LISE++ v.17.15 — Summary of Improvements 08/20/2025

Performance

- 🚀 **Gauge optimized**: progress updates throttled (configurable Hz) — calculations run faster while Cancel stays responsive.
- ⚡ **MSVC Release build**: project tuned with full optimization flags, debug overhead removed, QT_NO_DEBUG_OUTPUT enabled.
- 🔋 **Windows 11 Enterprise**: LISE disables OS background power-throttling, keeping speed constant even when not focused.

Benchmarking

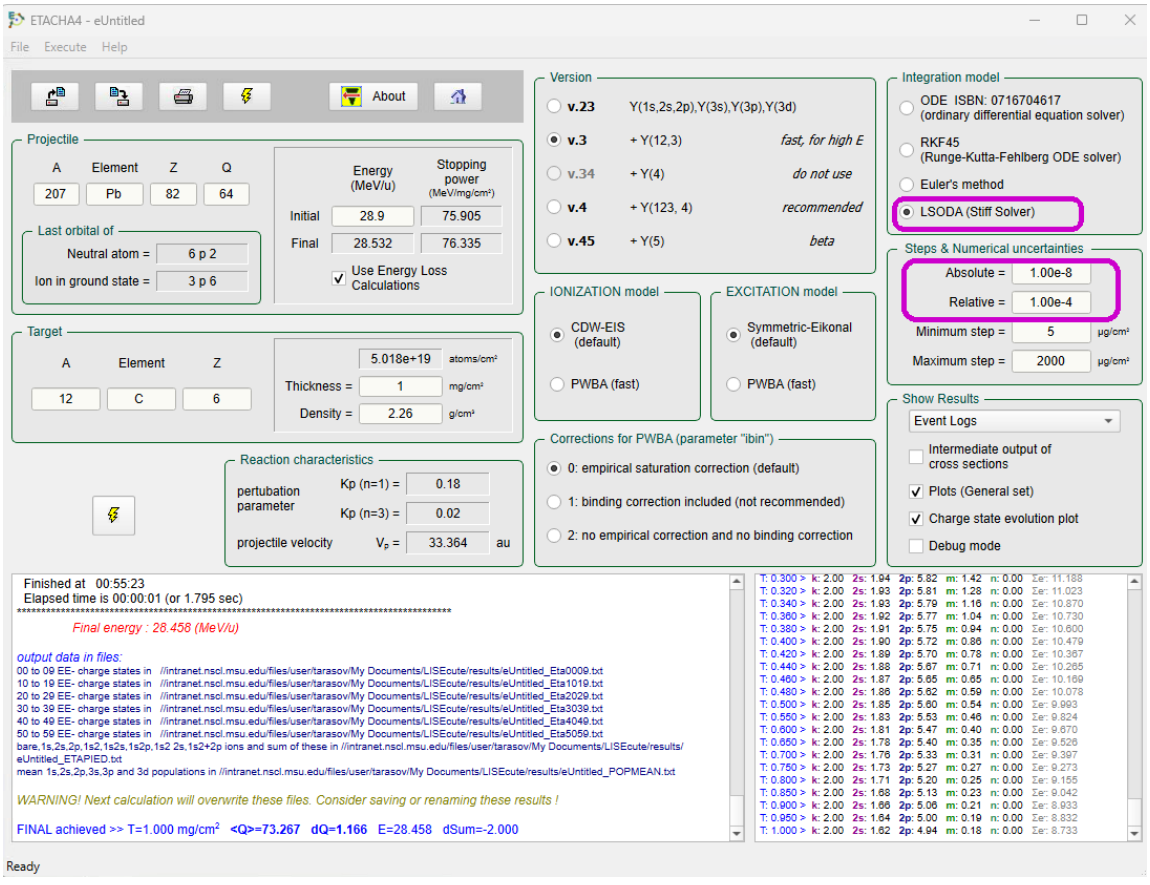
- Abrasion–Fission task runtime:
  - v.17.14 → **363.4 s**
  - v.17.15 → **260.8 s**
- → **~1.4× faster (≈ 28% improvement)**

Practical impact

- This version is well-suited for **LISE batch calculations**, especially for the *Initial Fissioning Nuclei* utility where long runs are common.

ETACHA 4.6 (project by A.Ray)

- **LSODA integrator** added, with improved defaults.
- **Euler** and **Adams–BDF** integrators available for quick or stiff problems.
- Warnings and defaults polished for production use.



Other Modifications

- UI polish: corrected icons, labels, wedge colors, and dark-mode cancel dialog.
- LISEforExcel PID calculator corrected.
- Added user messages (e.g. when no solution found).