

The life cycle of dust in the Magellanic Clouds

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The SAGE and HERITAGE projects have used the photometric capabilities of the Spitzer and Herschel space telescopes respectively to survey the entire Large and Small Magellanic Cloud. In addition, we performed an infrared spectroscopic survey (SAGE-Spec) of carefully selected targets in the LMC, using the IRS and MIPS SED instruments on board of Spitzer. Due to their vicinity and face-on view it is possible to study the individual components, such as stars and molecular clouds in the infrared. Not only are the Magellanic Clouds the nearest relatively large galaxies, they also have metallicities significantly lower than Solar (0.5 and 0.2 Solar for the LMC and SMC respectively), so that they can serve as analogs for low-metallicity galaxies commonly present earlier in the history of the Universe. Here I will report on findings from these surveys. I will discuss the sources of dust in the Large and Small Magellanic Cloud, and compare them to equivalent objects in the Milky Way.