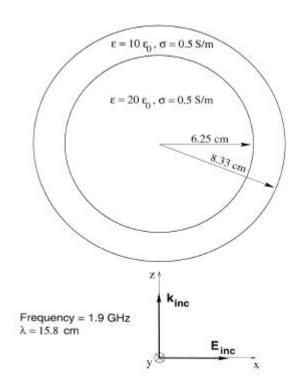
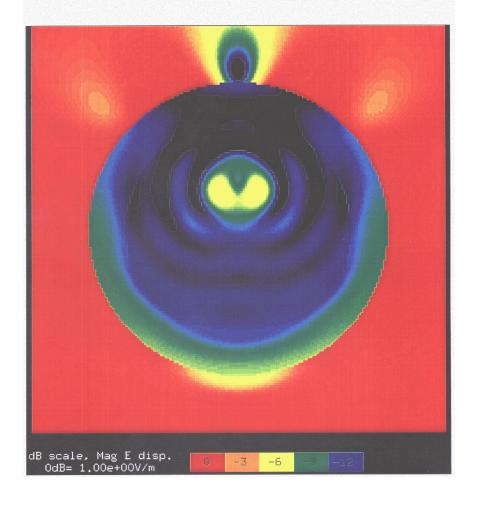
Validation Exercise: Layered Lossy Dielectric Sphere

- Inner radius: 6.25 cm, outer radius: 8.33 cm
- Frequency: 1.9 GHz, ? = 15.8 cm
- 1.28 mm FDTD cells, about $6x10^6$ cells total, 4000 time steps
- Outer spherical shell: relative permittivity of 10, ? = 0.5 S/m
- Inner sphere: relative permittivity of 20, ? = 0.5 S/m
- Plane wave excitation
- FDTD results are compared to exact modal solution

Validation Exercise: Layered Lossy Dielectric Sphere



Validation Exercise: Lossy Dielectric Sphere Modal Solution for E-Field Magnitude



Validation Exercise: Lossy Dielectric Sphere FDTD Solution for E-Field Magnitude

