

## Exotic Supernovae and Tidal Disruption Events from the Pan-STARRS1 Survey

The Pan-STARRS1 (PS1) project was a five-band optical survey of the northern sky that recently finished operations after taking data for more than four years.

One of the primary scientific drivers was to perform a deep time-domain survey of ten 7 sq. deg. fields. Our group mined the dataset to search for transient and variable sources, leading to the discovery of more than 5000 transients (mostly supernovae). I will give an overview of the survey along with some of our highlights from this search, with an emphasis on the more unusual transients. The PS1 observation strategy was particularly effective for finding numerous examples of superluminous supernovae at a median redshift of about  $z=1$ .

I will also present the discovery of a few optical transients associated with the tidal disruptions of stars by supermassive black holes. These events exhibit many of the expected signatures of tidal disruption, but major theoretical uncertainties remain in the interpretation of the data.