



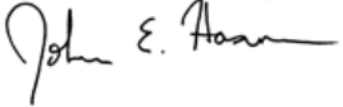
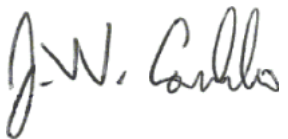
Gravitational Reference Advanced Technology Test in Space

Title: Space Antenna Patterns
Document Type: Reference
Document Number: GRATTIS-TN-107
Version: A
Date: 2026-06-01

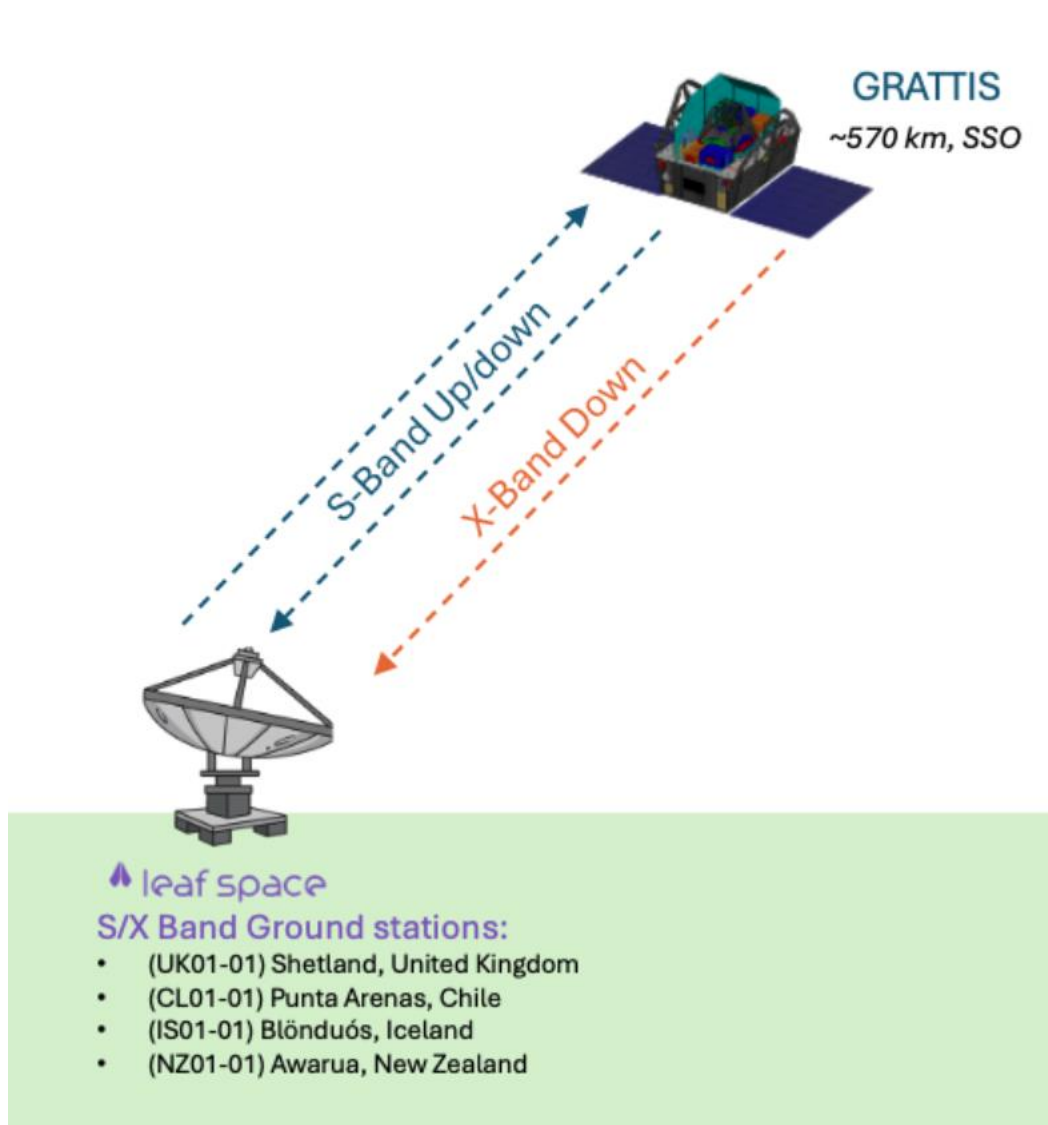
Prepared by:

