Synthetic spectra from 3D models of supernovae

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Supernova explosion modelers are generating new 3D models while polarization data indicate that some supernovae may not be spherically symmetric. In order to reconcile new models with real supernova explosions, synthetic spectra will be necessary. We outline our efforts to build a 3D radiative transfer code called Brute, built on the parameterized SYNOW direct analysis paradigm. Radiative transfer in Brute is performed by the Monte Carlo method, in particular based on the methods described by Lucy and Mazzali in various papers. The current purpose of our code is to investigate the likelihood of detecting interesting geometrical phenomena in supernovae. Future work will concentrate on enhancing the code to improve both resolution and the radiative transfer treatment.