

## Revisions for PrismSPECT 10.0.0

- Several significant changes in physics modules have been implemented. For more information on the models please refer to an appendix in the documentation titled "Physics Models Improvements April 2024"
  - Photon energy grid refinement for both photo-absorption and spectral modeling.
  - Continuum lowering model avoids destroying transitions just below the ionization threshold.
  - Including more line wings in bound-bound emissivities.
  - Extrapolation of photo-ionization cross sections below depressed ionization potential.
  - Automatic adjustment of time steps for non-local time dependent population solver.
  - A new output file is introduced to tabulate line profile parameters with individual broadening components, including Stark, Doppler, natural, and UTA width, and if enabled, Stark and UTA shifts. This file has the same number of rows as the existing transpwr file, where each row corresponds to one bound-bound transition.
- Bug fixes:
  - *Line Intensity Viewer*: fixed bug for axis title units for "Zero-Width" plasmas.