Name	Company	Signature
Anh N. Nguyen	CrossTrac	

Approved by:

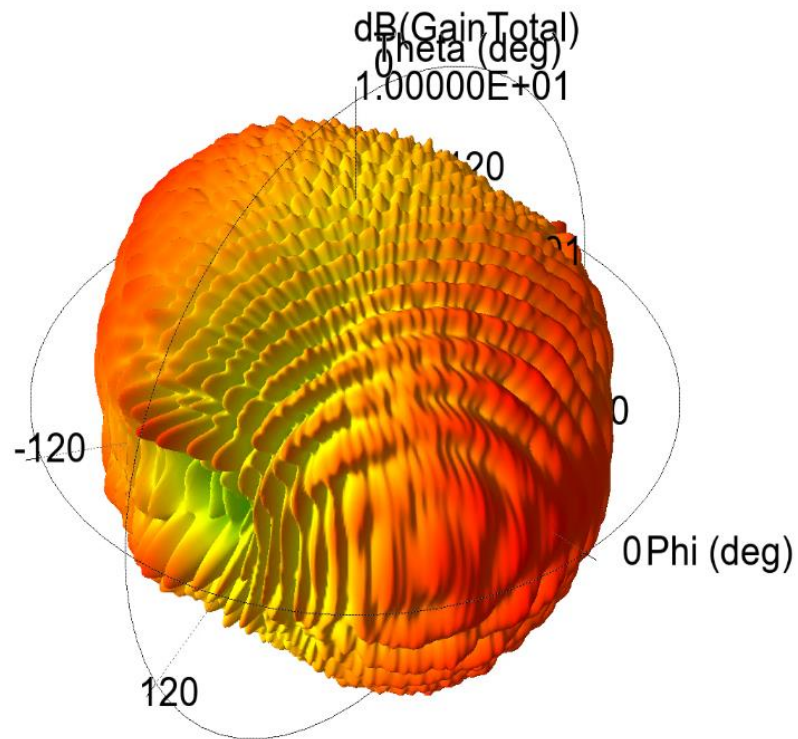
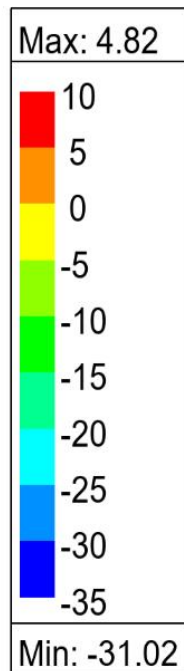
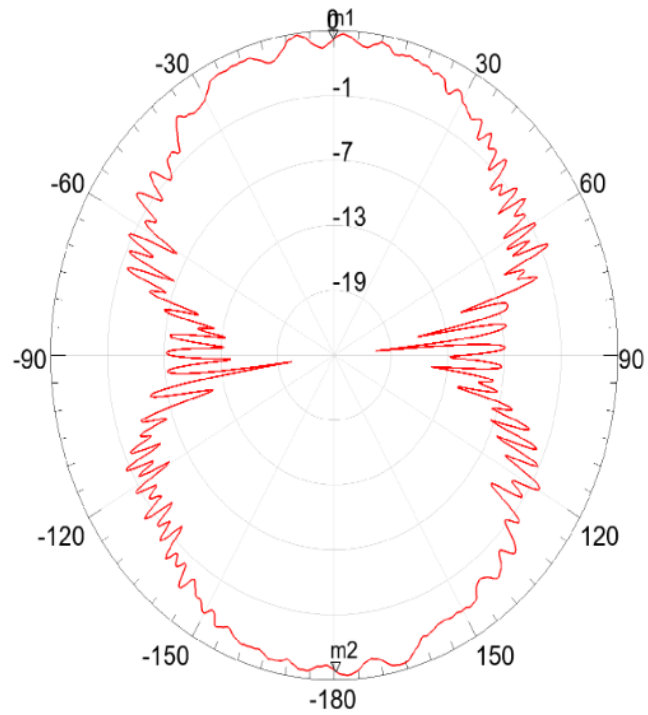
Name	Company	Signature
John Hanson <i>GRATTIS Project Manager</i>	CrossTrac	
John Conklin <i>GRATTIS Principal Investigator</i>	University of Florida	

