

Impact experiment of chondrules and related material

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Amongst chondrules there are broken chondrules which were probably destroyed by mutual collisions of chondrules in the solar nebula. To understand the destruction mechanism of chondrules, the first, we have done the destruction experiments of glass spheres whose composition is homogeneous. Two experiments were carried out: an impact experiment and a slow compression experiment.

Secondly, we have carried out the impact experiment of chondrules taken from Allende meteorite. From the velocity at which chondrules are broken, it is estimated that the strong turbulence, by which all chondrules are broken when they collide each other, had continued for 5-16 years at most in the early solar nebula.