Chondrule formation process

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Chondrules seem to have formed through a universal process in an early phase of the solar system. Though many models have been proposed to date, there is no consensus on the chondrule formation process since all models still have a lot of problems to be clarified. Here, we focus on the shock wave heating model. We have found that at least following features of the model are in good agreement with observations and experiments: (1) maximum temperature, (2) cooling rate, (3) presence of stable liquid phase, (4) characteristic size, and (5) rotation frequency. It is not clear if other features of chondrules can be explained using the shock wave heating model. That should be revealed in the future.