

## Kelly McKeon

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**From:** Edwards, Gary <gedwards@comsearch.com>  
**Sent:** Friday, May 21, 2021 4:46 PM  
**To:** Kelly McKeon  
**Cc:** David Liptsyn  
**Subject:** RE: Coordination Report - Antenna Centerline

Hi Kelly,

That small change in the AGL would have minimal impact on the coordination and the calculations involved.

Technically, you would want all of the coordination data filed with the FCC to match what was coordinated. However, there is not a field on the FCC Form 312 Schedule B that asks for the Antenna Centerline as represented in our Coordination notice. The Antenna Centerline in our Coordination notice is theoretically there for someone that is doing an Analysis against the earth station with their own system in the shared band of operation. In most instances, I don't believe this small modification in ACL height would create any changes in someone's Analysis against the earth station.

Hope this helps to answer your question, please feel free to call if you prefer.

Regards,

### Gary Edwards

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**From:** Kelly McKeon <Kelly.McKeon@spacex.com>  
**Sent:** Friday, May 21, 2021 6:19 PM  
**To:** Edwards, Gary <gedwards@comsearch.com>  
**Cc:** David Liptsyn <David.Liptsyn@spacex.com>  
**Subject:** Coordination Report - Antenna Centerline

Hi Gary,

Hoping you can help us understand the impact the Antenna Centerline (AGL) has on coordinating. The current value is 0.91m. If this were to change to 1.7m, what impact, if any, does that have on the coordination report?

Thank you!



**SPACE EXPLORATION HOLDINGS**  
**Ka-Band Earth Station – Manistique, MI**  
**Frequency Coordination Report**  
**28 GHz**

Job Number:	200302COMSGE02		
<b>Administrative Information</b>			
Status	ENGINEER PROPOSAL		
Call Sign	SPACEX		
Licensee Code	SPACEX		
Licensee Name	Space Exploration Holdings		
<b>Site Information</b>			
Venue Name	MANISTIQUE, MI		
Latitude (NAD 83)	45° 54' 31.0" N		
Longitude (NAD 83)	86° 29' 0.9" W		
Climate Zone	A		
Rain Zone	2		
Ground Elevation (AMSL)	206.56 m / 677.7 ft		
<b>Link Information</b>			
Satellite Type	Low Earth Orbit		
Mode	TR - Transmit-Receive		
Modulation	Digital		
Minimum Elevation Angle	25.0°		
Azimuth Range	0.0° to 360°		
Antenna Centerline (ACL)	0.91 m / 3.0 ft		
<b>Antenna Information</b>			
	Receive - FCC32		Transmit - FCC32
Manufacturer	SpaceX		SpaceX
Model	1.47 meter		1.47 meter
Gain / Diameter	46.9 dBi / 1.5 m		49.5 dBi / 1.5 m
3-dB / 15-dB Beamwidth	0.77° / 1.70°		0.49° / 1.17°
Max Available RF Power	(dBW/4 kHz)		-39.8
	(dBW/MHz)		-15.8
Maximum EIRP	(dBW/4 kHz)		97
	(dBW/MHz)		33.7
Inference Objectives:	Long Term	-156.0 dBW/MHz 20%	-151.0 dBW/4 kHz 20%
	Short Term	-146.0 dBW/MHz 0.01%	-126.0 dBW/4 kHz 0.0025%
<b>Frequency Information</b>			
	Receive 18.0 GHz		Transmit 28.0 GHz
Emission / Frequency Range (MHz)	62M507W - 480M07W / 17800.0 - 18600.0 62M507W - 480M07W / 18800.0 - 19300.0		62M507W - 480M07W / 27500.0 - 29500.0 62M507W - 480M07W / 29500.0 - 30000.0
Max Great Circle Coordination Distance	262.0 km / 162.8 mi		125.0 km / 77.7 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi		100.0 km / 62.1 mi

**Kelly McKeon**  
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