



Far-infrared flux densities of main belt asteroids from serendipitous Herschel/PACS observations

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The Herschel Space Observatory had two imaging instruments, working in the far-infrared and submillimetre regimes: the PACS cameras at 70/100 and 160 μm and the SPIRE photometers at 250, 350 and 500 μm . Small solar system bodies, especially main belt asteroids were serendipitously present in the field of view mainly in large scan maps. We identified these objects with the original aim to mark the affected sources in the Herschel PACS and SPIRE Point Source Catalogues. In our present study we extracted flux densities in the PACS bands for asteroids above the detection limit, either using existing standard data products from the Herschel Science Archive, or re-reducing the PACS maps in the co-moving frame of the target. We obtained ~ 600 new flux density values for 270 asteroids, a significant increase in the number of Herschel asteroid observations. These new flux densities will be included in the Small Bodies: Near and Far (SBNF) Infrared Database (Szakáts et al., 2020). The fluxes obtained from Herschel are excellent for radiometric studies to get the object's size, albedo and maybe also thermal properties, when combined with other measurements (Alí-Lagoa et al., 2020).