sat. Network	CYGNUS	A1f1 Notif. adm.	USA	A1f3 Inter. sat. org.	BR1 Date of receipt
	BR6a/BR6b Id. no.	21	BR3a Provision reference	9.1/IA	BR2 Adm. serial no.	BR20 BR IFIC no.

Résumé / Summary / Resumen

Il est prévu d'exploiter ce système à satellites non OSG dans le cadre d'une mission de courte durée conformément à la Résolution 32 (CMR-19)
This non-GSO satellite system is planned to be operated as short duration mission in accordance with Resolution 32 (WRC-19)
Está previsto que este sistema de satélites no OSG opere como misión de corta duración en los términos de la Resolución 32 (CMR-19)

Article 9, sous-section IA / Article 9, sub-section IA / Artículo 9, sub-sección IA
 第9条第1A分节 / Статья 9, подраздел IA / المادة 9، القسم الفرعي IA

B1a Beam designation	B2 Emi-Rcp	BR8 Action code	BR7a Group id.	BR9 Action code	BR47 Frequency band (MHz)	BR62 Expiry date for bringing into use	C4a Class of station
CLSRX	R		5		2026.705 - 2030.855		ES
CTCRX	R		6		2105.90625 - 2106.90625		ED
			7		2104.00625 - 2108.80625		ED
CLSTX	E		1		2200.235 - 2206.165		ES
CTCTX	E		2		2285.01 - 2289.99		ER
			3		2285.01 - 2289.99		ER
			4		2284.42 - 2290.58		ER
			8		2285.01 - 2289.99		ER

E_TSUM Requested by: CARLOS.F Date: 07.06.2024 1:32:18 PM DB: API_349506.MDB Plan Id.: Notice type: NONGEO

A1a Sat. Network CYGNUS A1f1 Notif. adm. USA A1f3 Inter. sat. org. BR1 Date of receipt 06.05.2024 BR20 BR IFIC no.

BR6a/BR6b Id. no. 21 BR3a Provision reference 9.1/1A BR2 Adm. serial no. CLSRX R

A1f2 Submitted on behalf USA

A1g Short Mission Duration Res.32

A4b1 No. of orbital planes 2 A4b2 Ref. body T BR99 Total number of satellites 2

A4b1a Constellation N A4b1b Configuration type A4b1c Number of sub-sets mutually exclusive

A4b3a No. of space stations simult. trans. on Northern Hemisphere A4b3b No. of space stations simult. trans. on Southern Hemisphere

Action code	Orbital plane id. no.	A4b1d Orbit set id.	A4b4a Inclination angle	A4b4b No. of satellites in this plane	A4b4c Period	A4b4d Apogee	A4b4e Perigee	A4b4f Min. altitude	A4b4i Arg. of perigee	A4b4j Long. asc. node	A4b4m.n.o Sun synchronous		
											Y/N	Reference node	Node local time
	1		51.64	1	0-01:29	308e0	250e0	250e0			N		
	2		51.6	1	0-01:33	422e0	413e0	413e0			N		

Les renseignements figurant dans le tableau «PHASE» (éléments A.4.b.4.j, A.4.b.4.h et A.4.b.4.l de l'Appendice 4) ne sont pas inclus dans le présent fichier et peuvent être consultés directement dans la base de données mdb, si besoin est.

Information from the "PHASE" table (A.4.b.4.j, A.4.b.4.h and A.4.b.4.l of Appendix 4) is not included in this file and may be consulted directly from the mdb database if needed.

En este archivo no se incluye información del Cuadro «FASE» (A.4.b.4.j, A.4.b.4.h y A.4.b.4.l del Apéndice 4) que, en caso necesario, puede consultarse directamente en la base de datos mdb.

B1a/BR17 Beam designation CLSRX B1b Steerable B2 Emi-Rcp R B3a1 Max. co-polar gain 2.2

B2a1 Transmit only when visible from notified service area Y B2a2 Min. Elev. Angle

