Impact of uncertainties in radiative/convective interfaces in Stellar Modelling (or stellar properties inferences)

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Abstract

One of the major uncertainties in stellar modelling and, hence in the inference of the stellar properties via comparison between models and empirical measurements, is the treatment of the interfaces between radiative and convective zones. Despite the tremendous improvement in our capability to compute stellar models in the various evolutionary phases and mass regime, we still lack of a sound and robust treatment of how to manage convection at the critical boundary between convective and radiative regions both in the interiors and in the outer convection zone. We briefly review the various approaches that have been suggested to treat the radiative/convective interfaces in stellar modelling and how they impact on the properties of the stellar models.

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