EDIS⌐N

Electromagnetic Design of
flexIble SensOrs

FNP Team-Tech

Report 3. Bistatic Radar Cross-section - simple
geometries

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1 Introduction

The aim of this report is to verify the accuracy of the scattering formulation. We consider the three test PEC structures: cylinder, cube and sphere. The dimensions and reference scattering characteristics are provided in:

- Ming-Sheng, Chen, et al. *"Hybrid lifting wavelet-like transform for solution of electromagnetic integral equation."* Chinese Physics Letters 25.3 (2008): 1000.

The fourth and fifth examples deal with the dielectric cylinder and the turbine inlet. The dimensions and reference scattering characteristics are provided in:

- Zhao, Kezhong. *"A domain decomposition method for solving electrically large electromagnetic problems."* Diss. The Ohio State University, 2007.
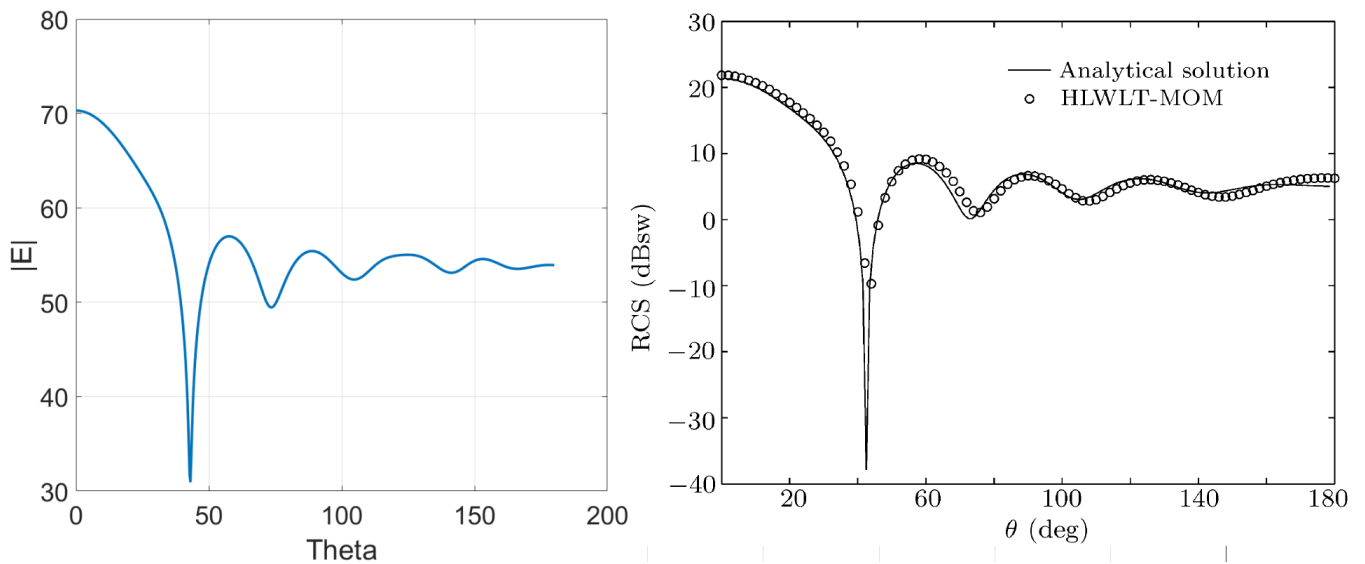

