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# Automated Photometry and KBO Occultation Event Detection in the TAOS Project

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The Taiwan-America Occultation Survey (TAOS), now with three telescopes fullyoperational, has been collecting scientific data from the beginning of 2005. We report here the data analysis and occultation event detection algorithmsdeveloped for the project. A special photometry pipeline, called AdaptiveAperture Photometry, devised to deal with crowded star fields, contaminationby image streaks and image motion, is capable of processing thousands of lightcurves within the sampling rate of 5 Hz. A rank statistic is used todetect any possible occultation event. So far nearly a billion photometricmeasurements have been taken, and no occultation events are detected using thecurrent analysis scheme. In 2006, the fourth telescope will be in servicewhich will vastly increase the detection reliability.