

S³AGA: The Spitzer/IRS and SDSS Spectral Atlas of Galaxies and AGNs

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S³AGA (Spitzer/IRS and SDSS Spectral Atlas of Galaxies and AGN) is a catalog of galaxies with uniform mid-IR and optical spectra. We build the catalog by cross-matching the CASSIS (Cornell Atlas of Spitzer/IRS Sources, Leboutteiller et al. 2011) objects with the Data Release 7 (DR7) spectral sample of the SDSS. The current version of S³AGA includes 598 objects. They span a redshift range of $0.001 < z < 0.36$, with a median redshift at 0.07. Based on the optical classification scheme, S³AGA contains 156 type I AGN, 94 type II AGN, 234 star-forming (SF) galaxies, 103 AGN-SF composites, and 9 quiescent galaxies. We performed series of systematic measurements on the optical spectral features and mid-IR spectral features, in particular, the 10 μ m silicate strengths and various PAH features. We compare the measurements done by different methods and discuss their systematic errors. Finally, we show various optical and mid-IR characters of the S³AGA sample, and layout different scientific studies we would like to pursue with S³AGA.