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Bayesian constraints on the initial stage using Trajectum

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In Bayesian analyses of heavy ion collisions up to now one usually uses the TRENTo prescription for the initial state, followed by a free streaming initial stage. In this work, we extend this picture in two ways. Firstly, we generalize the TRENTo formula so that it is able to describe binary scaling. This introduces a parameter which we subsequently use to determine whether binary scaling is compatible with experimental data. Secondly, we replace the weakly coupled free streaming initial stage by a description that interpolates between weak and strong coupling, where a parameter controls the interpolation. As with the first extension, we confront the model with data, to determine whether data favors a weakly or strongly coupled initial stage.

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