MAFOT: a parallel field line and drift orbit tracer

by Andreas Wingen

MAFOT can calculate:

- Poincaré plots
- Connection length
- Penetration depth
- Manifolds of separatrix or island chains
- full 3-D orbits
- B-fields outside of VMEC & SIESTA last closed surface

in tokamaks:
DIII-D, ITER, NSTX, MAST & any other

Control GUI available

in:

- Poloidal cross-sections: (R,Z) & (θ,ψ) coordinates
- Footprints on divertor targets

for:

- magnetic field lines
- relativistic particles in a guiding center drift approximation

with:

- RMP vacuum fields of coils
- M3D-C1 plasma response
  - linear & non-linear
  - single & multimode
- VMEC & SIESTA B-fields
- arbitrary individual current filaments
- radial electric fields
- *new* GPEC fields

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