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Newsletter #44, August 24th 2018

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If the newsletter does not look good in your email, check the pdf here!

News from the front (engineering and DQA)

This week the hardware team focussed on reducing filter exchange time. The first phase was to revise the path between storage closet and instrument eliminating a stop along the way (originally installed for diagnostic purposes), and then to speed up these moves. The actual (un)docking sequence remains unchanged. This reduced exchange time by about 25%.

Exchange Filter	Test 1012 2018-03-09	Test 1019 2018-08-21	change
FILTER_ZTF_I	83.9 sec	65.8 sec	-18.1 sec
FILTER_ZTF_G	82.1 sec	65.8 sec	-16.3 sec
FILTER_ZTF_R	80.5 sec	64.1 sec	-16.4 sec

The next phase (still in progress) is to install new “secondary latch mechanisms”. These are the two passive latches that would catch the filter should an earthquake or other mishap shake the magnetic latches fee. The new latches have impressively engagement friction thus smooth operation, and are beefed up so that a singlelatch can protect the filter form falling in the event that the other is mysteriously not engaged. We have no reason to think this scenario is possible but have tested that the filter is protected anyway. The goal here is to feel safe enough that it will no longer be deemed necessary to do exchanges with telescope horizontal. In intermediate position, say 30 deg from zenith (so that filter is still not above primary mirror) will provide a much larger time saving on our filter exchanges.

Analysis of astrometric and DIQ errors continues.

IMPORTANT: We (still) need your help for the ZTF FAQs page! (and would love to remove this item from the newsletter)

During several weeks, we have listed the questions that people across the collaboration would like to have in the FAQs page. Now it is time to add answers. Please help us fill the voids (and elaborate on the answers already there).

News from working groups

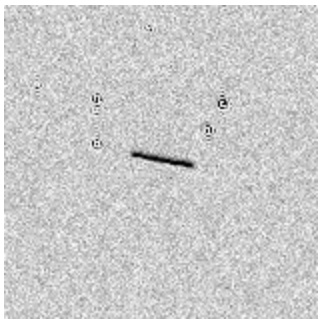
SNe and relativistic explosions: “The Supernova and Relativistic Explosions working group has had an exciting week! We found another infant supernova and were able to trigger rapid follow-up (ZTF18abokyfk; see ATel #11978 for details). Also noteworthy is the classification of a young SLSN-I (ZTF18abmasep; ATel forthcoming), which could still rise significantly before reaching maximum light.”

AGNs and TDEs: “The ZTFbh SWG is busy finalizing our paper on our TDE NedStark, and will be submitting to the publication board shortly! We are also actively scanning and following up TDE candidates with SEDM, and analyzing our Swift, XMM, and HST follow-up observations of our confirmed TDEs. ”

Cosmology: "We have started planning a deeper spectroscopic campaign for a few weeks in October, in order to type SNe Ia beyond the depth of the Bright Transient SEDm program. The goals will be to verify the ZTF detection efficiency closer to the mag threshold and study what spectroscopic resources are necessary for a larger/deeper program. We would welcome other SWGs to join."

Galactic/M31: “We have a running M31 filter which produces many candidates, mostly long-period variables like Cepheids. We have also started to work on a microlensing filter. Last week we finished the summer high-cadence Galactic Plane observations. The run was very successful and we are now waiting for matchfiles to start digging through the data”

Solar System: “ZTF seems to have hit a "panic" button last weekend, with a dozen of news NEO detections, including one object that passed the Earth by only 0.23 lunar distance on Tuesday (one of the closest approaches this year). Shout-out to David Kaplan who first identified this and just joined us from the galactic group a few days ago. For our astrophysicist friends to get a sense, this object traveled ~100 degrees in just 3 hours upon its closest approach! A few others of these turn out to be undocumented artificial objects, including one ~0.5-m wide object. Follow-up observation is ongoing.”



When one survey telescopes discovers the other survey telescope. Last night ZTF ‘discovered’ TESS as part of the NEO search for streaking asteroids

Reminder: ZTF special session at the EWASS 2019 (deadline in ~2 weeks)?

At the ZTF meeting, a small group of people (including Cristina Barbarino, Dan Perley, Jakob Nordin, Mickael Rigault, Ragnhild Lunnan and others) discussed applying for a special session at the next European Week of Astronomy and Space Science in Lyon (24 – 28 June 2019). More information about the EWASS 2019 can be found at http://eas.unige.ch/EWASS2019/index.jsp.

The date of the assembly would fall nicely after the MSIP DR1.
We would like to apply for a special session that would give us up to 3 blocks of 1.5 hours. The goals of the special session would be:

- overview about ZTF
- different broker systems
- results from the Year-1 data, with a particular emphasis on MSIP data (not only from us but from the entire community)
- results from ZTF non-transient science groups. For instance, the Galactic-plane group discovered binary systems that would be prime targets for LISA.
- how other transient surveys tuned their strategies to maximise the synergies with ZTF
- how can ZTF be used to gear up for LSST (e.g., using ZTF light curves for photometric typing of SNe)

The deadline for the application is 9 September.

Reminders:

- Public Alerts:There is a link to the alerts archive on the website!
- Please help us keeping track of all the available softwares! A preliminary list is available on the twiki. Let us know if you are building a software which you think could benefit (or be relevant to) a large portion of the collaboration.
- **ZTF general slack channel**: Please join through this link!
- If you want to get access to the **ZTF data** via the IRSA interface, please request data access to the communication coordinators: ztf.communication.coordinators@gmail.com
-**Archive GUI** now ready! The interactive image search, filtering and visualization tool is now ready ().
- 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, please email us at ZTF.communication.coordinators@gmail.com

"The two best days of school, the first and the last" (Anonymous)

Have a great and productive week!
Thomas and Maayane

AMPEL coding session, including Steve Schulze (visiting from Weizmann), Matteo Giomi and Jakob van Santen