ETACHA : construction notes

1. Implement an advanced integrator to avoid a stiffness problem
2. ~~Check Cross section scaling from energy~~
   ~~(it looks like there is disagreement between CS (E) & scales(E-dE) * CS (E-dE))~~
3. ~~“Shell evolution” plot – modify from Spline to Area~~
4. Modify the code source to
   - Have more modern structure software (for example avoid <“goto” Fortran heritage>) that allows prevent bugs, optimize for speed
   - Eliminate compiler warnings (mostly correlated to the previous item)
   - Decrease number of global variables came from original common blocks
5. Version 3.4 (currently it’s hidden) should be corrected
6. Be ready for the High energy cross sections update
7. Implement the LISE^{++} ionization energy database to ETACHA to use in charge state evolution calculations
8. Based on the ionization energy database create a X-ray plot corresponding to currently calculated charge state evolution. Think about possibility to use this plot for particle identification
9. Create ETACHA library to use with other applications (for example, LISE^{++})