

Optimized Herschel/PACS photometer observing and data reduction strategies for moving solar system targets

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Received: 30 June 2013 / Accepted: 16 September 2013
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Abstract The “TNOs are Cool!: A survey of the trans-Neptunian region” is a Herschel Open Time Key Program that aims to characterize planetary bodies at the outskirts of the Solar System using PACS and SPIRE data, mostly taken as scan-maps. In this paper we summarize our PACS data reduction scheme that uses a modified version of the standard pipeline for basic data reduction, optimized for faint, moving targets. Due to the low flux density of our targets the observations are confusion noise limited or at least often affected by bright nearby background sources at 100 and 160 μm . To overcome these problems we developed techniques to characterize and eliminate the background at the positions of our targets and a background matching technique to compensate for pointing errors. We derive a variety of maps as science data products that are used depending on the source flux and background

Herschel is an ESA space observatory with science instruments provided by European-led Principal Investigator consortia and with important participation from NASA.

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