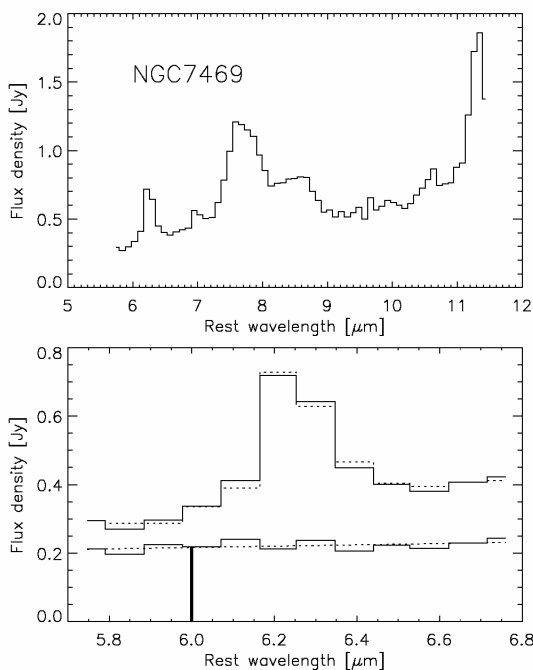
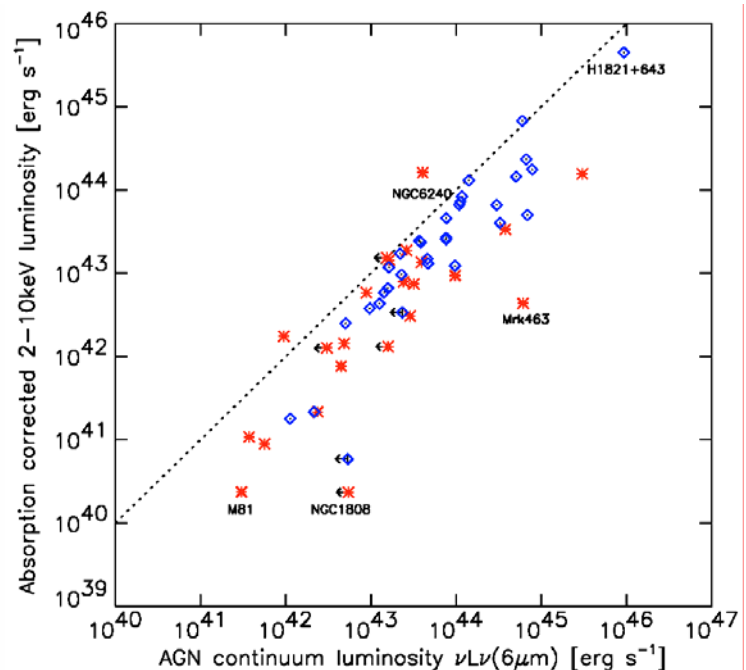


Comparing the mid-infrared continuum of AGN to the absorption corrected X-ray emission, we do not see the strongly anisotropic mid-infrared emission predicted by ‘torus’ models.

Tests of this prediction have been hindered by the often large host contamination of IRAS data and by the scarcity of high resolution mid-IR imaging. As a new approach, we have used spectral decomposition to separate the 6 μ m AGN continuum from the host emission in the ISO low resolution spectra of 71 active galaxies and compare the results to observed and intrinsic 2-10keV hard X-ray fluxes. We find a correlation between mid-infrared luminosity and absorption corrected hard X-ray luminosity, but the scatter is significantly larger than previously found with smaller statistics. Main contributors are likely variations in the dust geometry, and AGN variability in combination with non-simultaneous observations. There is no significant difference between Type 1 and Type 2 objects in the average ratio of mid-infrared and hard X-ray emission. This is inconsistent with the most simple version of a unified scheme in which an optically and geometrically thick torus dominates the mid-infrared AGN continuum. Most probably, significant non-torus contributions to the AGN mid-IR continuum, for example from dust inside the Narrow Line Region, are masking the expected difference between the two types of AGN. Alternatively, radial density profile modifications to the clumpy torus models of Nenkova et al. (2002) may suggest that the anisotropy of the torus emission proper is smaller than commonly assumed.



Spectral decomposition used to separate the AGN mid-infrared continuum from the host galaxy’s aromatic emission features, shown here as an example for the Seyfert 1 galaxy NGC 7469 with its well-known circumnuclear starburst. We have applied this method to many AGN spectra in the ISO database.



Comparison of absorption corrected hard X-ray luminosity and mid-infrared AGN continuum luminosity for a sample of Type 1 (blue diamonds) and Type 2 (red asterisks) AGN. The two quantities correlate well over a large range of luminosities, and there is no evidence for a systematic difference in their ratio between Type 1 and Type 2 objects. The dotted line indicates slope 1, it is not a fit.

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