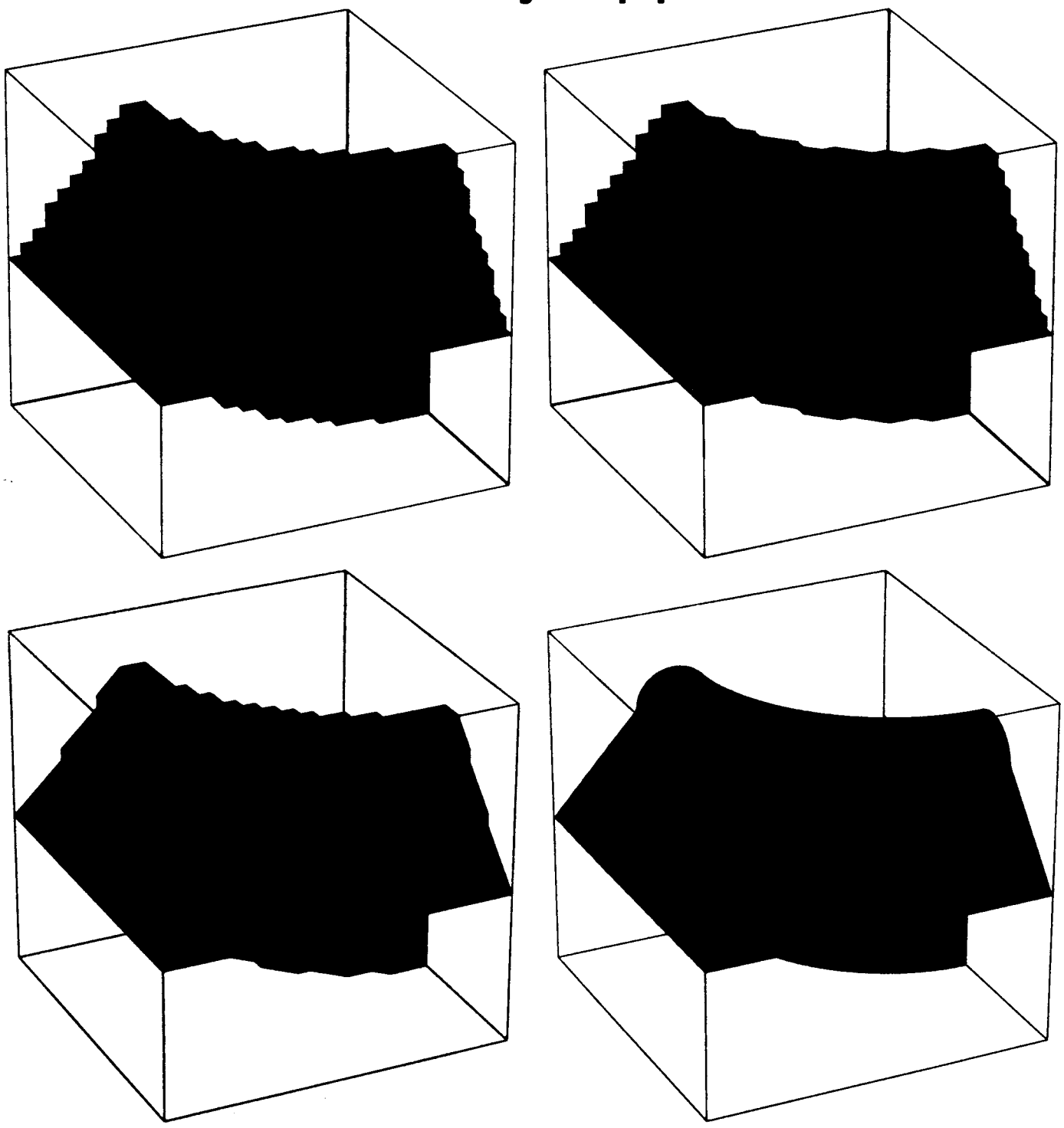
- Improved GdfidL
  - Greatly improved accuracy due to better material discretisation.
  - Improved speed
  - Programmable mesher and postprocessor
  - Periodic boundary conditions in x-, y- and z-direction simultaneously for eigenvalue computations
  - 'Perfectly Matched Layer' as absorbing boundary condition for time domain computations

