

ZTF Team Meeting, “Pasadena”
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ZTF Phase I survey summary and Phase II plans

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Phase I – an unprecedented survey in unprecedented times



Mar 17, 2018 – Sep 30, 2020:

- 380,000 exposures
- 300 million alerts
- 3 Data Releases: 5.6B sources (gri)
- > 90 publications – 1800 citations, 5200 reads
- Almost 5000 SNe, > 3000 Ia, > 1000 II; > 2000 in TNS
- 25 TDE, 10 CLAGN, Neutrino from TDE
- 19 ultracompact double degenerate binaries (4 / 8 < 15 min)
- Asteroids (10000s MB, 180 NEAs), comets (16 outbursts, 3 + 1 detected)
- Atiras, Vatira, but no Planet 9
- No NS-NS or BH-NS EM counterpart but a BH-BH?

and so much more...



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Current operational status

Reported in March:

- The Palomar 200" is suspended until further notice
- Palomar staff are now self-isolating and avoiding shared workspaces
- The P48 and P60 can be operated remotely from laptops on the mountain
- The IPAC and UW processing and distribution pipelines remain operational for the time being

Caveats:

- There is some engineering/day crew support on the mountain in case minor problems are encountered but if we have an issue such as the recent filter exchanger or shutter problem, requiring an engineer from campus to go up, then we shall have cease P48 or P60 operations until the COVID-19 situation improves

ZTF kept operating with despite engineering issues, fires (riots and earthquakes)

- Oct 12, 2020: All Palomar Observatory staff officially back at work



Phase II: Dec 1, 2020 – Sep 30, 2023 (public)

Funded by the NSF MSIP program to \$5M:

- a 2-night survey of the Northern sky in g and r (using 50% of available time)
- >1200 spectral classifications of SNe per year with SEDM and daily uploading to TNS
- continued public alerts
- forced photometry service and in alerts
- a two-month data release cycle
- upgraded IPAC infrastructure including light curve database
- deeper references
- crowded field difference image photometry
- mainstreaming ML efforts
- Summer School (Minnesota, Coughlin)
- Zooniverse
- a new web tool/mobile app for the general public to explore our dynamic universe



Phase II: Oct 1, 2020 – Sep 30, 2023 (partnership)

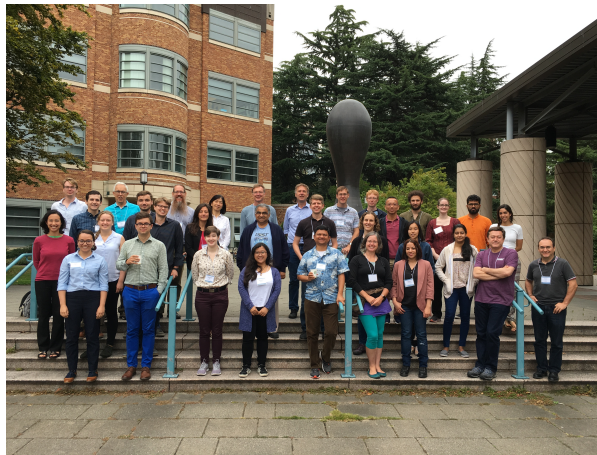
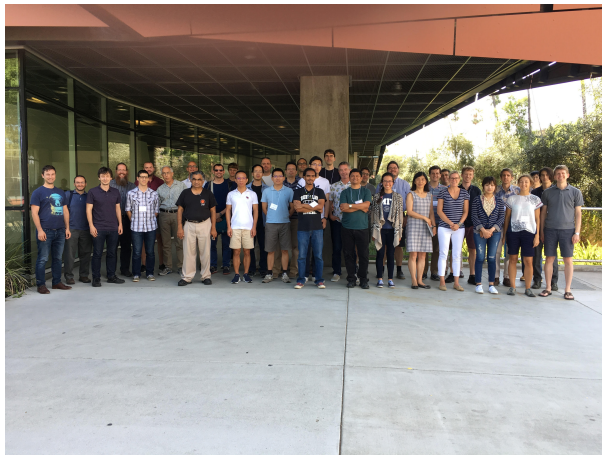
- New partnership structure:
 - University of Washington not continuing (Eric Bellm remains an Associate)
 - Weizmann Institute transitions from major to minor partner
 - Trinity College Dublin transitions from Associate to minor partner
 - Lawrence Livermore National Laboratory and IN2P3 are two new major partners
- Use of partnership time determined by ZTF Board (no 6 monthly SSC TAC)
- All user lists are being regenerated, collaborator lists reviewed, WG leads reviewed (TDE/AGN), SSC, Pub Board
- New M31/microlensing WG



Ongoing programs

- Shadowing: TESS, SRG, LSST
- ZUDS (coaddition)
- New imaging modes
- ZTF Source Classification Project (SCOPE)
- Calibration
- Fritz

A big thank you to...



et al.