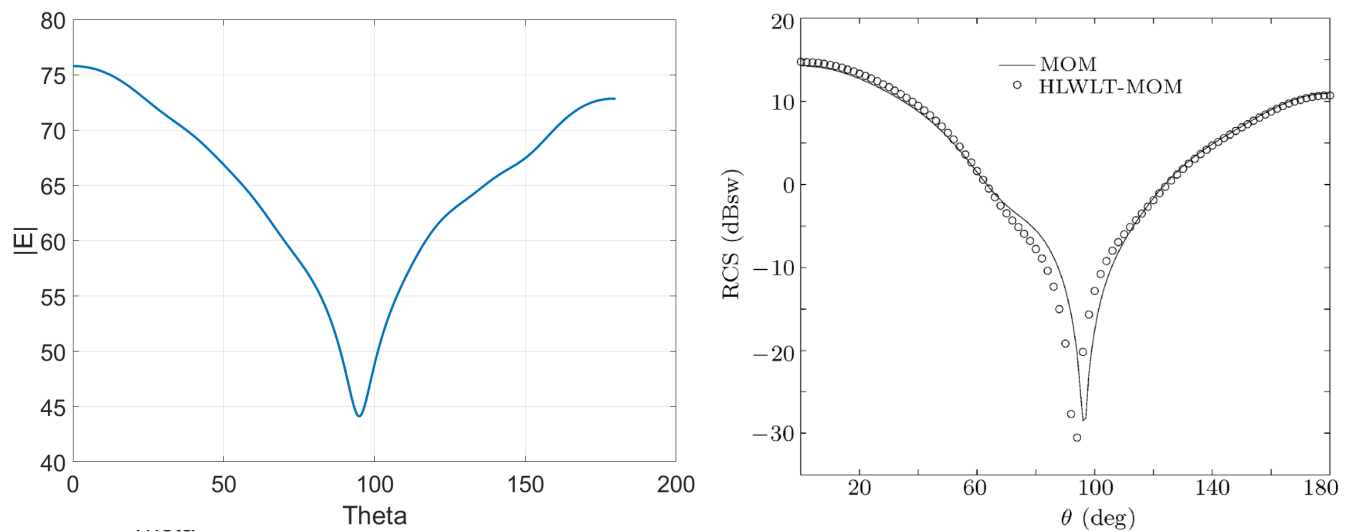Figure 1: E-plane bistatic RCS of a PEC sphere.

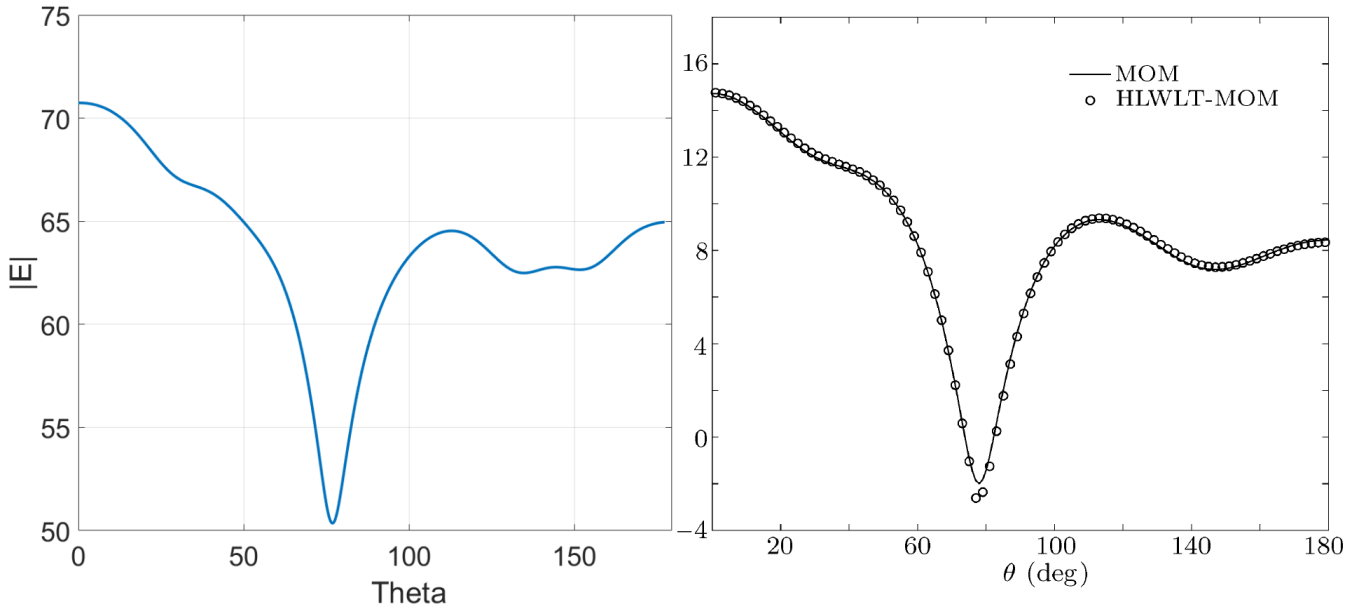
Figure 2: E-plane bistatic RCS of a PEC cube.

