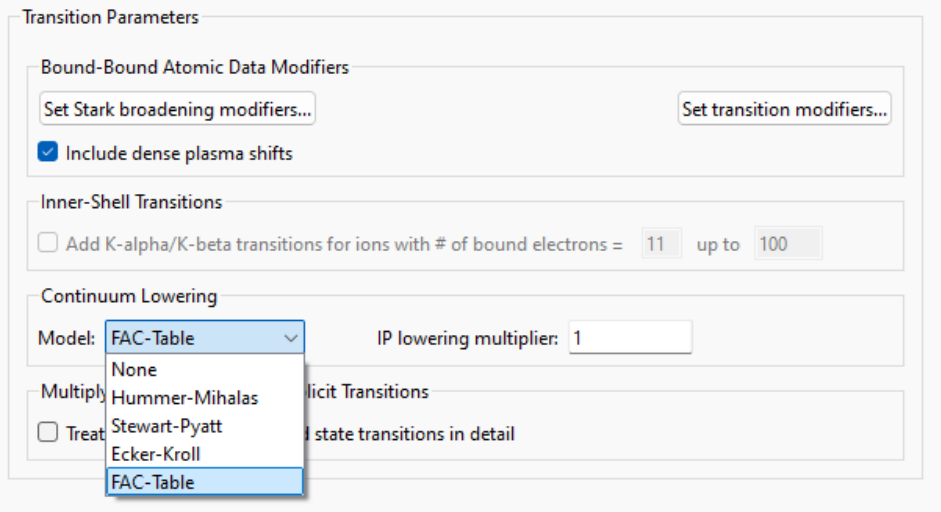
Revisions for PrismSPECT 10.1.0

- Additional option for continuum lowering models (*Atomic Processes -> Advanced -> Transitions*) and for dense plasma shifts. FAC Table option and dense plasma shifts require *.es atomic data files. The data will be distributed to all PrismSPECT users. A systematic calculation of plasma screening effects on atomic structure for all ions of Z=1 to 36 has been carried out using the Flexible Atomic Code. The screening potential is obtained within the framework of Stewart-Pyatt model. The shifts in ionization potentials of bound electron radial orbitals up to principal quantum number 10 and all orbital angular momenta are tabulated on a grid of electron densities and temperatures. Due to the slight differences in the screening effects on different radial orbitals, this tabulated database enables to not only determine the continuum lowering of the ground states, but also transition energy shifts within the same ionization stages. The database of ionization potential shifts is a significant improvement over analytical formulas often employed for ionization potential depression.



- Improved convergence stability for NLTE simulations with large optical depths. Note that this may increase the simulation time for some calculations.
- Added option to specify the density in terms of electron density.