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Titulo: Selecting Seyfert galaxies with nuclear AGN-dominated far-infrared emission

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Resumen:

We present far-infrared (FIR) 70 - 500 microns imaging observations obtained with Herschel/PACS and SPIRE of 33 nearby (median distance of 30 Mpc) Seyfert galaxies from the Revised Shapley-Ames (RSA) catalogue. We obtain the FIR nuclear (r = 1 kpcand r = 2 kpc) and integrated spectral energy distributions (SEDs). We estimate the unresolved nuclear emission at 70 microns and we fit the nuclear and integrated FIR SEDs with a grey body model. We find that the integrated FIR emission of the RSA Seyferts in our sample is dominated by emission from the host galaxy, with dust properties similar to those of normal galaxies (non AGN). We use four criteria to select galaxies whose nuclear 70 microns emission is dominated by the AGN: (1) elevated 70/160 microns flux ratios, (2) spatially resolved, high dust temperature gradient, (3) 70 microns excess emission with respect to the fit of the FIR SEDs with a grey body, and (4) excess of nuclear SFR obtained from 70 m icrons over SFR from mid-infrared indicators. 16 galaxies (48 per cent of the initial sample) satisfy at least one of these conditions, whereas 10 satisfy half or more. After careful examination of these, we select six bona fide candidates (18 per cent of the initial sample) and estimate that 2 40 -70 per cent of their nuclear (r = 1 - 2 kpc) 70 microns emission is contributed by dust heated by the AGN.