

Opacity Studies for Solar and Stellar Models

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Nowadays, several detailed opacity codes such as OPAL (LLNL), LEDCOP (LANL), the Opacity Project (international academic collaboration) or OPAS (CEA) are able to supply stellar structure models with data describing plasmas of about twenty or more partially ionized chemical elements. The agreement between these codes can be very good concerning the frequency-integrated global quantities. On the other hand, noticeable differences can be observed concerning the pure spectral opacities.

In this talk, an overview of a typical spectral opacity computation will be made, illustrated by solar and stellar applications, and the essential role of laboratory experiments to check the quality of the computed data will be underlined.