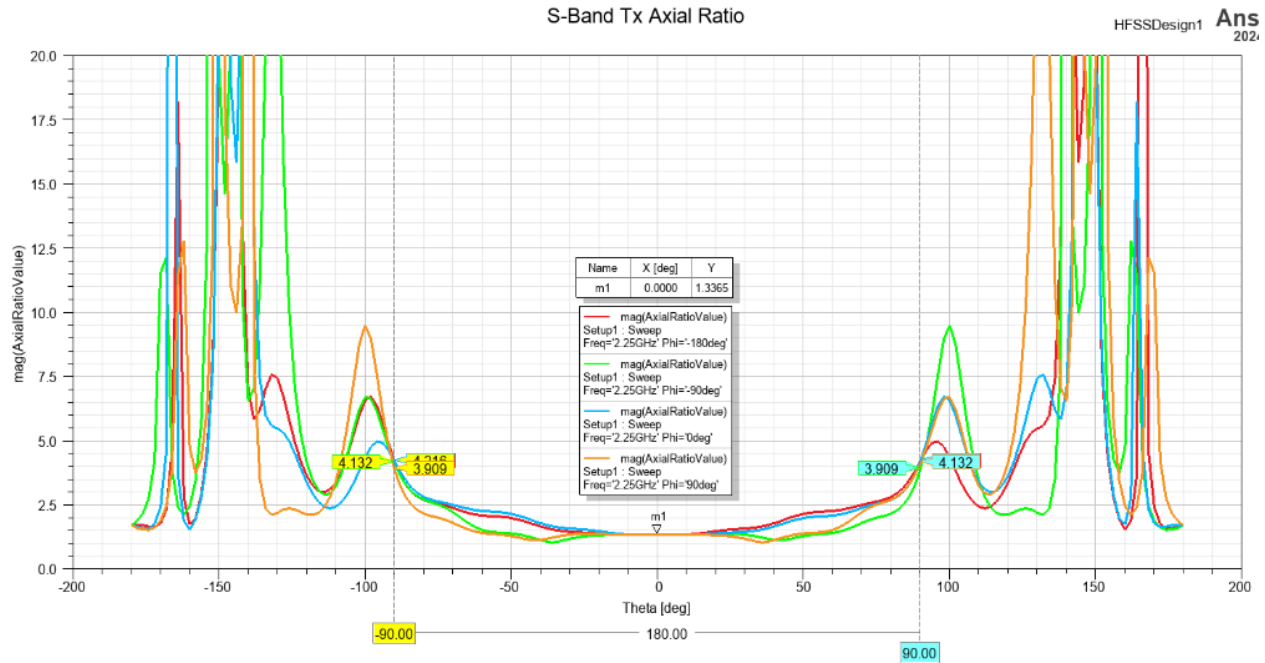
Reference: Below is an image that summarizes the comm links defined in this document. GRATTIS will be utilizing Leaf Space commercial ground stations. Note: the S/X band antenna are identical at each Ground station location.



