Near-IR properties of *Spitzer* sources

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We present an analysis of the near-IR properties of galaxies and quasars detected in the mid-IR by the Spitzer Space Telescope. Using optical photometry from the Wide Field Survey and near-IR fluxes from the First Data Release of the UKIDSS (Dye *et al.* 2006) survey we carry out a preliminary characterization of the surface density of different samples of galaxies and their clustering properties.

We also show how the near-IR photometry and morphology information allows an even better selection of AGNs than the mid-IR alone or optical alone. The combination of all the multiwavelenth photometry results in a powerful tool to perform AGN selection and study the fraction of obscured AGNs missing from the optical surveys.

We describe how Astrogrid the UK Virtual Observatory (<http://www.astrogrid.org>) has been used to perform the data discovery, query the relevant catalogues and perform their cross match and different sample selections. Using the different tools available we carry out the determination of photometric redshifts and clustering distribution. Individual research of outlier sources is significantly easy within the system.

Using the Data Set Access (DSA) component, AstroGrid provides access to the public *Spitzer*-SWIRE (Lonsdale *et al.* 2003) catalogues, the SDSS DR5 (Adelman-McCarthy *et al.* 2006) catalogues as well as authenticated access to the UKIDSS catalogues. All of them are queried using Astronomical Data Query Language (ADQL; based on standard SQL). Astrogrid provides tools, integrated within the system, to perform cross match of the different catalogues and produce interactive plots. Outliers are then studied using AstroScope, a powerful tool for finding images, catalogues and spectra over a region of sky.

References

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