B3c1 Co-polar antenna pattern

Co-polar ref. pattern	Coef. A	Coef. B	Co-polar rad. diag.
ND-SPACE			

List of orbital planes
2

B4a3a1 Angle alpha B4a3a2 Angle beta

BR92 Attach. for missing angle alpha/beta

BR7a/BR7b Group id. 5 BR1 Date of receipt 06.05.2024 C2c RR No. 4.4

BR14 Special Section

C4a Class of station ES [ETI] C3a Assigned freq. band C5a Noise temperature 580

C4b Nature of service CO C6a Polarization type CR C6b Polarization angle

C11a2 Service area C11a3 Service area diagram

A2b Period of valid. A3a Op. agency 167 A3b Adm. resp. A BR16 Value of type C8b

BR96 Start date for 9.1/9.1A

BR62 Expiry date for bringing into use 11.44/11.44.1

C1 Frequency Range

C1a Lower limit	C1b Upper limit
2026.705 MHz	2030.855 MHz

C7a Design. of emission	C8a1/C8b1 Max. peak pwr	C8a2/C8b2 Max. pwr dens.	C8c1 Min. peak pwr	C8c2 Atch.	C8c3 Min. pwr dens.	C8c4 Atch.	C8e1 C/N ratio	C8e2 Atch.	C8f2 E.i.r.p. on the beam axis
1 4M15G1D--	-6.5	-71.2	-6.5		-71.2		15		-4.5

Commented [CF1]: Delete Y from the filing

Commented [RDM]([2R1]): Changed to N, SpaceCap validator fails with no value here.

Commented [CF3]: We suggest replacing ES with ET.

Commented [RDM]([4R3]): Change made in updated SpaceCap output.

Commented [CF5]: Add the number of years you plan to use this ITU filing.

Commented [RDM]([6R5]): Remains at 1 year.

E_TSUM Requested by: CARLOS.F Date: 07.06.2024 1:32:18 PM DB: API_349506.MDB Plan Id.: Notice type: NONGEO

A1a Sat. Network: CYGNUS A1f1 Notif. adm.: USA A1f3 Inter. sat. org.: BR1 Date of receipt: 06.05.2024 BR20 BR IFIC no.:

BR6a/BR6b Id. no.: 21 BR3a Provision reference: 9.1/IA BR2 Adm. serial no. CLSRX R

C7b Carrier frequency of the emissions (4M15G1D--)

2028.78 MHz

C10a1 Assoc. space station id.	C10a3 Type	C10a2 Nominal longitude	C10a4 Beam designation
ISS-USOS-RPOD	N		CLSTX

13C Remarks

B1a/BR17 Beam designation: CTCRX B1b Steerable: B2 Emi-Rcp: R B3a1 Max. co-polar gain: 3.4

B2a1 Transmit only when visible from notified service area: Y B2a2 Min. Elev. Angle:

B3c1 Co-polar antenna pattern

Co-polar ref. pattern	Coef. A	Coef. B	Co-polar rad. diag.
ND-SPACE			

List of orbital planes
ALL

B4a3a1 Angle alpha: B4a3a2 Angle beta:

BR92 Attach. for missing angle alpha/beta:

BR7a/BR7b Group id.: 3 BR1 Date of receipt: 06.05.2024 C2c RR No. 4.4:

BR14 Special Section:

C4a Class of station: ED, ET C3a Assigned freq. band: C5a Noise temperature: 460

C4b Nature of service: CO C6a Polarization type: CR C6b Polarization angle:

C11a2 Service area: USA C11a3 Service area diagram:

A2b Period of valid.: I A3a Op. agency: 167 A3b Adm. resp.: A BR16 Value of type C8b:

BR96 Start date for 9.1/9.1A:

BR62 Expiry date for bringing into use: 11.44/11.44.1

C1 Frequency Range

C1a Lower limit	C1b Upper limit
2105.90625 MHz	2106.90625 MHz

C7a Design. of emission	C8a1/C8b1 Max. peak pwr	C8a2/C8b2 Max. pwr dens.	C8c1 Min. peak pwr	C8c2 Attch.	C8c3 Min. pwr dens.	C8c4 Attch.	C8e1 C/N ratio	C8e2 Attch.	C8f2 E.i.r.p. on the beam axis
1 1M00G1D--	19.4	-23.6	14.4		-23.6		25		
2 20K0G2D--	19.4	-37.6	14.4		-42.6		25		

C7b Carrier frequency of the emissions (1M00G1D--)

2106.40625 MHz

C7b Carrier frequency of the emissions (20K0G2D--)

2106.40625 MHz

Commented [CF7]: We suggest adding ET as well.

Commented [RDM]([8R7]): Change made in updated SpaceCap output. The associated Earth station was also change to include TT in addition to TD to pass SpaceCap validation filters which require the same number of classifications for the transmit and receive side.

Commented [CF9]: We use the formula Power Spectral Density = Power (dBW) - 10*Log10(bandwidth in Hz)

Commented [CF10R9]: Check all the power spectral density values

Commented [RDM]([11R9]): Change made in updated SpaceCap output.