S-band TX

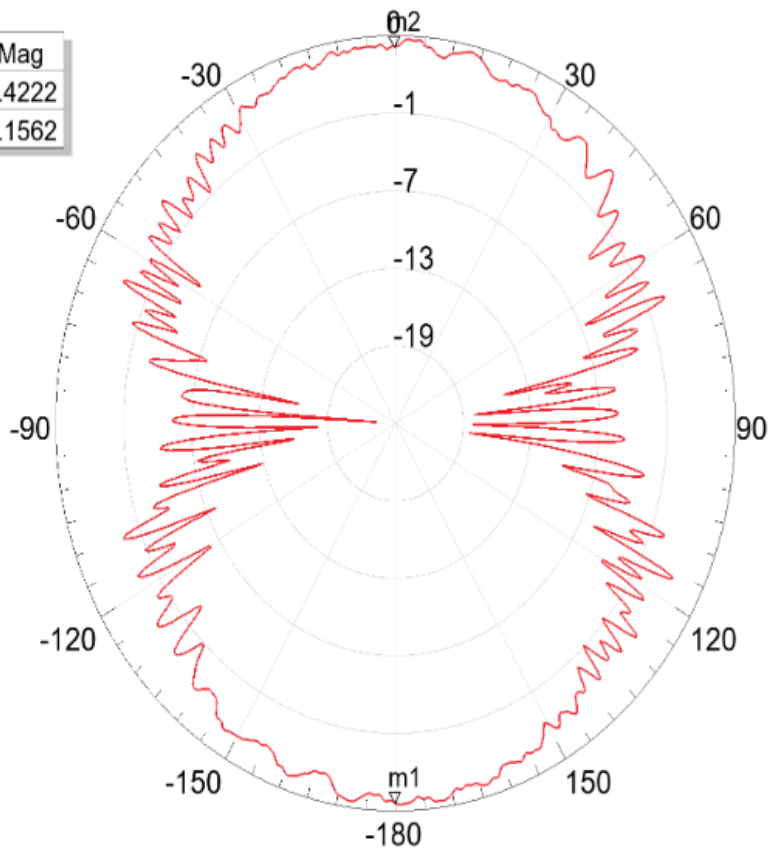
Name	Phi [deg]	Ang	Mag
m1	0E+00	4.9738E-13	4.2389
m2	179.5	179.5000	4.2711



