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Bayesian Approach to Galactic Cosmic Ray Propagation

Saturday 1 August 2015 15:30 (1 hour)

The fully Bayesian approach to the problem of deriving constraints for cosmic ray (CR) model parameters has several advantages. These are: (i) an efficient global scan of the whole parameter space allowing us to explore and take into account parameter correlations and degeneracies, (ii) a best-fit point and statistically well-defined errors on the parameters, (iii) the ability to include and marginalize over “nuisance” parameters (such as modulation potential and error rescaling parameters) making the analysis more robust. For this study, we use the latest version of the CR propagation code GALPROP together with the BAMBI code, the most efficient Bayesian analysis code available to date that combines MultiNest with Neural networks. The results of the analysis will be reported during the conference.

Collaboration

– not specified –

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