#0014

### Bayesian Transit Detection for YETI and Kepler

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To search for signatures of transiting planets in light curves of thousands of stars automatically, a new algorithm was developed, that is applicable to ground and space based observations. A Bayesian analysis extracts a probability at each position of a stars lightcurve and regarding to these probabilities a change in brightness can happen at corresponding times. Probabilities are expected to be high near the beginning and the end of a transit phase. Positions with a high probability are fitted with a theoretical transit model (Mandel and Agol 2002) and a simple F-Test statistic is done to prove signicance. Lightcurves with detected transit signals are further tested for periodicity, which is essential to do follow up observations. Several tests on simulated and real data show, that this method is very sensitive especially for long single transits with durations of more than 10h (earth like orbit around G2V star). Our poster shows first succesful application of our processing pipeline to ground based and space observations by Yeti and Kepler.