

Photometric Monitoring of Active Galactic Nuclei using the Thai Robotic Telescope in Chile

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We report the ongoing variability monitoring program for a well-defined, flux-limited sample of active galactic nuclei (with $B_j < 18$ mag) through a multi-band optical imaging using Thailand's 0.6-m remotely-operated telescope at Cerro Tololo Inter-American Observatory, Chile. Our goal is to search for month-time scales outbursts to identify potential targets for spectroscopic follow-up to estimate the broad-line region size through reverberation mapping technique. We have developed a Python pipeline based on the publicly available SWARP or SExtractor to efficiently extract the photometry and produce light-curves in the B,V, and R bands. We typically achieve a consistent photometric uncertainty of < 0.05 mag for targets at 14-15 mag under optimal conditions at an average cadence of two days or better for a number of objects during a 2014 - 2015. Here, we demonstrate the use of our machinery to monitor PG1302-102, which has recently been found to be the first candidate of a binary supermassive blackhole at sub-kpc distance, at accuracy approaching 0.01mag over 14 months.

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