- GdfidL computes
  - Resonant Fields
    - Frequencies
    - Shunt-Impedances
    - Q-Values
  - Time dependent fields
    - Scattering parameters
    - Wake fields and Wakepotentials

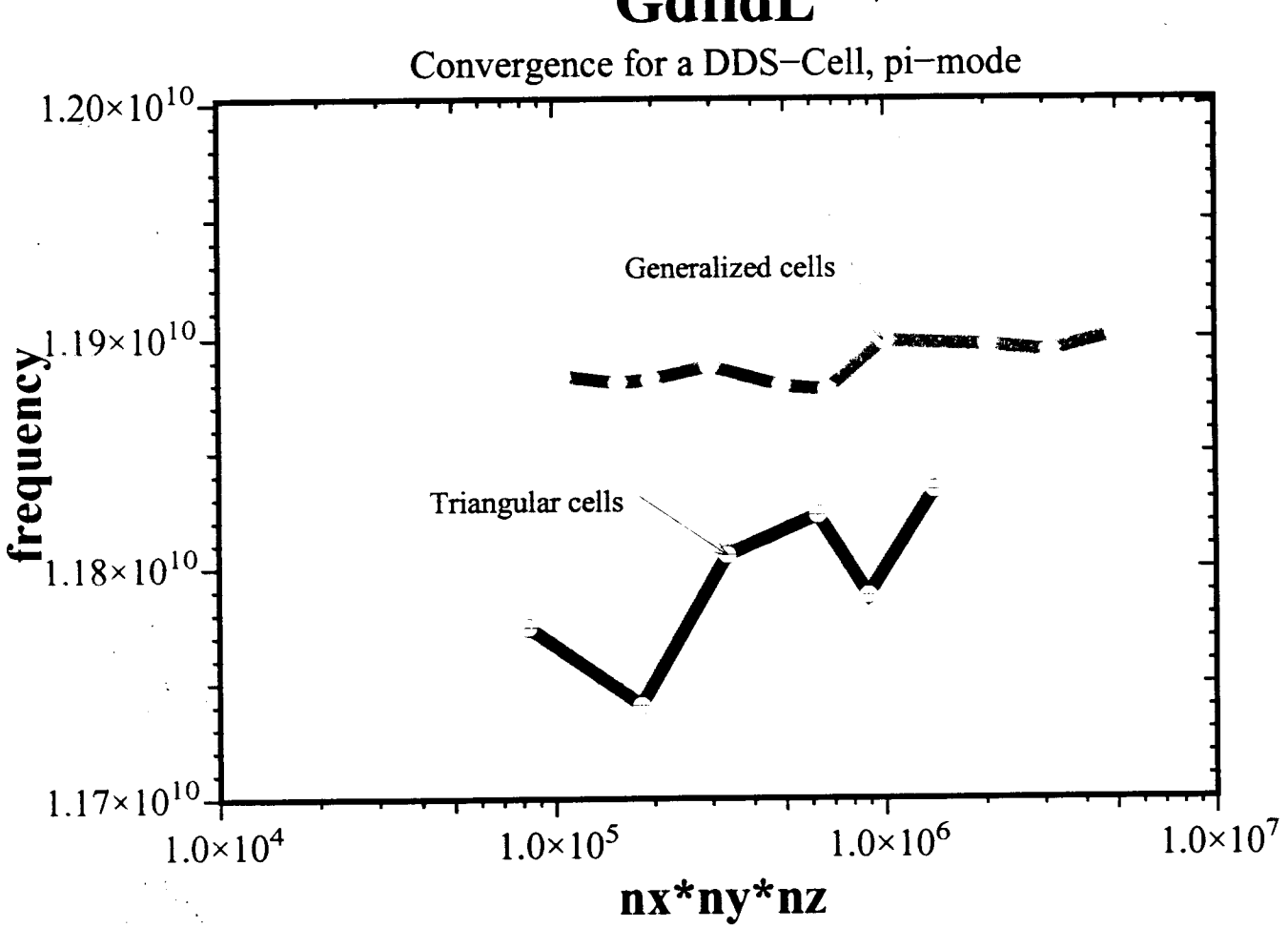
