An experimental concept to measure opacities under solar-relevant conditions

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Abstract

Recent solar abundance models (Asplund 2009) use a significantly lower abundance for C, N, O compared to models used roughly a decade ago. Although the models used now are much more sophisticated than before, a discrepancy still exists between the abundances in the models and the abundances determined by helioseismic inferences. Agreement can be obtained by ad hoc adjustments to the opacity of high-Z (Z > 2) elements ranging from a few percent in the solar interior to as much as 30

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