E_TSUM Requested by: CARLOS.F Date: 07.06.2024 1:32:18 PM DB: API_349506.MDB Plan Id.: Notice type: NONGEO
 A A1a Sat. Network CYGNUS A1f1 Notif. adm. USA A1f3 Inter. sat. org. BR1 Date of receipt 06.05.2024 BR20 BR IFIC no.
 BR6a/BR6b Id. no. 21 BR3a Provision reference 9.1/IA BR2 Adm. serial no. CTCRX R

C10b1 Assoc. earth station id.	C10b2 Type	C10c1 Geographical coord.		C10c2 Ctry	C10d1/C10d2 Cls. / Nat.	C10d3 Max. iso. gain	C10d4 Bmwidth					
WALLOPS FLIGHT FACILITY	S	075W28 35	37N55 28	USA	1 TD CO	44.8	0.95					

C10d5a Co-polar antenna pattern							
C10b1 Assoc. earth station id.	Co-polar ref. pattern	Coef. A	Coef. B	Coef. C	Coef. D	Phi1	Co-polar rad. diag.
WALLOPS FLIGHT FACILITY	REC-465-6-E						

13C Remarks

BR7a/BR7b Group id. 7 BR1 Date of receipt 06.05.2024 C2c RR No. 4.4
 BR14 Special Section
 C4a Class of station BD [E] C3a Assigned freq. band C5a Noise temperature 460
 C4b Nature of service CO C6a Polarization type CR C6b Polarization angle
 C11a2 Service area XR1, XR2, XR3 C11a3 Service area diagram
 A2b Period of valid. A3a Op. agency 167 A3b Adm. resp. A BR16 Value of type C8b
 BR96 Start date for 9.1/9.1A
 BR62 Expiry date for bringing into use 11.44/11.44.1

C1 Frequency Range	
C1a Lower limit	C1b Upper limit
2104.00625 MHz	2108.80625 MHz

C7a Design. of emission	C8a1/C8b1 Max. peak pwr	C8a2/C8b2 Max. pwr dens.	C8c1 Min. peak pwr	C8c2 Attn.	C8c3 Min. pwr dens.	C8c4 Attn.	C8e1 C/N ratio	C8e2 Attn.	C8f2 E.i.r.p. on the beam axis
1 4M80G1D--	8.6	-56.3	-6		-70.9		15		

C7b Carrier frequency of the emissions (4M80G1D--)									
2106.40625	MHz								

C10a1 Assoc. space station id.	C10a3 Type	C10a2 Nominal longitude	C10a4 Beam designation
TDRS 107W	G	107 W	CTCTX
TDRS 12W	G	12 W	CTCTX
TDRS 133E	G	133 E	CTCTX
TDRS 164.2W	G	164.2 W	CTCTX
TDRS 167.5W	G	167.5 W	CTCTX
TDRS 171W	G	171 W	CTCTX
TDRS 174W	G	174 W	CTCTX
TDRS 46W	G	46 W	CTCTX
TDRS 49W	G	49 W	CTCTX
TDRS 62W	G	62 W	CTCTX
TDRS 85E	G	85 E	CTCTX
TDRS 89E	G	89 E	CTCTX
TDRS CENTRAL	G	79 W	CTCTX
TDRS EAST	G	41 W	CTCTX
TDRS WEST	G	171 W	CTCTX

13C Remarks

- Commented [CF12]: We suggest adding ET as well.
- Commented [RDM[(13R12): Change made in updated SpaceCap output.
- Commented [CF14]: Suggest deleting these.
- Commented [RDM[(15R14): SpaceCap validator does not allow blank entry. Left as-is to reflect global nature of links to TDRSS.

E_TSUM Requested by: CARLOS.F Date: 07.06.2024 1:32:18 PM DB: API_349506.MDB Plan Id.: Notice type: NONGEO

A A1a Sat. Network CYGNUS A1f1 Notif. adm. USA A1f3 Inter. sat. org. BR1 Date of receipt 06.05.2024 BR20 BR IFIC no.