Better boundary approximation



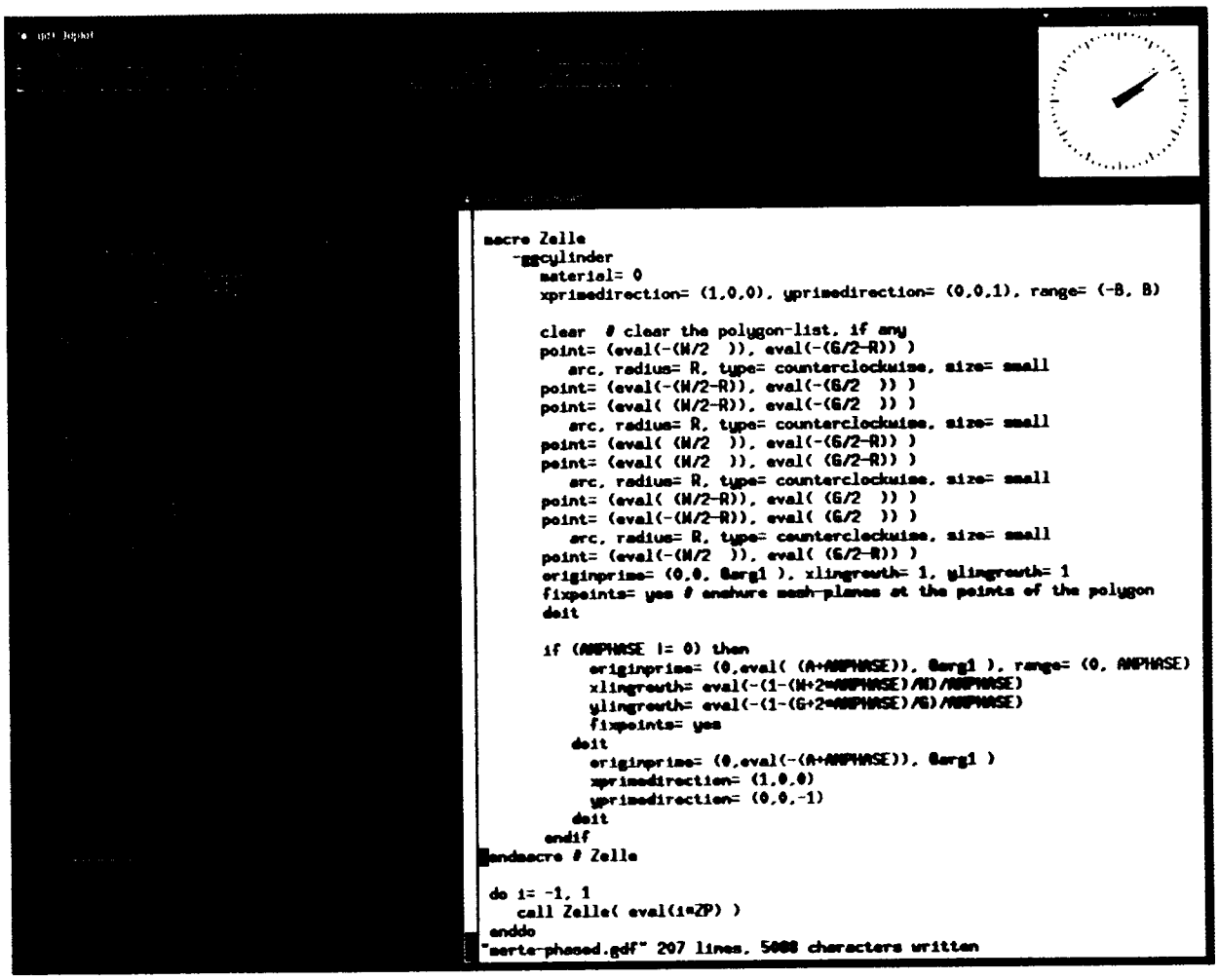
Fri Feb 26 13:51:35 1999

blue: MAFIA 1,4 M meshpoints
≈ 10h

red: generalized 517 meshpoints
diagonal filling ≈ 10h

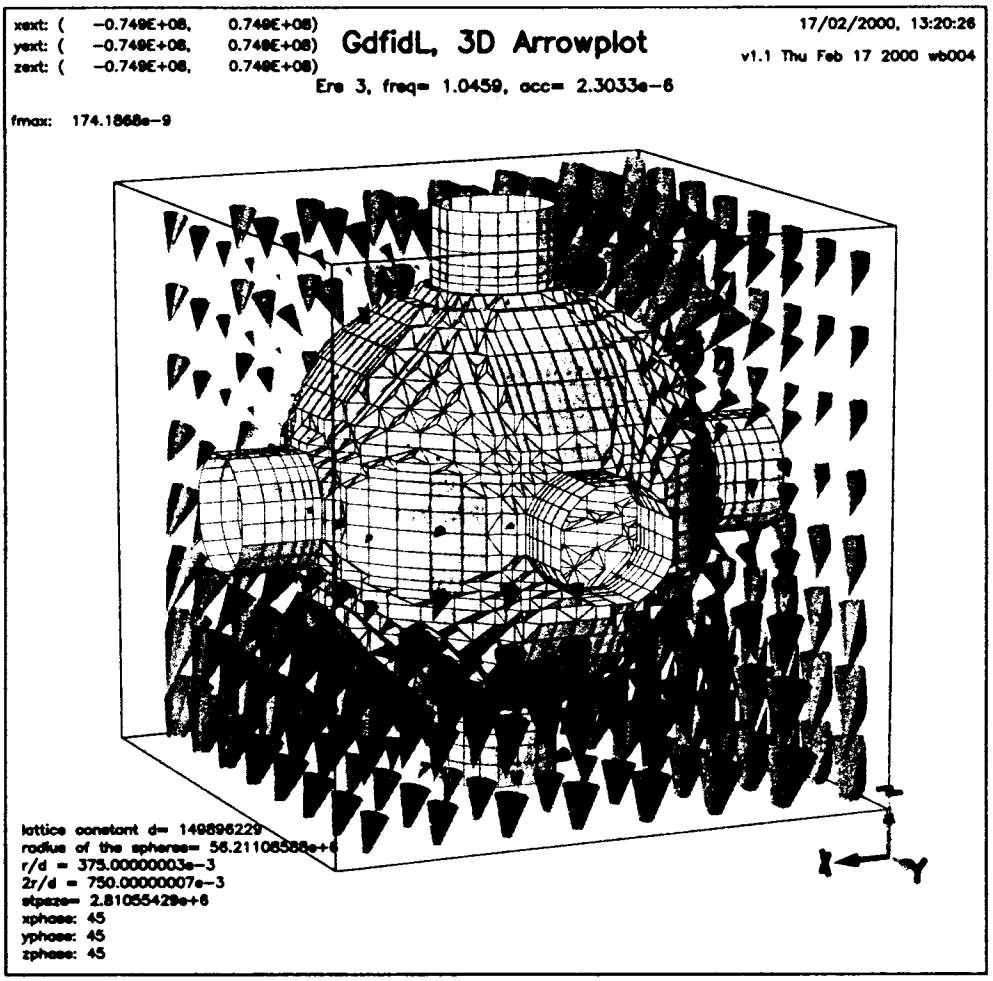