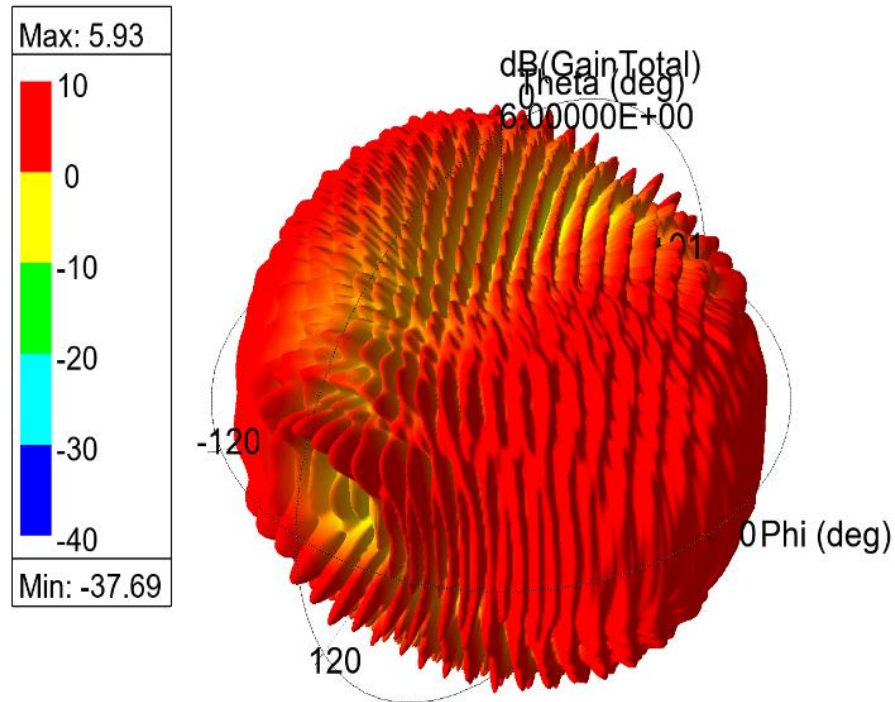


S-band RX

Name	Phi [deg]	Ang	Mag
m1	-180	-180.0000	4.4222
m2	0E+00	4.9738E-13	4.1562

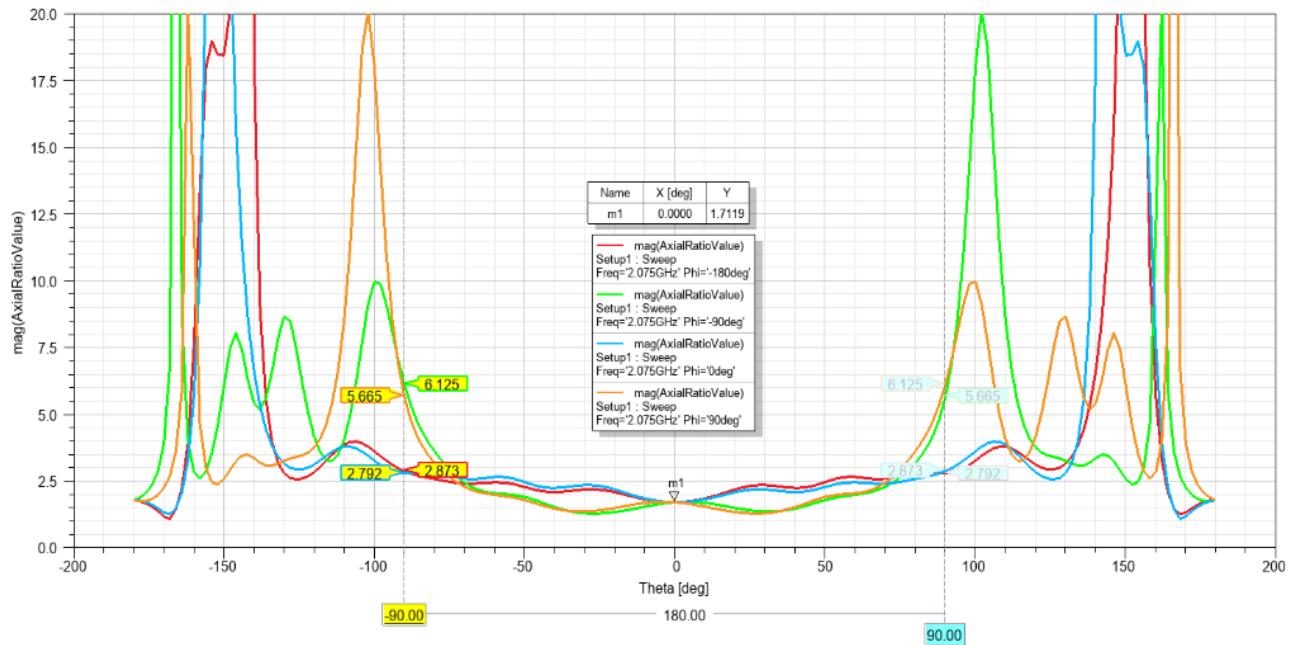


S-Band Rx



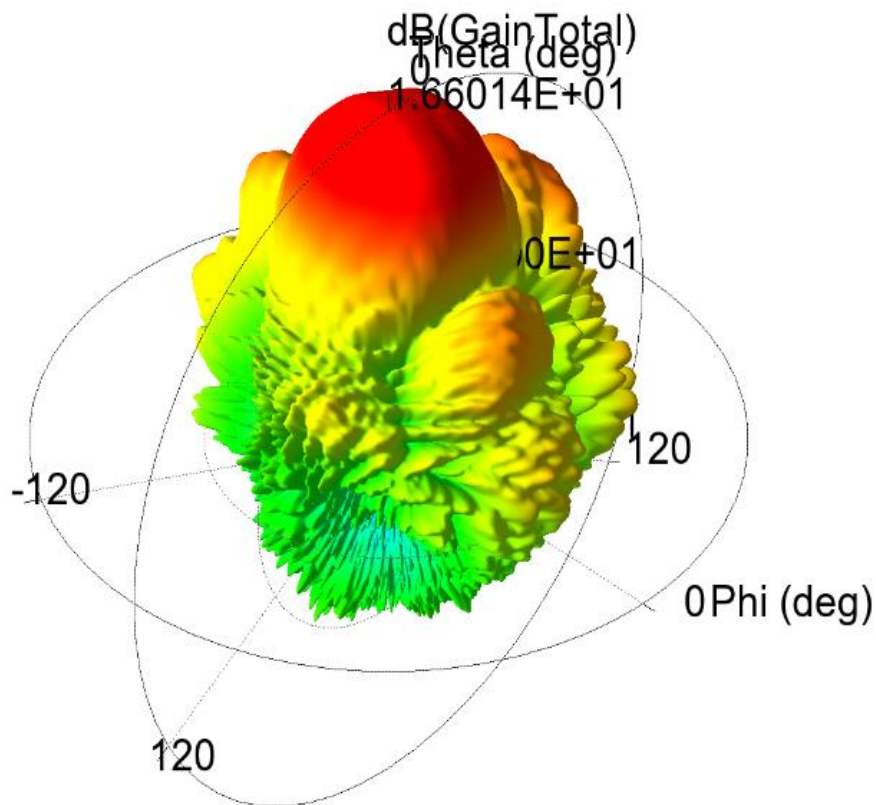
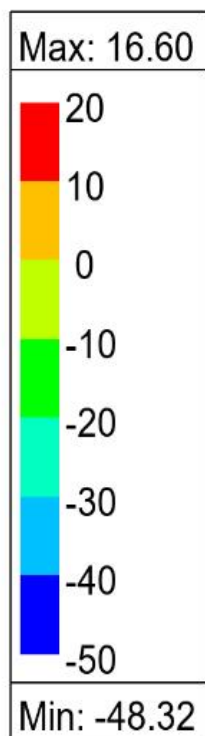
