Contribution ID: **12** Type: **Short oral in replacement of poster**

Short_Oral_12: Bayesian inference applied to electron temperature data: computational performances and diagnostics integration.

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Bayesian inference proves to be a robust tool for the fitting of parametric models on experimental datasets. In the case of electron kinetics, it can help the identification of non-thermal components in electron population and their relation with plasma parameters and dynamics.
We present here a tool for electron distribution reconstruction based on MCMC (Monte Carlo Markov Chain) based Bayesian inference on Thomson Scattering data, discussing the computational performances of different algorithms and information metrics. Along, a possible integration between Soft X-ray spectroscopy and Thomson Scattering is presented, focusing on the parametric optimization of diagnostics spectral channels in different plasma regimes.

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