

5. Metallic Cone-Sphere with Gap

- Model :
The model was created from the analytic expression to create a curve and revolved to create a surface.
The total length is 0.689 m (27.127 inches)
- Simulation parameters :
The Monostatic RCS is computed at 2 frequencies : 869 MHz and 9 GHz
For both Vertical and Horizontal polarization
The RCS is plotted in dBm^2 as function of azimuth angle from -180 to 0° . -180° degrees azimuth corresponds to incidence on the tip. The elevation angle is zero.
- Solver :
Method of Moment method was used with MSCBD solver and EFIE equations.

	869 MHz	9 GHz
Mesh size	Lambda/40	Lambda/15
Number of unknowns	8 952	131 508
Total time	13 seconds	7 min 26 s

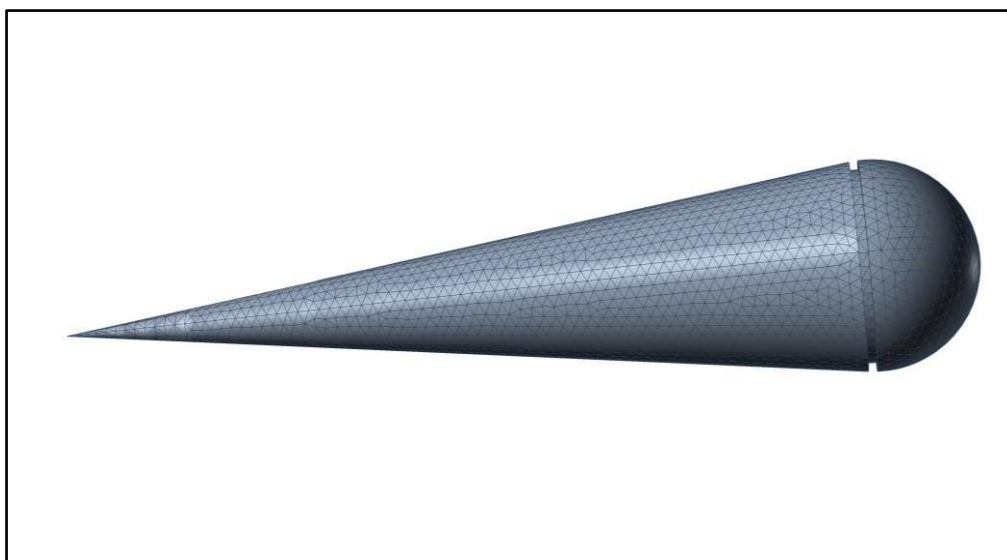


Figure 16 - Cone-Sphere with gap mesh model

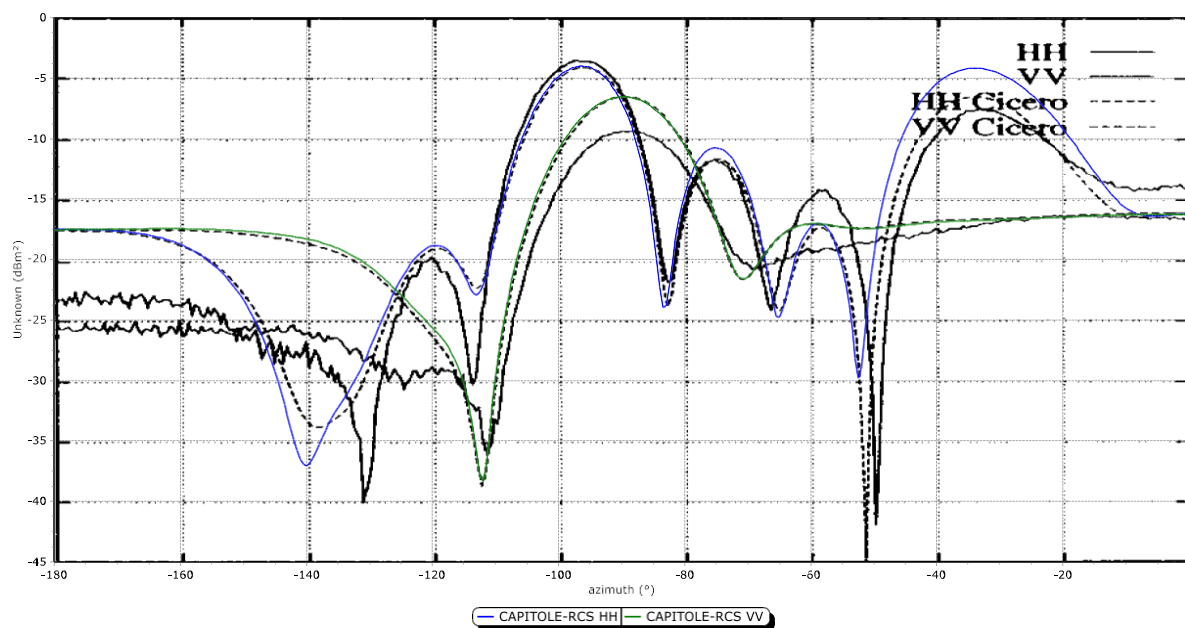


Figure 17 - Metallic Cone-Sphere with gap RCS @869MHz CAPITOLE-RCS vs measurement

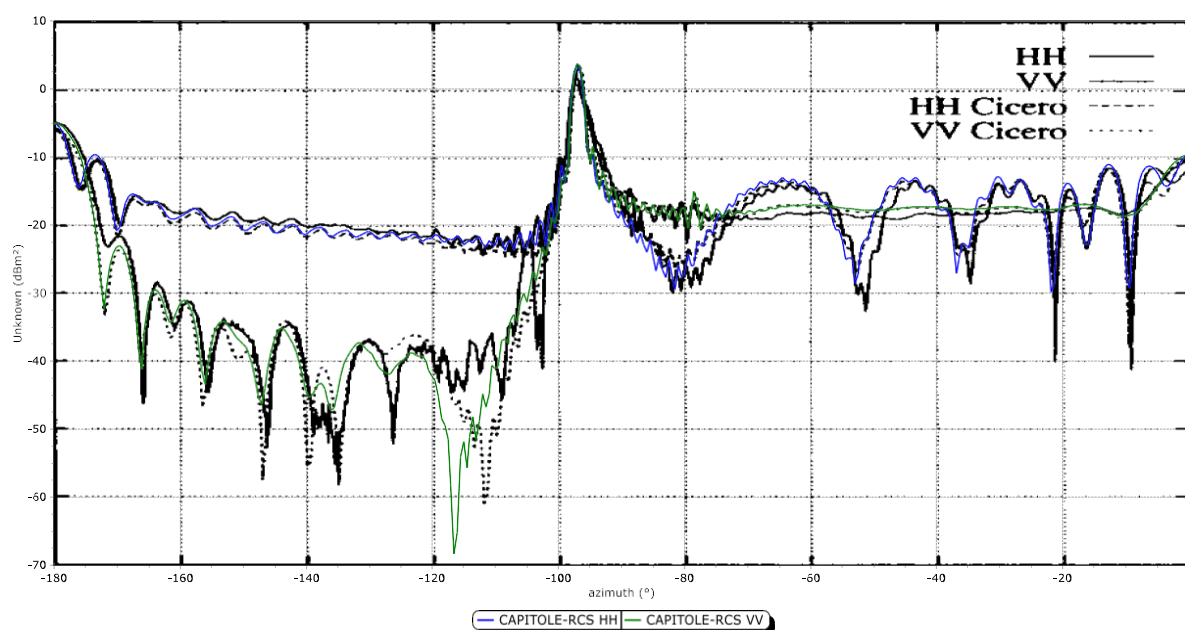


Figure 18 - Metallic Cone-Sphere with gap RCS @9GHz CAPITOLE-RCS vs measurement