State of EMPIRE

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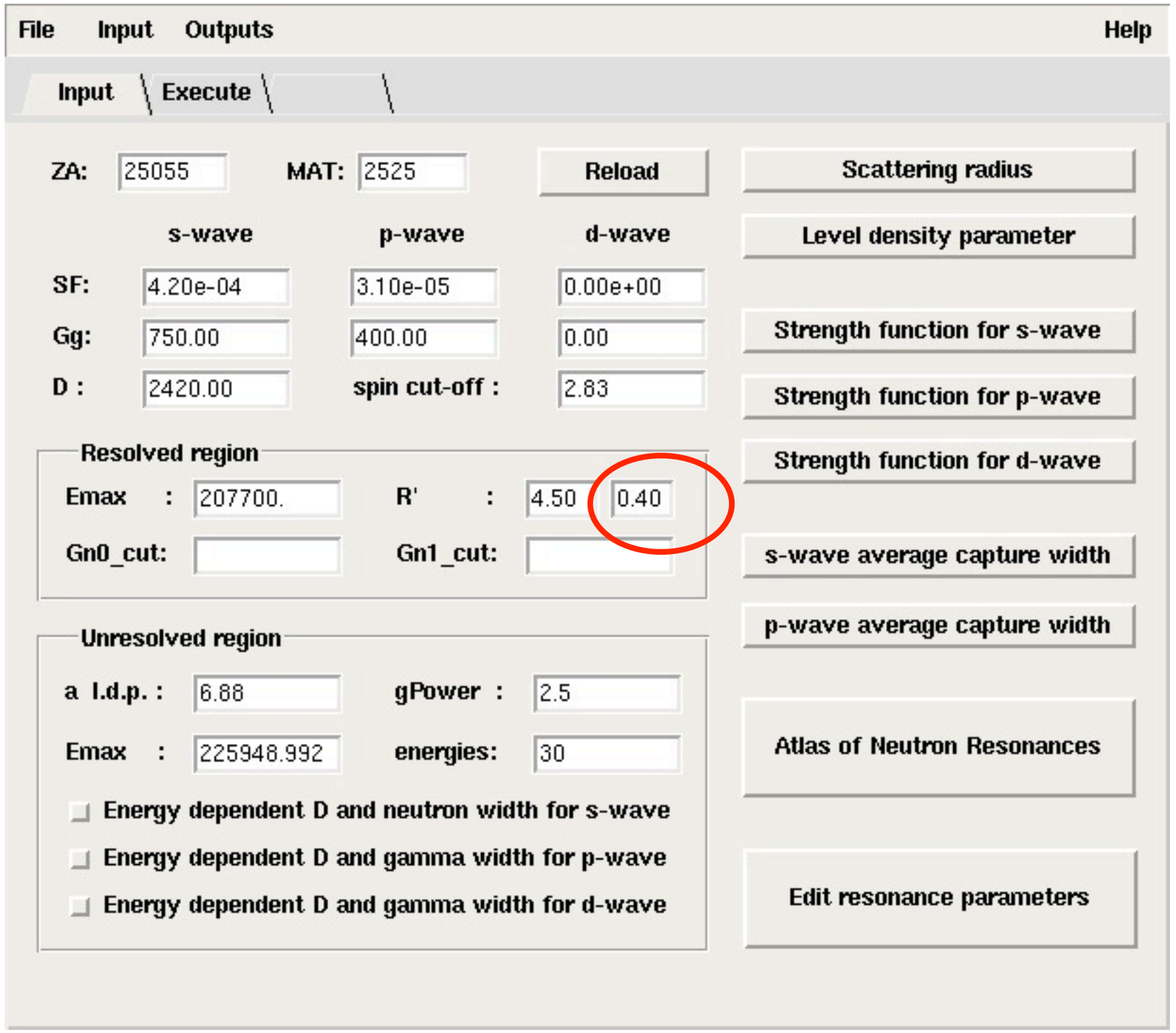
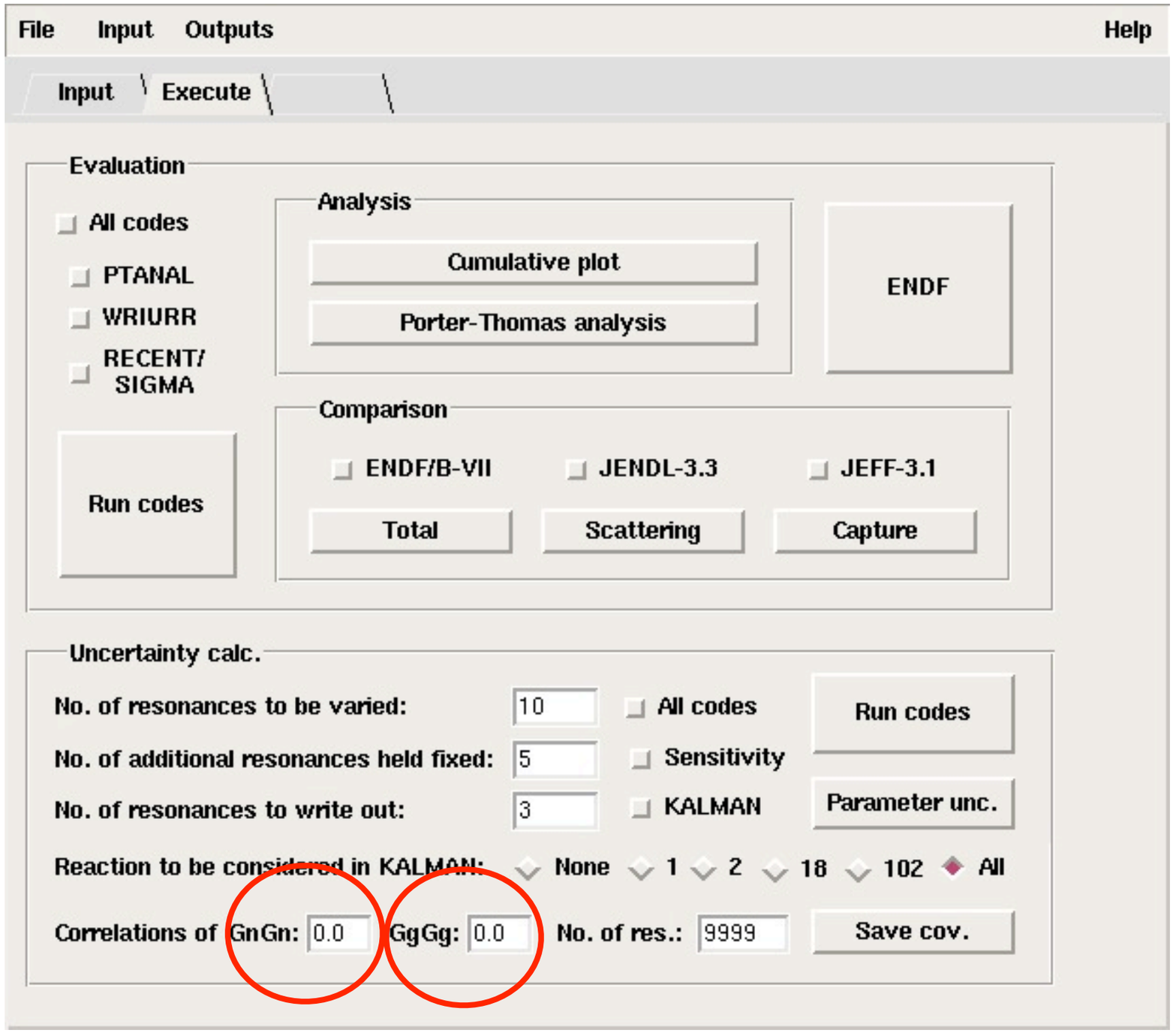
Recent development