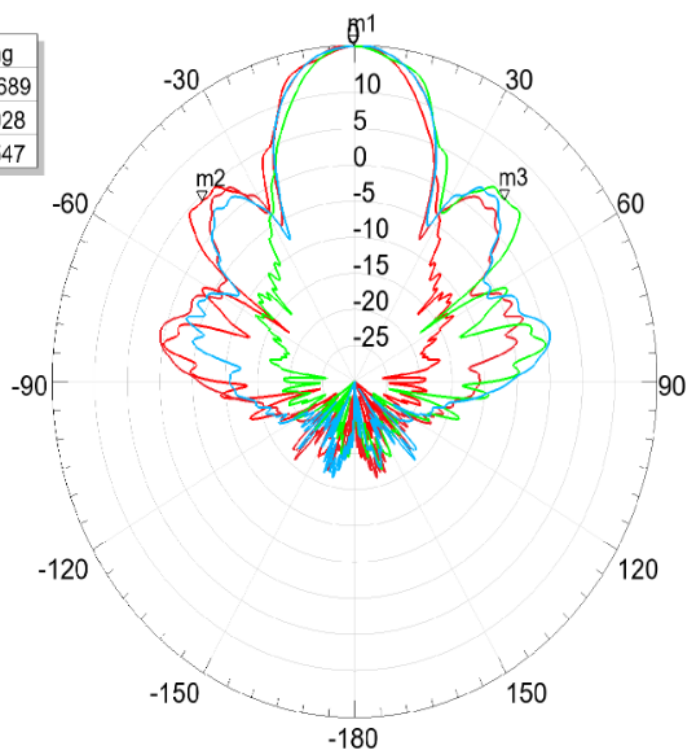
S-Band Rx Axial Ratio Plot

HFSSDesign1 **Ans**
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X-band TX

Name	Theta [deg]	Ang	Mag
m1	0E+00	4.9738E-13	16.5689
m2	-43	-43.0000	4.2928
m3	42.5	42.5000	4.2547



X-band TX Axial Ratio Plot

