

## **Fitting the full UV-IR SED of Nearby Galaxies with DirtyGrid**

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We fit the full ultraviolet (UV) to infrared (IR) spectral energy distributions (SEDs) of nearby galaxies in the SINGS sample using the DirtyGrid – a major computational effort to generate the full range of SEDs allowed by the underlying physical parameters, using DIRTY and PEGASE. DIRTY (Gordon et al. 2001; Misselt et al. 2001) is a 3D Monte Carlo radiative transfer model that computes dust scattering, absorption and emission (including non-equilibrium emission) self consistently, and PEGASE (Fioc and Rocca-Volmerange 1997) is a stellar evolutionary synthesis model that provides the stellar energy input to DIRTY. The SINGS sample (Kennicutt et al. 2003) is a representative set of all types of galaxies in the local universe. We assemble the observed SEDs with GALEX, ground based optical, and Spitzer data and study them using a Bayesian approach.