- Six ejectiles (n, p, alpha, g, d, t, ^{3}He) + arbitrary light ion; includes ENDF-6 formatting (Capote, Trkov)
- Inclusion of RIPL-3 combinatorial level densities with parity dependence
- Further extension of the resonance module
  - adjustment of capture, elastic and fission uncertainties to reproduce thermal uncertainties using anticorrelations
  - inclusion of arbitrary correlations among gamma-widths and among neutron-widths
- Upgrade of ZVView package - 2-D and 3-D plotting of covariance matrices (Zerkin)
- Working towards EMPIRE-3.0 release

Resonance module (scat. radius uncertainty)
(Young-Sik Cho)



Resonance module (parameter correlations)
(Young-Sik Cho)



Working towardsEMPIRE-3.0 release (C. Mattoon)

- Scripts modified to allow running EMPIRE in an arbitrary directory - step towards parallelization
- Simplified installation (modernized Makefile)
- More user friendly GUI
- several Bash scripts ported to Python (error checking)
- Python modules for manipulation of ENDF files
  - functions for reading/writing ENDF sections (search & replace)
  - classes for dealing with MF=31, 32, 33, and 35
  - classes for working with multi-group cross sections and covariances from NJOY and PUFF

^{55}Mn(n,inl)
In theory we trust!