BR6a/BR6b Id. no. 21 BR3a Provision reference 9.1/IA BR2 Adm. serial no. CTCRX R

B1a/BR17 Beam designation CLSTX B1b Steerable B2 Emi-Rcp E B3a1 Max. co-polar gain 2.2

B2a1 Transmit only when visible from notified service area Y B2a2 Min. Elev. Angle

B3c1 Co-polar antenna pattern

Co-polar ref. pattern	Coef. A	Coef. B	Co-polar rad. diag.
ND-SPACE			

List of orbital planes

2

B4a3a1 Angle alpha B4a3a2 Angle beta

BR92 Attach. for missing angle alpha/beta

BR7a/BR7b Group id. 1 BR1 Date of receipt 06.05.2024 C2c RR No. 4.4

BR14 Special Section

C4a Class of station BS C3a Assigned freq. band

C4b Nature of service CO C6a Polarization type CR C6b Polarization angle

C8d1 Max. tot. peak pwr. C8d2 Contiguous bandwidth C11a3 Service area diagram

C11a2 Service area

A2b Period of valid. A3a Op. agency 167 A3b Adm. resp. BR16 Value of type C8b

BR96 Start date for 9.1/9.1A

BR62 Expiry date for bringing into use 11.44/11.44.1

C1 Frequency Range	
C1a Lower limit	C1b Upper limit
2200.235 MHz	2206.165 MHz

C7a Design. of emission	C8a1/C8b1 Max. peak pwr	C8a2/C8b2 Max. pwr dens.	C8c1 Min. peak pwr	C8c2 Attch.	C8c3 Min. pwr dens.	C8c4 Attch.	C8e1 C/N ratio	C8e2 Attch.	C8f1 E.i.r.p. on the beam axis
1 4M98G1D--	8.5	-56.3	8.5		-56.3		18		11

C7b Carrier frequency of the emissions (4M98G1D--)

2203.2 MHz

C10a1 Assoc. space station id.	C10a3 Type	C10a2 Nominal longitude	C10a4 Beam designation
ISS-USOS-RPOD	N		CLSTX

13C Remarks

B1a/BR17 Beam designation CTCTX B1b Steerable B2 Emi-Rcp E B3a1 Max. co-polar gain 2.8

B2a1 Transmit only when visible from notified service area Y B2a2 Min. Elev. Angle

B3c1 Co-polar antenna pattern

Co-polar ref. pattern	Coef. A	Coef. B	Co-polar rad. diag.
ND-SPACE			

Commented [CF16]: Suggest changing this to ET

Commented [RDM[(17R16): Change made in updated SpaceCap output.

E_TSUM Requested by: CARLOS.F Date: 07.06.2024 1:32:18 PM DB: API_349506.MDB Plan Id.: Notice type: NONGEO
 A A1a Sat. Network CYGNUS A1f1 Notif. adm. USA A1f3 Inter. sat. org. BR1 Date of receipt 06.05.2024 BR20 BR IFIC no.
 BR6a/BR6b Id. no. 21 BR3a Provision reference 9.1/1A BR2 Adm. serial no. CTCTX E

List of orbital planes
 ALL

B4a3a1 Angle alpha B4a3a2 Angle beta
 BR92 Attach. for missing angle alpha/beta

BR7a/BR7b Group id. 2 BR1 Date of receipt 06.05.2024 C2c RR No. 4.4

BR14 Special Section
 C4a Class of station BR, ET C3a Assigned freq. band
 C4b Nature of service CO C6a Polarization type CR C6b Polarization angle
 C8d1 Max. tot. peak pwr. C8d2 Contiguous bandwidth
 C11a2 Service area USA C11a3 Service area diagram
 A2b Period of valid. 1 A3a Op. agency 167 A3b Adm. resp. A BR16 Value of type C8b
 BR96 Start date for 9.1/9.1A
 BR62 Expiry date for bringing into use 11.44/11.44.1

C1 Frequency Range	
C1a Lower limit	C1b Upper limit
2285.01 MHz	2289.99 MHz

C7a	C8a1/C8b1	C8a2/C8b2	C8c1	C8c2	C8c3	C8c4	C8e1	C8e2	C8f1
Design. of emission	Max. peak pwr	Max. pwr dens.	Min. peak pwr	Attch.	Min. pwr dens.	Attch.	C/N ratio	Attch.	E.i.r.p. on the beam axis
1 4M98G1D--	6.4	-58.4	6.4		-58.4		22		
2 3M00G1D--	6.4	-55.4	6.4		-55.4		19		

C7b Carrier frequency of the emissions (4M98G1D--)									
2287.5	MHz								

C7b Carrier frequency of the emissions (3M00G1D--)									
2287.5	MHz								

C10b1	C10b2	C10c1		C10c2	C10d1/C10d2		C10d3	C10d4	C10d6
Assoc. earth station id.	Type	Geographical coord.		Ctry	Cls. / Nat.		Max. iso. gain	Bmwdth	Noise temp.
WALLOPS FLIGHT FACILITY	S	075W28 35	37N55 28	USA	1	TR CO	45.8	0.85	200

