

Dust from Supernovae and Evolved Stars

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Until the advent in the late 1990's of sensitive submillimetre detector arrays such as SCUBA, it was generally believed that the main sources of the interstellar dust found in galaxies were the dusty outflows from evolved stars such as AGB stars and M supergiants, although a dust contribution from supernovae had been suggested on theoretical grounds. However, the subsequent detection at submillimetre wavelengths of very large dust masses in some high redshift galaxies that were emitting less than a billion years after the Big Bang led to a more serious consideration of core-collapse supernovae (CCSNe) from massive stars as major dust contributors. But it was not until the 2009-2013 *Herschel* mission that direct observational evidence was obtained for the presence of large masses of newly formed dust ($>0.2 M_{\text{sun}}$) in several young CCSN remnants.

I will review current methods for estimating dust masses and dust injection rates into the ISM from both evolved stars and supernovae, as well as current estimates for the lifetimes in the ISM of dust particles from these sources.