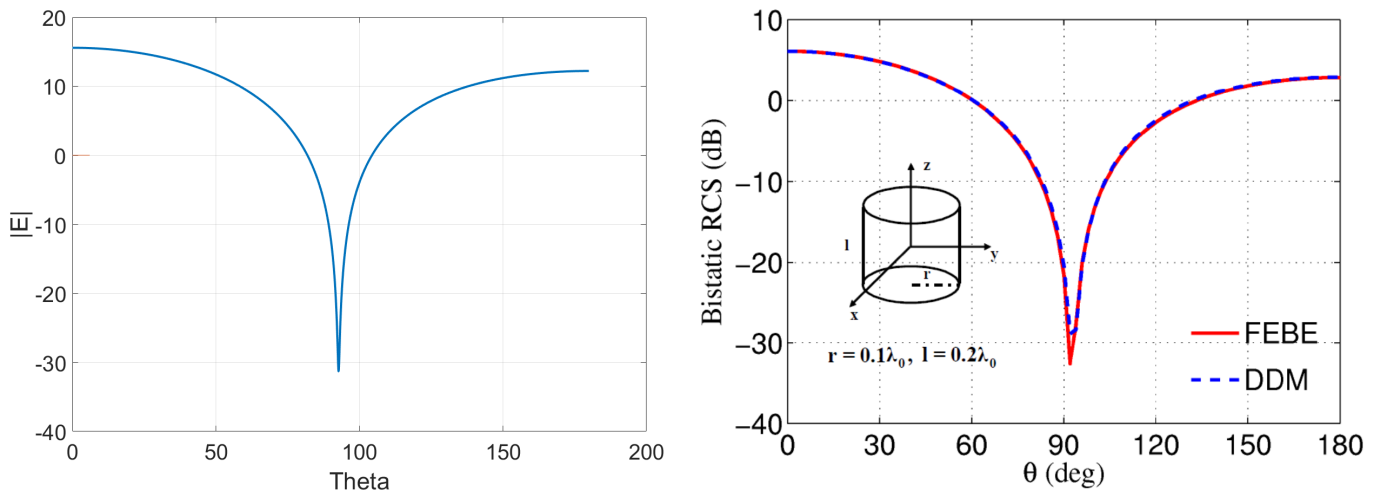Figure 3: E-plane bistatic RCS of a PEC cylinder.

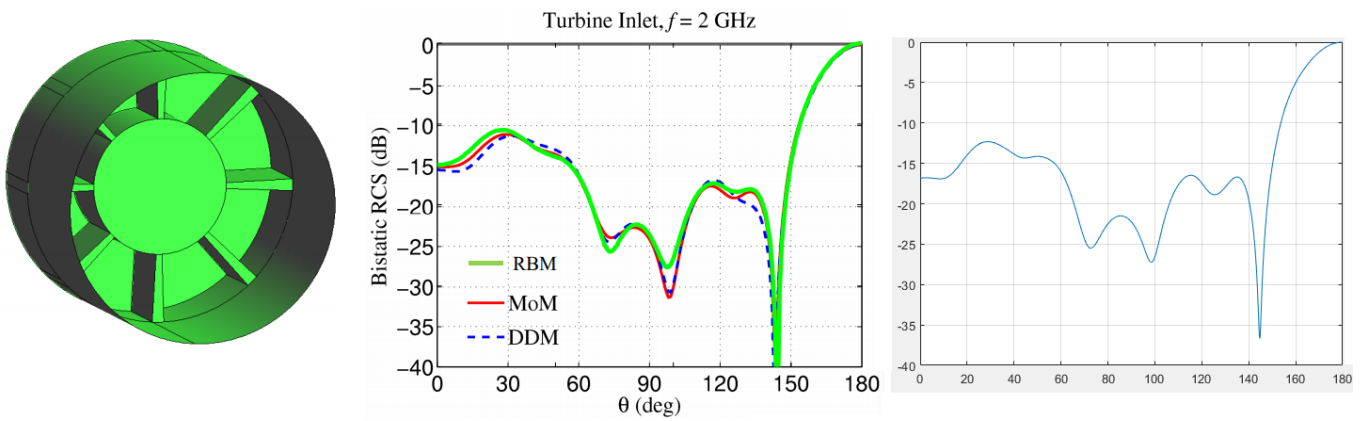

Figure 4: E-plane bistatic RCS of a dielectric cylinder.

Figure 5: E-plane bistatic RCS of turbine inlet.