PHT-S measurements of the Zodiacal Light

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Abstract

At wavelengths between 3 micron and 10 micron the brightness of the Zodiacal Light increases by about two order of magnitudes. We performed 9 long (1024-4096 sec) PHT-S measurements towards different ecliptic positions, in order to (1) determine the shape of the spectrum in the 3-11.6 micron region; (2) check the variation of the shape at different sky positions; and (3) search for possible spectral features. The results are compared with simultaneous PHT-P1 photometry, the ISOCAM-CVF spectrum of the Zodiacal Light, and COBE/DIRBE photometry.

Since the Zodiacal Light is a very weak source for PHT-S, the measurements also teach us about the behaviour of the spectrometer close to the level of dark current. We summarize our understanding of the drift behaviour of the detectors, accurate dark current subtraction, and calibration.