1067-78-1582 **Weiwei Zhang***, 133, North River Street, Wilkes-Barre, PA 18702. *Electromagnetic Scattering from Large Cavities.*

In this talk, I will present a modified mode matching method to calculate the Electromagnetic field scattered from large open cavity which is recessed in an infinite ground plan. The problem can be served as a model of duct structures, such as jet engine intakes of an aircraft or antenna windows embedded in complicated structures. The phenomena are governed by the Helmholtz equation (2D) and the Maxwell's equations (3D) with suitable boundary conditions. The calculations of Radar Cross Section (or echo area) of this structure are considered and the numerical experiments are studied. (Received September 21, 2010)