The Catalina Real-Time Transient Survey (CRTS)

Andrew Drake
California Institute of Technology

Abstract

The Catalina Real-time Transient Survey (CRTS) is a completely open, VOEvent-enabled, optical transient survey that provides a model for the large synoptic surveys of the future. CRTS has so far discovered more than 7,000 highly variable and transient sources including 2,000 supernovae and 1,000 catalysmic variables. I will highlight some of the rare and extreme types optical transients discovered by CRTS, as well as how increases in coverage and cadence of our second generation project, CRTS-II, will aid the discovery of new types of transient objects and phenomena. Lastly, I will discuss on-going efforts to characterize the variable sky using nine years of Catalina data for 500 million sources.