
Lifecycle of dust: Supernova dust formation and destruction

Mikako Matsuura*¹

¹Cardiff University – United Kingdom

Abstract

There is an ongoing debate about whether supernovae act as factories or destroyers of dust. Because supernovae originate from high-mass stars, their evolutionary timescales are short; as short as a hundred years for stars with masses around 100 Msun. Consequently, their influence on dust production and destruction could have been tremendous, especially, in the early Universe. In this review, we summarise recent observational and theoretical studies on supernovae and supernova remnants, focusing on their roles in the formation, destruction, and overall evolution of cosmic dust over time.

*Speaker