Dust in galactic nuclei

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The central regions of galaxies are complex and harsh environments, where obscuration by dust often makes it difficult to gain a clear picture of the different components, structures and processes in the nuclear regions. In turn, the dust particles themselves are affected through irradiation and shocks, and we may expect the properties of dust near active galactic nuclei to be modified , for example by selective destruction of small grains or by annealing. The weak silicate emission features in many active galactic nuclei may provide evidence for destruction or depletion of the smallest dust grains while modifications to PAH emission spectra may also suggest a larger mean grain size in these regions. I will present high spatial resolution results obtained with large ground-based telescopes that indicate that much of the dust towards heavily obscured nuclei is in the galaxy ISM and has similar properties to that in the Milky Way and investigate the properties of dust in the central regions of galaxies.