A method to calculate the Galactic cosmic ray density with high spatial resolution, new developments

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The recent discovery of direct evidences for the acceleration of high energetic particles at the shell supernova remnant RXJ1713.7-3946 underlined the need to calculate the cosmic ray (CR) distribution in the Galaxy on a spatial grid fine enough to resolve the changes in the CR density due to these kind of objects. This is a progress report on the further development of a method to solve the time dependent CR propagation equation with high spatial resolution for arbitrary source distributions.