C10d5a Co-polar antenna pattern							
C10b1 Assoc. earth station id.	Co-polar ref. pattern	Coef. A	Coef. B	Coef. C	Coef. D	Phi1	Co-polar rad. diag.
WALLOPS FLIGHT FACILITY	REC-1855-R						

13C Remarks

BR7a/BR7b Group id. 3 BR1 Date of receipt 06.05.2024 C2c RR No. 4.4

BR14 Special Section
 C4a Class of station BR, ET C3a Assigned freq. band
 C4b Nature of service CO C6a Polarization type CR C6b Polarization angle

Commented [CF18]: Suggest adding ET

Commented [RDM[(19R18]: Change made in updated SpaceCap output. The associated Earth station was also change to include TT in addition to TR to pass SpaceCap validation filters which require the same number of classifications for the transmit and receive side.

Commented [CF20]: Check the Earth station antenna pattern for both the uplink and downlink.

Commented [RDM[(21R20]: This pattern was changed to "Rec ITU-R S.465-6" to align with the uplink pattern.

Commented [CF22]: Suggest adding ET

Commented [RDM[(23R22]: Change made in updated SpaceCap output

E_TSUM Requested by: CARLOS.F		Date: 07.06.2024	1:32:18 PM	DB: API_349506.MDB	Plan Id.:	Notice type: NONGEO
A	A1a Sat. Network	CYGNUS	A1f1 Notif. adm.	USA	A1f3 Inter. sat. org.	
BR6a/BR6b Id. no.		21	BR3a Provision reference	9.1/1A	BR1 Date of receipt	06.05.2024
			BR2 Adm. serial no.		BR20 BR IFIC no.	
					CTCTX	E

C8d1 Max. tot. peak pwr. C8d2 Contiguous bandwidth

C11a2 Service area C11a3 Service area diagram

A2b Period of valid. A3a Op. agency A3b Adm. resp. BR16 Value of type C8b

BR96 Start date for 9.1/9.1A

BR62 Expiry date for bringing into use 11.44/11.44.1

C1 Frequency Range	
C1a Lower limit	C1b Upper limit
2285.01 MHz	2289.99 MHz

C7a	C8a1/C8b1	C8a2/C8b2	C8c1	C8c2	C8c3	C8c4	C8e1	C8e2	C8f1
Design. of emission	Max. peak pwr	Max. pwr dens.	Min. peak pwr	Attch.	Min. pwr dens.	Attch.	C/N ratio	Attch.	E.i.r.p. on the beam axis
1 4M98G1D--	6.4	-58.4	6.4		-58.4		22		
2 3M00G1D--	6.4	-55.4	6.4		-55.4		19		

C7b Carrier frequency of the emissions (4M98G1D--)									
2287.5	MHz								

C7b Carrier frequency of the emissions (3M00G1D--)									
2287.5	MHz								

C10b1	C10b2	C10c1		C10c2	C10d1/C10d2	C10d3	C10d4	C10d6		
Assoc. earth station id.	Type	Geographical coord.		Ctry	Cls. / Nat.	Max. iso. gain	Bmwidth	Noise temp.		
SANTIAGO	S	070W40 03	33S08 54	CHL	1 TR CO	47	0.69	181		

C10d5a Co-polar antenna pattern							
C10b1	Co-polar ref. pattern	Coef. A	Coef. B	Coef. C	Coef. D	Phi1	Co-polar rad. diag.
SANTIAGO	REC-1855-R						

13C Remarks

Commented [RDM[(24)]: This pattern was changed to "Rec ITU-R S.465-6"

BR7a/BR7b Group id. BR1 Date of receipt C2c RR No. 4.4

BR14 Special Section

C4a Class of station C3a Assigned freq. band

C4b Nature of service C6a Polarization type C6b Polarization angle

C8d1 Max. tot. peak pwr. C8d2 Contiguous bandwidth

C11a2 Service area C11a3 Service area diagram

Commented [CF25]: Suggest adding ET

Commented [RDM[(26R25)]: SpaceCap validator failed with station class ET included, left as only ER.

Commented [CF27]: Suggest removing all these

A2b Period of valid. A3a Op. agency A3b Adm. resp. BR16 Value of type C8b

BR96 Start date for 9.1/9.1A

BR62 Expiry date for bringing into use 11.44/11.44.1

C1 Frequency Range	
C1a Lower limit	C1b Upper limit
2284.42 MHz	2290.58 MHz

C7a	C8a1/C8b1	C8a2/C8b2	C8c1	C8c2	C8c3	C8c4	C8e1	C8e2	C8f1
Design. of emission	Max. peak pwr	Max. pwr dens.	Min. peak pwr	Attch.	Min. pwr dens.	Attch.	C/N ratio	Attch.	E.i.r.p. on the beam axis
1 6M16G1D--	8.3	-56.6	6.4		-58.5		15		

Commented [RDM[(28R27)]: SpaceCap validator does not allow blank entry. Left as-is to reflect global nature of links to TDRSS.

