

# Combined Inversion of Optical and Thermal Data of Asteroids

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A method of simultaneous inversion of optical and thermal infrared data that allows the size of an asteroid to be derived along with its shape and spin state was published by Durech et al. (2017, A&A 604, A27). The method optimizes all relevant parameters (shape and its size, spin state, light-scattering properties, thermal inertia, surface roughness) by gradient-based optimization. The thermal emission is computed by solving the 1-D heat diffusion equation. Calibrated optical photometry and thermal fluxes at different wavelengths are needed as input data. We will present recent examples of application of this method to selected asteroids for which we derived their thermophysical parameters with realistic uncertainties.