



Extended Opacity Tables with Higher Temperature-Density-Frequency Resolution

POSTER

Abstract

Theoretical models for plasma opacities underpin our understanding of radiation transport in many different astrophysical objects. These opacity models are also relevant to HEDP experiments such as ignition scale experiments on NIF. We present a significantly expanded set of opacity data from the widely utilized Opacity Project, and make these higher resolution data publicly available through OSU's portal with [dropbox.com](https://www.dropbox.com). This expanded data set is used to assess how accurate the interpolation of opacity data in temperature-density-frequency dimensions must be in order to adequately model the properties of most stellar types. These efforts are the beginning of a larger project to improve the theoretical opacity models in light of experimental results at the Sandia Z-pinch showing that the measured opacity of Iron disagrees strongly with all current models.

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