E_TSUM Requested by: CARLOS.F Date: 07.06.2024 1:32:18 PM DB: API_349506.MDB Plan Id.: Notice type: NONGEO

A A1a Sat. Network CYGNUS A1f1 Notif. adm. USA A1f3 Inter. sat. org. BR1 Date of receipt 06.05.2024 BR20 BR IFIC no.

BR6a/BR6b Id. no. 21 BR3a Provision reference 9.1/IA BR2 Adm. serial no. CTCTX E

C7b Carrier frequency of the emissions (6M16G1D--)										
2287.5	MHz									

C10a1 Assoc. space station id.	C10a3 Type	C10a2 Nominal longitude	C10a4 Beam designation
TDRS 107W	G	107 W	CTCTX
TDRS 12W	G	12 W	CTCTX
TDRS 133E	G	133 E	CTCTX
TDRS 164.2W	G	164.2 W	CTCTX
TDRS 167.5W	G	167.5 W	CTCTX
TDRS 171W	G	171 W	CTCTX
TDRS 174W	G	174 W	CTCTX
TDRS 46W	G	46 W	CTCTX
TDRS 49W	G	49 W	CTCTX
TDRS 62W	G	62 W	CTCTX
TDRS 85E	G	85 E	CTCTX
TDRS 89E	G	89 E	CTCTX
TDRS CENTRAL	G	79 W	CTCTX
TDRS EAST	G	41 W	CTCTX
TDRS WEST	G	171 W	CTCTX

13C Remarks

BR7a/BR7b Group id. 8 BR1 Date of receipt 06.05.2024 C2c RR No. 4.4

BR14 Special Section

C4a Class of station ER C3a Assigned freq. band

C4b Nature of service CO C6a Polarization type CR C6b Polarization angle

C8d1 Max. tot. peak pwr. C8d2 Contiguous bandwidth

C11a2 Service area MWA C11a3 Service area diagram

A2b Period of valid. 1 A3a Op. agency 167 A3b Adm. resp. A BR16 Value of type C8b

BR96 Start date for 9.1/9.1A

BR62 Expiry date for bringing into use 11.44/11.44.1

C1 Frequency Range	
C1a Lower limit	C1b Upper limit
2285.01 MHz	2289.99 MHz

C7a Design. of emission	C8a1/C8b1 Max. peak pwr	C8a2/C8b2 Max. pwr dens.	C8c1 Min. peak pwr	C8c2 Attch.	C8c3 Min. pwr dens.	C8c4 Attch.	C8e1 C/N ratio	C8e2 Attch.	C8f1 E.i.r.p. on the beam axis
1 4M98G1D--	6.4	-58.4	6.4		-58.4		22		
2 3M00G1D--	6.4	-55.4	6.4		-55.4		19		

C7b Carrier frequency of the emissions (4M98G1D--)									
2287.5	MHz								

C7b Carrier frequency of the emissions (3M00G1D--)									
2287.5	MHz								

Commented [RDM](29): Change made in updated SpaceCap output. The associated Earth station was also change to include TT in addition to TR to pass SpaceCap validation filters which require the same number of classifications for the transmit and receive side.

E_TSUM Requested by: CARLOS.F		Date: 07.06.2024	1:32:18 PM	DB: API_349506.MDB	Plan Id.:	Notice type: NONGEO
A	A1a Sat. Network	CYGNUS	A1f1 Notif. adm.	USA	A1f3 Inter. sat. org.	
	BR6a/BR6b Id. no.	21	BR3a Provision reference	9.1/IA	BR1 Date of receipt	06.05.2024
					BR20 BR IFIC no.	
					BR2 Adm. serial no.	
					CTCTX	E

C10b1 Assoc. earth station id.	C10b2 Type	C10c1 Geographical coord.		C10c2 Ctry	C10d1/C10d2 Cls. / Nat.	C10d3 Max. iso. gain	C10d4 Bmwdth	C10d6 Noise temp.		
SOUTH POINT	S	155W39 48	19N00 50	CHL	1 TR CO	48	0.7	281		

C10d5a Co-polar antenna pattern							
C10b1 Assoc. earth station id.	Co-polar ref. pattern	Coef. A	Coef. B	Coef. C	Coef. D	Phi1	Co-polar rad. diag.
SOUTH POINT	REC-1855-R						

