

Newsletter #18, 23rd of February 2018
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Last news from the front (Engineering and Data Quality status):

I-band filter was installed in the frame, first observations are planned soon
Some starflat data was obtained last week

News from AMPEL

The AMPEL project is now set up to receive the UW alert stream. We have implemented a few sample filters that can be used as starting points for further developments by users. More information can be found at: http://noir.caltech.edu/twiki_ptf/bin/view/ZTF/AmpelCommissioning

News from working groups

Machine Learning group and zooniverse: "The Pan-STARRS data transfer for SG separation is complete and is being ingested now. It should be included in classifications by the middle of next week replacing the current quantum [0,0.5,1] classifications. Traditional (RF-based) RB model will be updated soon. Thanks for the bogus, and real, classifications so far, as well as pointing out weirder pathologies. We are also starting to work on a Deep Learning based model and exploring better resolution cutouts. Our latest meeting was at 9 AM PT on Wednesday. Next 3 meetings are: Wed, Feb 28 (9 AM PT); Thu, Mar 8 (2 PM PT); Wed, Mar 14 (9 AM PT)."

Physics of Supernovae and Relativistic Explosions: "The Supernovae and Relativistic Explosions working group is hoping the weather will start to cooperate on Mt. Palomar so we will be able to finally test the pipelines and follow-up in real-time! Meanwhile we are following up a few interesting targets from the nights of r-band data, and discussing how to best meet the challenges identified so far".

Cosmology: "The SNIa/cosmology group has started looking at which lightcurve fit data we should use to prioritize spectroscopic follow-up."

BH&AGNs: "The ZTFbh SWG is actively working in several areas:

- testing the GROWTH Marshal filter for our "nuclear transients" science program
- working to create and test filters for our AMPEL channels
- improving SEDM's SNID classification of AGN

We are having lots of fun scanning in the GROWTH Marshal, and hope to converge on our "AMPEL → GROWTH Marshal → follow-up" strategy over the next couple weeks as science validation continues.

Please don't forget to include our ZTFbh working group on any emails about the GROWTH Marshal, AMPEL, or SEDM.

We now have a ZTFbh slack channel, and use it to discuss transients of interest...and now that ZTF data is flowing in, our telecons are weekly.

Thanks again to the GROWTH Marshal team for creating and supporting such a flexible and valuable tool for transient filtering, follow-up, and classification."

Solar system: "Between December 2 and December 8, 2017, the Centaur Echeclus underwent an outburst while at 7.3 AU from the Sun, producing a dust coma observed by the ZTF. Assuming a dust ejection velocity

near 50m/s for ~1 micron-sized grains, we find a dust production rate ~300 kg/s (cf. Bauer et al. 2008). The outburst lasted roughly 30 days.”

ZTF in the press!

ZTF was mentioned in Nature, as the future route to discovering shock breakout!

<https://www.nature.com/articles/d41586-018-02331-4>

Reminders:

- The registration for our ZTF team meeting (Caltech, March 19-21, 2018) is now open! Please use the link below: <https://goo.gl/forms/TCYa5rhFFdxv07rk2>
- Archive GUI now ready! The interactive image search, filtering and visualization tool is now ready (see previous newsletters).
- The ZTF Twitter account is now active! <https://twitter.com/ztfsurvey> Re-tweet @ztfsurvey!
- To use the url shortener (e.g. during telecons, talks, in emails), navigate to <http://zwicky.tf/shorten> (username: ztf password:16chips) and type in the URL you want shortened.
- The Wiki page is active! Check it out at <http://zwicky.tf/wiki>.
- To request access to the wiki page: please email us at ZTF.communication coordinators@gmail.com

“For the radiance of eternity is not white: It’s infrared” (Sir Arthur Clarke)

Have a great and productive week!
Thomas and Maayane