

# Convergence of impurities in ETS (tracker 1704)

Present situation:

- transport equations for impurity densities are solved similarly to the equations for the main ion species
- this is done in the separate workflow block and using the 'predefined' solver (solver 4)
- frequency of the impurity density calculations can be varied (each iteration, each time step, time intervals)
- no convergence check is performed on the impurity densities

Proposal: include convergence check on impurity density equations similarly as is done for the main ion species

Options:

- check on all charge states of all impurities (this suggestion is supported by Gergo)
- check on the total density
- check on several 'cumulative' charge states (similarly as implemented in TCI)
- other options

Questions:

- what would be most appropriate? Pros/cons of each option
- how the convergence check is done (if done at all) in standalone code (COREDIV)?
- ?