13C Remarks

C9 Modulation characteristics		C7a Designation of emission 1M00G1D--
C9a1 Type of modulation	BPSK	
C9a2a Lowest frequency		
C9a2b Highest frequency		
C9a2c Frequency deviation		
C9a3a Freq. deviation of the pre-emphasized signal		
C9a3b Pre-emphasis characteristics		
C9a3c Type of multiplexing		
C9a4a Bit rate		
C9a4b Number of phases		
C9a5a Modulating signal attached (see attch. no.)		
C9a5b Amplitude modulation		
C9a6a Peak-to-peak freq. dev.		
C9a6b Sweep frequency		
C9a6c Energy dispersal waveform		
C9a7 Type of energy dispersal	Carriers will always be modulated	
C9a8 Other types of modulation (see attch. no.)		
C9a9 TV standard		
BR7a Group id.	6	

Commented [CF30]: I think CHL is a typo and meant to add HWA

Commented [RDM[(31R30): Change made in updated SpaceCap output

Commented [RDM[(32): This pattern was changed to "Rec ITU-R S.465-6"

E_TSUM Requested by: CARLOS.F		Date: 07.06.2024	1:32:18 PM	DB: API_349506.MDB	Plan Id.:	Notice type: NONGEO
A	A1a Sat. Network	CYGNUS	A1f1 Notif. adm.	USA	A1f3 Inter. sat. org.	
BR6a/BR6b Id. no.		21	BR3a Provision reference	9.1/IA	BR1 Date of receipt	06.05.2024
			BR2 Adm. serial no.		BR20 BR IFIC no.	
					CTCTX	E

C9 Modulation characteristics	C7a Designation of emission 20K0G2D--
C9a1 Type of modulation	PSK
C9a2a Lowest frequency	
C9a2b Highest frequency	
C9a2c Frequency deviation	
C9a3a Freq. deviation of the pre-emphasized signal	
C9a3b Pre-emphasis characteristics	
C9a3c Type of multiplexing	
C9a4a Bit rate	
C9a4b Number of phases	
C9a5a Modulating signal attached (see attch. no.)	
C9a5b Amplitude modulation	
C9a6a Peak-to-peak freq. dev.	
C9a6b Sweep frequency	
C9a6c Energy dispersal waveform	
C9a7 Type of energy dispersal	Carriers will always be modulated
C9a8 Other types of modulation (see attch. no.)	
C9a9 TV standard	
BR7a Group id.	6

C9 Modulation characteristics	C7a Designation of emission 3M00G1D--
C9a1 Type of modulation	QPSK
C9a2a Lowest frequency	
C9a2b Highest frequency	
C9a2c Frequency deviation	
C9a3a Freq. deviation of the pre-emphasized signal	
C9a3b Pre-emphasis characteristics	
C9a3c Type of multiplexing	
C9a4a Bit rate	
C9a4b Number of phases	
C9a5a Modulating signal attached (see attch. no.)	
C9a5b Amplitude modulation	
C9a6a Peak-to-peak freq. dev.	
C9a6b Sweep frequency	
C9a6c Energy dispersal waveform	
C9a7 Type of energy dispersal	Carriers will always be modulated
C9a8 Other types of modulation (see attch. no.)	
C9a9 TV standard	
BR7a Group id.	2, 3, 8

E_TSUM Requested by: CARLOS.F		Date: 07.06.2024	1:32:18 PM	DB: API_349506.MDB	Plan Id.:	Notice type: NONGEO
A	A1a Sat. Network	CYGNUS	A1f1 Notif. adm.	USA	A1f3 Inter. sat. org.	
BR6a/BR6b Id. no.		21	BR3a Provision reference	9.1/IA	BR1 Date of receipt	06.05.2024
			BR2 Adm. serial no.		BR20 BR IFIC no.	
					CTCTX	E

C9 Modulation characteristics		C7a Designation of emission 4M15G1D--
C9a1 Type of modulation	Spread spectrum	
C9a2a Lowest frequency		
C9a2b Highest frequency		
C9a2c Frequency deviation		
C9a3a Freq. deviation of the pre-emphasized signal		
C9a3b Pre-emphasis characteristics		
C9a3c Type of multiplexing		
C9a4a Bit rate		
C9a4b Number of phases		
C9a5a Modulating signal attached (see attch. no.)		
C9a5b Amplitude modulation		
C9a6a Peak-to-peak freq. dev.		
C9a6b Sweep frequency		
C9a6c Energy dispersal waveform		
C9a7 Type of energy dispersal	Carrier always spread by digital stream	
C9a8 Other types of modulation (see attch. no.)		
C9a9 TV standard		
BR7a Group id.	5	