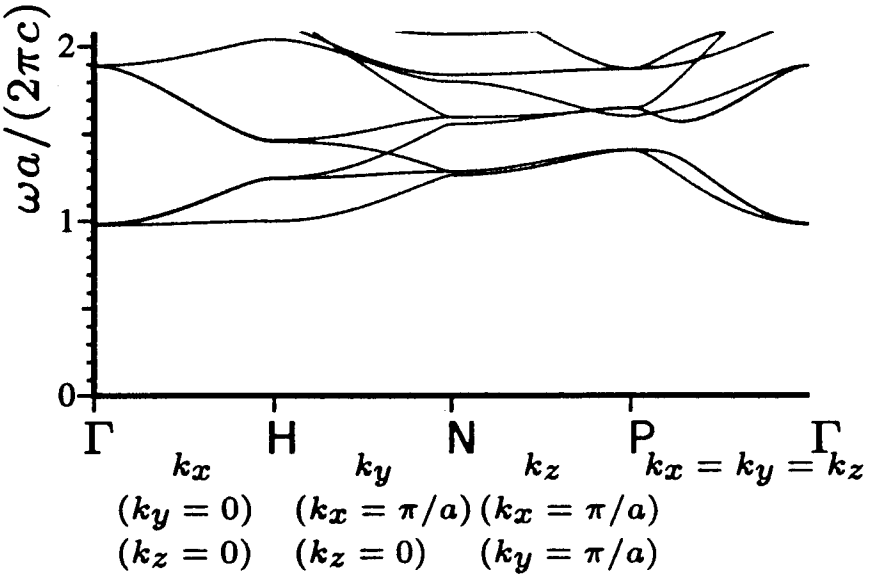
Programmable mesher and postprocessor



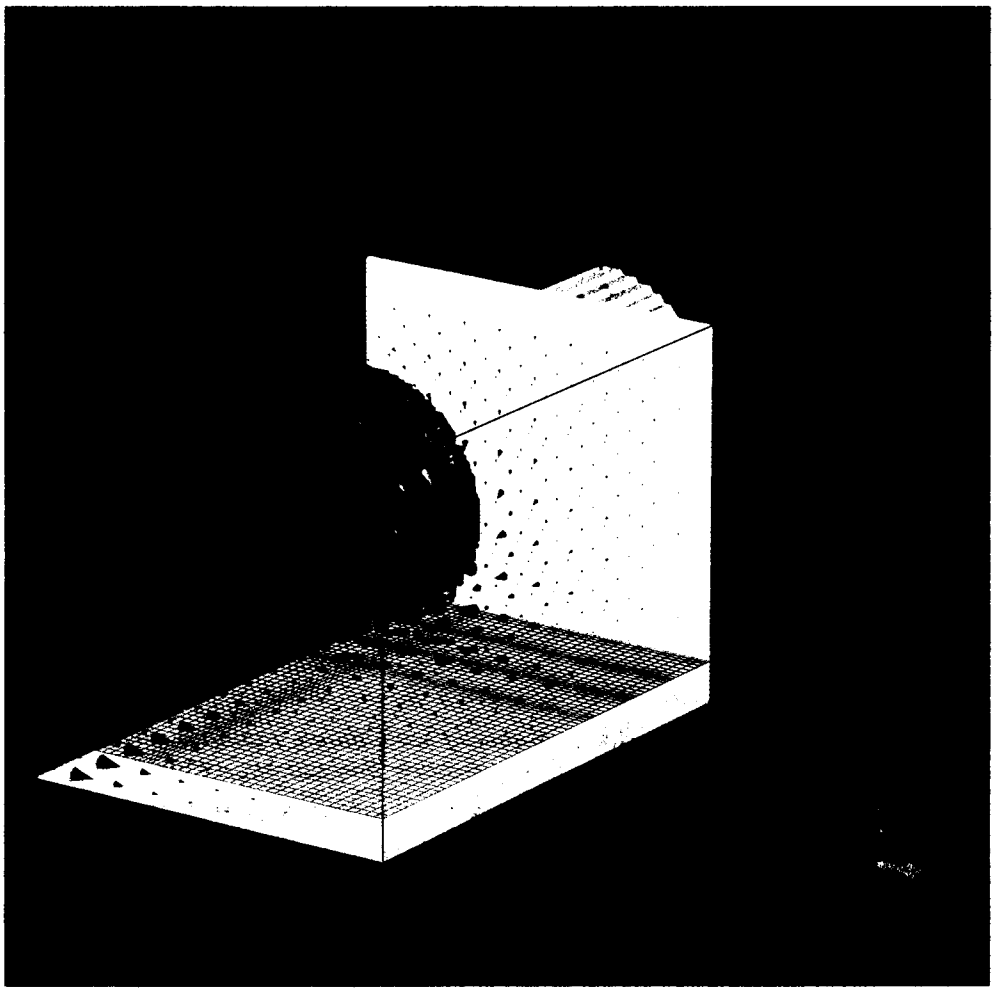
- do-loops
- if then / endif
- macros with parameters

Periodic boundary conditions in x- y- and z-direction





Perfectly Matched Layer



'Perfectly Matched Layers' are used as absorbing boundary conditions. It is no longer needed to specify a sufficiently large number of orthogonal modes to have low reflection.

Ports can be inhomogeneously filled with dielectrics.