



COMSEARCH[®]
A CommScope Company

November 28, 2020

Re: Universal Space Network, Inc.
NAALEHU, HI
S-Band Transmit Only Earth Station
Job Number: 201128COMSGE02

Dear Frequency Coordinator:

This notice is being provided in accordance with Section 25.203(c) of the FCC Rules and Regulations. We are forwarding the attached coordination data on behalf of Universal Space Network, Inc., 417 Caredean Drive, Suite A Horsham, PA 19044 for for the purpose of obtaining an STA to provide launch and early orbit support of ATHENA from their existing Earth Station located in NAALEHU, HI.

The coordination notice is being circulated to the owners (or their protection agents) of all existing or proposed terrestrial facilities operating in a shared frequency band within the coordination contours of the proposed station(s).

Please update your database with the attached information.

We respectfully request that you examine this data for its interference potential with your system(s). In the event that your analysis identifies potential interference cases that have not been resolved, please contact us by January 02, 2021.

If there are any questions concerning this coordination notice, please contact Comsearch.

Sincerely,

COMSEARCH

Gary K. Edwards
Senior Manager
gedwards@comsearch.com

Enclosure(s)

Date: 11/28/2020
Job Number: 201128COMSGE02

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code UNSPNE
Licensee Name Universal Space Network, Inc.

Site Information

NAALEHU, HI
Venue Name
Latitude (NAD 83) 19° 0' 50.3" N
Longitude (NAD 83) 155° 39' 46.6" W
Climate Zone C
Rain Zone 4
Ground Elevation (AMSL) 378.0 m / 1240.2 ft

Link Information

Satellite Type Low Earth Orbit
Mode TO - Transmit-Only
Modulation Digital
Minimum Elevation Angle 5.0°
Azimuth Range 0.0° to 360°
Antenna Centerline (AGL) 8.54 m / 28.0 ft

Antenna Information

Transmit - FCC32
Manufacturer Datron
Model 1453
Gain / Diameter 57.1 dBi / 13.0 m
3-dB / 15-dB Beamwidth 0.76° / 1.46°

Max Available RF Power (dBW/4 kHz) -10.2
(dBW/MHz) 13.8

Maximum EIRP (dBW/4 kHz) 46.9
(dBW/MHz) 70.9

Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
Short Term -131.0 dBW/4 kHz 0.0025%

Frequency Information

Transmit 2.0 GHz
Emission / Frequency Range (MHz) 512KG1D / 2082.0

Max Great Circle Coordination Distance 293.2 km / 182.2 mi
Precipitation Scatter Contour Radius 168.0 km / 104.4 mi

Coordination Values		NAALEHU, HI
Licensee Name		Universal Space Network, Inc.
Latitude (NAD 83)		19° 0' 50.3" N
Longitude (NAD 83)		155° 39' 46.6" W
Ground Elevation (AMSL)		378.0 m / 1240.2 ft
Antenna Centerline (AGL)		8.54 m / 28.0 ft
Antenna Model		Datron 13.0 meter
Antenna Mode		Transmit 2.0 GHz
Interference Objectives: Long Term		-154.0 dBW/4 kHz 20%
Short Term		-131.0 dBW/4 kHz 0.0025%
Max Available RF Power		-10.2 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 2.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	2.77	76.32	4.50	293.25
5	2.63	74.59	4.50	293.25
10	2.42	72.91	4.50	293.25
15	2.31	71.40	4.50	293.25
20	2.13	69.95	4.50	293.25
25	1.92	68.61	4.50	293.25
30	1.68	67.37	4.50	293.25
35	0.91	65.81	4.50	293.25
40	0.29	64.52	4.50	293.25
45	0.00	63.74	4.50	293.25
50	0.00	63.44	4.50	293.25
55	0.00	63.37	4.50	293.25
60	0.00	63.51	4.50	293.25
65	0.00	63.87	4.50	293.25
70	0.00	64.44	4.50	293.25
75	0.00	65.22	4.50	293.25
80	0.00	66.19	4.50	293.25
85	0.00	67.34	4.50	293.25
90	0.00	68.67	4.50	293.25
95	0.00	70.15	4.50	293.25
100	0.00	71.77	4.50	293.25
105	0.00	73.53	4.50	293.25
110	0.00	75.39	4.50	293.25
115	0.00	77.35	4.50	293.25
120	0.00	79.39	4.50	293.25
125	0.00	81.51	4.50	293.25
130	0.00	83.67	4.50	293.25
135	0.00	85.87	4.50	293.25
140	0.00	88.10	4.50	293.25
145	0.00	90.34	4.50	293.25
150	0.00	92.58	4.50	293.25
155	0.00	94.80	4.50	293.25
160	0.00	96.99	4.50	293.25
165	0.00	99.14	4.50	293.25
170	0.00	101.24	4.50	293.25
175	0.00	103.26	4.50	293.25
180	0.00	105.19	4.50	293.25
185	0.00	107.02	4.50	293.25

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Antenna Centerline (AGL)	8.54 m / 28.0 ft	
Antenna Model	Datron 13.0 meter	
Antenna Mode	Transmit 2.0 GHz	
Interference Objectives: Long Term	-154.0 dBW/4 kHz	20%
Short Term	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power	-10.2 (dBW/4 kHz)	

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 2.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	108.73	4.50	293.25
195	0.00	110.32	4.50	293.25
200	0.00	111.75	4.50	293.25
205	0.00	113.03	4.50	293.25
210	0.00	114.13	4.50	293.25
215	0.00	115.04	4.50	293.25
220	0.00	115.75	4.50	293.25
225	0.00	116.26	4.50	293.25
230	0.00	116.56	4.50	293.25
235	0.00	116.63	4.50	293.25
240	0.00	116.49	4.50	293.25
245	0.00	116.13	4.50	293.25
250	0.00	115.56	4.50	293.25
255	0.00	114.78	4.50	293.25
260	0.00	113.81	4.50	293.25
265	0.00	112.66	4.50	293.25
270	0.47	110.97	4.50	293.25
275	0.69	109.35	4.50	293.25
280	0.83	107.68	4.50	293.25
285	0.88	105.95	4.50	293.25
290	1.05	104.06	4.50	293.25
295	1.27	102.08	4.50	293.25
300	1.37	100.09	4.50	293.25
305	1.57	98.02	4.50	293.25
310	1.84	95.92	4.50	293.25
315	2.08	93.83	4.50	293.25
320	2.28	91.75	4.50	293.25
325	2.38	89.69	4.50	293.25
330	2.49	87.65	4.50	293.25
335	2.55	85.63	4.50	293.25
340	2.68	83.67	4.50	293.25
345	2.74	81.75	4.50	293.25
350	3.17	80.03	4.50	293.25
355	2.95	78.14	4.50	293.25