C9 Modulation characteristics		C7a Designation of emission 4M80G1D--
C9a1 Type of modulation	Spread spectrum	
C9a2a Lowest frequency		
C9a2b Highest frequency		
C9a2c Frequency deviation		
C9a3a Freq. deviation of the pre-emphasized signal		
C9a3b Pre-emphasis characteristics		
C9a3c Type of multiplexing		
C9a4a Bit rate		
C9a4b Number of phases		
C9a5a Modulating signal attached (see attch. no.)		
C9a5b Amplitude modulation		
C9a6a Peak-to-peak freq. dev.		
C9a6b Sweep frequency		
C9a6c Energy dispersal waveform		
C9a7 Type of energy dispersal	Carrier always spread by digital stream	
C9a8 Other types of modulation (see attch. no.)		
C9a9 TV standard		
BR7a Group id.	7	

E_TSUM Requested by: CARLOS.F		Date: 07.06.2024	1:32:18 PM	DB: API_349506.MDB	Plan Id.:	Notice type: NONGEO
A	A1a Sat. Network	CYGNUS	A1f1 Notif. adm.	USA	A1f3 Inter. sat. org.	BR1 Date of receipt 06.05.2024
BR6a/BR6b Id. no.		21	BR3a Provision reference	9.1/IA	BR2 Adm. serial no.	CTCTX E

C9 Modulation characteristics	C7a Designation of emission 4M98G1D--
C9a1 Type of modulation	QPSK
C9a2a Lowest frequency	
C9a2b Highest frequency	
C9a2c Frequency deviation	
C9a3a Freq. deviation of the pre-emphasized signal	
C9a3b Pre-emphasis characteristics	
C9a3c Type of multiplexing	
C9a4a Bit rate	
C9a4b Number of phases	
C9a5a Modulating signal attached (see attch. no.)	
C9a5b Amplitude modulation	
C9a6a Peak-to-peak freq. dev.	
C9a6b Sweep frequency	
C9a6c Energy dispersal waveform	
C9a7 Type of energy dispersal	Carriers will always be modulated
C9a8 Other types of modulation (see attch. no.)	
C9a9 TV standard	
BR7a Group id.	2, 3, 8

C9 Modulation characteristics	C7a Designation of emission 4M98G1D--
C9a1 Type of modulation	Spread spectrum
C9a2a Lowest frequency	
C9a2b Highest frequency	
C9a2c Frequency deviation	
C9a3a Freq. deviation of the pre-emphasized signal	
C9a3b Pre-emphasis characteristics	
C9a3c Type of multiplexing	
C9a4a Bit rate	
C9a4b Number of phases	
C9a5a Modulating signal attached (see attch. no.)	
C9a5b Amplitude modulation	
C9a6a Peak-to-peak freq. dev.	
C9a6b Sweep frequency	
C9a6c Energy dispersal waveform	
C9a7 Type of energy dispersal	Carrier always spread by digital stream
C9a8 Other types of modulation (see attch. no.)	
C9a9 TV standard	
BR7a Group id.	1

E_TSUM Requested by: CARLOS.F		Date: 07.06.2024	1:32:18 PM	DB: API_349506.MDB	Plan Id.:	Notice type: NONGEO
A	A1a Sat. Network	CYGNUS	A1f1 Notif. adm.	USA	A1f3 Inter. sat. org.	BR1 Date of receipt 06.05.2024
BR6a/BR6b Id. no.		21	BR3a Provision reference	9.1/IA	BR2 Adm. serial no.	CTCTX E

C9 Modulation characteristics	C7a Designation of emission 6M16G1D--
C9a1 Type of modulation	Spread spectrum
C9a2a Lowest frequency	
C9a2b Highest frequency	
C9a2c Frequency deviation	
C9a3a Freq. deviation of the pre-emphasized signal	
C9a3b Pre-emphasis characteristics	
C9a3c Type of multiplexing	
C9a4a Bit rate	
C9a4b Number of phases	
C9a5a Modulating signal attached (see attch. no.)	
C9a5b Amplitude modulation	
C9a6a Peak-to-peak freq. dev.	
C9a6b Sweep frequency	
C9a6c Energy dispersal waveform	
C9a7 Type of energy dispersal	Carrier always spread by digital stream
C9a8 Other types of modulation (see attch. no.)	
C9a9 TV standard	
BR7a Group id.	4

BR22 Administration remarks

BR23 Radiocommunication Bureau comments