

R45c

GRAPESPH simulations of the globular cluster formation.

N.Nakasato, M.Mori, T.Tsujimoto, G.Mathews, K.Nomoto

We examine two globular cluster formation scenarios with SPH simulations, using GRAPE-3AF. First model is the spontaneous collapse, which is found to induce a disruption of the system. However, the system can survive when sufficiently high external pressure exists. Second model is the collision of the two proto-cluster clouds, which can form a bound stellar system due to efficient cooling and a burst of star formation.