ORIGINAL ARTICLE

VST OmegaCAM difference image analysis

Astro-WISE implementation

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Abstract We present a modified version of the difference image analysis software developed by the OGLE collaboration (DIAPL) and its implementation within AstroWISE environment. Python interface and parallel execution are described. Examples of graphical output on simulated data set are presented. The tool will be used in VST surveys for photometric variability search.

Keywords Difference image · Light curve · Variability · VST

1 Introduction

Image subtraction is a method by which one image is point spread function (PSF) matched against another one by using a convolution kernel, so that they can be differenced to detect and measure light curve of photometrically variable objects.

We adopt the software DIAPL written by Woźniak [4]. This package is based on the "optimal point spread function (PSF) matching algorithm" with a space varying kernel [1, 2] and was extensively used by different groups. In

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