

Ka-Band Earth Station – Mt. Jackson, VA

Frequency Coordination Report

28 GHz



Prepared on Behalf of
Telesat Canada

November 4, 2015



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1. Summary of Results

On behalf of Telesat Canada, Comsearch performed a coordination notice for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Mt. Jackson, Virginia, which will transmit at 28 GHz¹. Prior-notification letters were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on November 4, 2015.

No objections were received from any of the incumbent 28 GHz licensees.

2. 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Mt. Jackson, Virginia was prior-coordinated by Comsearch. A notification letter and datasheet for this earth station were sent to the following 28 GHz common carrier fixed microwave licensee on November 2, 2015. This licensee is authorized to operate temporary fixed operations from 27.5 to 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Verizon	Continental US

A notification letter and datasheets for the Ka-Band earth station in Mt. Jackson, Virginia were also sent to the following 28 GHz local television transmission licensee on November 2, 2015. This licensee is authorized to operate temporary fixed operations from 27.5 to 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Information Super Station, LLC	Continental US

No objections were received from the common carrier or local television transmission service incumbents.

¹ The proposed earth station will operate in the 28.35 – 29.5 GHz portion of the Ka-Band.

3. 28 GHz LMDS Coordination

The proposed earth station will not operate on frequencies that overlap Block A of the LMDS service. Therefore, no LMDS coordination was necessary.

The total frequency allocation for Block A of the LMDS spectrum appears below.

Block A: 27.500-28.350 GHz
 29.100-29.250 GHz
 31.075-31.225 GHz

4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Mt. Jackson, Virginia. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

COMSEARCH**Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147
 (703)726-5662 <http://www.comsearch.com>

Date: 11/02/2015
 Job Number: <PCNJobCode>

Administrative Information

Status ENGINEER PROPOSAL
 Call Sign <PCNCallSign>
 Licensee Code IC0236
 Licensee Name Telesat Canada -

Site Information MT JACKSON, VA

Venue Name
 Latitude (NAD 83) 38° 43' 44.4" N
 Longitude (NAD 83) 78° 39' 24.1" W
 Climate Zone A
 Rain Zone 2
 Ground Elevation (AMSL) 282.24 m / 926.0 ft

Link Information

Satellite Type Geostationary
 Mode TO - Transmit-Only
 Modulation Digital
 Satellite Arc 15° W to 15° West Longitude
 Azimuth Range 107.2° to 107.2°
 Corresponding Elevation Angles 11.7° / 11.7°
 Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information Transmit - FCC32

Manufacturer Andrew
 Model 2.4 Meter
 Gain / Diameter 55.1 dBi / 2.4 m
 3-dB / 15-dB Beamwidth 0.32° / 0.64°

Max Available RF Power (dBW/4 kHz) 8.3
 (dBW/MHz) 32.3

Maximum EIRP (dBW/4 kHz) 63.4
 (dBW/MHz) 87.4

Interference Objectives: Long Term -151.0 dBW/4 kHz 20%
 Short Term -128.0 dBW/4 kHz 0.0025%

Frequency Information Transmit 28.0 GHz

Emission / Frequency Range (MHz) 500KG7D - NON / 28350.0 - 28872.0
 500KG7D - NON / 29256.0 - 29500.0

Max Great Circle Coordination Distance 155.0 km / 96.3 mi
 Precipitation Scatter Contour Radius 220.3 km / 136.9 mi

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Coordination Values	MT JACKSON, VA
Licensee Name	Telesat Canada -
Latitude (NAD 83)	38° 43' 44.4" N
Longitude (NAD 83)	78° 39' 24.1" W
Ground Elevation (AMSL)	282.24 m / 926.0 ft
Antenna Centerline (AGL)	2.74 m / 9.0 ft
Antenna Model	Andrew 2.4 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	8.3 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.64	106.88	-10.00	124.45
5	0.60	101.98	-10.00	125.37
10	0.91	97.09	-10.00	113.69
15	0.65	92.17	-10.00	124.09
20	0.62	87.27	-10.00	125.44
25	0.36	82.37	-10.00	140.15
30	0.00	77.49	-10.00	154.98
35	0.00	72.60	-10.00	154.98
40	0.00	67.72	-10.00	154.98
45	0.00	62.84	-10.00	154.98
50	0.00	57.98	-10.00	154.98
55	0.32	53.09	-10.00	143.73
60	0.76	48.18	-10.00	119.80
65	1.30	43.25	-8.90	105.48
70	2.45	38.19	-7.55	100.00
75	3.93	33.05	-5.98	100.00
80	4.12	28.18	-4.25	100.00
85	4.36	23.35	-2.21	100.00
90	4.85	18.50	0.32	100.00
95	4.83	14.01	3.34	100.00
100	4.75	10.03	6.96	100.00
105	3.38	8.65	8.58	127.85
110	3.58	8.62	8.62	119.46
115	3.57	11.27	5.70	109.71
120	3.38	15.24	2.43	100.99
125	3.57	19.52	-0.26	100.00
130	3.61	24.12	-2.56	100.00
135	3.49	28.89	-4.52	100.00
140	3.05	33.79	-6.22	100.00
145	1.93	38.85	-7.74	100.00
150	1.47	43.77	-9.03	101.02
155	0.80	48.72	-10.00	117.87
160	0.45	53.62	-10.00	133.12
165	0.27	58.50	-10.00	147.86
170	0.25	63.37	-10.00	149.69
175	0.22	68.26	-10.00	152.35
180	0.21	73.14	-10.00	154.52
185	0.30	78.03	-10.00	144.82

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Antenna Model	Andrew 2.4 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	8.3 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.29	82.93	-10.00	146.17
195	0.00	87.83	-10.00	154.98
200	0.00	92.73	-10.00	154.98
205	0.27	97.63	-10.00	147.36
210	1.01	102.56	-10.00	109.59
215	1.20	107.48	-10.00	104.93
220	1.10	112.37	-10.00	107.25
225	0.58	117.22	-10.00	126.11
230	1.25	122.17	-10.00	103.74
235	1.55	127.09	-10.00	100.00
240	1.01	131.86	-10.00	109.65
245	1.13	136.72	-10.00	106.72
250	0.90	141.46	-10.00	113.75
255	1.15	146.27	-10.00	106.02
260	2.14	151.27	-10.00	100.00
265	2.56	156.05	-10.00	100.00
270	1.21	159.90	-10.00	104.75
275	1.22	163.93	-10.00	104.33
280	1.14	167.20	-10.00	106.31
285	1.22	169.25	-10.00	104.50
290	1.57	169.46	-10.00	100.00
295	1.92	167.50	-10.00	100.00
300	1.72	163.81	-10.00	100.00
305	1.49	159.55	-10.00	100.00
310	1.34	155.07	-10.00	101.38
315	1.45	150.52	-10.00	100.00
320	1.55	145.84	-10.00	100.00
325	1.59	141.07	-10.00	100.00
330	1.88	136.31	-10.00	100.00
335	1.74	131.43	-10.00	100.00
340	1.52	126.53	-10.00	100.00
345	1.13	121.60	-10.00	106.53
350	0.99	116.70	-10.00	110.06
355	0.66	111.78	-10.00	123.97



5. Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

Contact person:	Joanna Lynch
Title:	Manager, Spectrum & Data Solutions
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
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