

Letter to Participants

Re: Time-Domain Astronomy with Small Aperture Telescopes in the Rubin Era Workshop

We approach noon for time-domain astronomy (TDA): soon the Rubin Observatory will increase the rate of observed transient events by more than an order of magnitude. While many new efforts will be focused on Rubin/LSST, whatever cadence the survey ultimately adopts will be to the detriment of some TDA science (no survey can ever be truly synoptic). In the run-up to LSST the TDA community has developed tons of (highly successful!) infrastructure on smaller aperture telescopes over the past two decades. This raises an interesting question: what is the role of these small aperture telescopes once Rubin starts? Rubin is expensive, so an argument could be made for phasing out such work. Or these systems could be re-deployed to work in concert with Rubin, or redirected to produce orthogonal time-domain observations.

The aim of this workshop is to bring together TDA researchers to discuss potential strategies and synergies for different small aperture facilities once Rubin begins routine operation. The meeting will be primarily focused on discussion, with the aim of developing new plans (complementing and competing with Rubin) using small telescopes.

In advance of the in-person meeting we are soliciting written submissions from participants to facilitate and focus our discussions. We have two prompts (limit 2 pages, including figures and references):

- (1) If you are currently leading/working on a facility that will run concurrently with Rubin (~during and after 2024; e.g., ARGUS, WLAST, LS4, DESI), please provide a facility summary. The summary should discuss how the project complements and differs from Rubin.
- (2) Alternatively, please draft a statement describing how you would use existing facilities (e.g., ZTF, ATLAS, Lick 3-m, CTIO-4m, etc; ignore limitations of funding or access to the community) to perform complementary or orthogonal science to Rubin. *Do not be shy!* Imagine you can fully control/redesign ZTF and Lick, or any other combination of facilities.

Arguments and ideas in the written submissions will be discussed during the in-person meeting, our aim is to develop a white paper summarizing the results of our discussion.

Sincerely,

Adam Miller & Shri Kulkarni