Dust-to-metal ratio in galaxies

Akio K. Inoue¹

¹Osaka Sangyo University, Japan

The mass fraction of dust in metals (elements heavier than helium in the astronomy), so-called the dust-to-metal ratio (DTM), is now becoming a standard *observational* quantity in the field of the galactic and extragalactic astronomy. DTM in galaxies is determined by the formation, evolution, and destruction processes of dust in the interstellar medium of galaxies. Thus, it is very important quantity to understand these processes which are still largely uncertain. In this work, I try to compile DTM and related measurements for various galaxy populations from the local Universe to high redshift reported in the literature and to extract some trends from them. Then, I will discuss the physical and chemical implications from the trends.