

Newsletter #34, June 13th 2018
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News from the GROWTH marshal:

If you are using the GROWTH marshal, a few notes:

1. We are adding annotations to the packets to help improve your filter. Specifically, we added galactic co-ordinates, which you can write into your filter as:

observation["candidate"]["gal_lat"]

Observation["candidate"]["gal_lon"].

(We also plan to add proximity to bright star etc. and will keep you updated when we have tested those)

2. Scanning page now allows UTC sort with HH:MM:DD. Default is the last hour of the night for those scanning during the night.

3. Scanning page now only plots positive photometry and limits in the light curves

4. Annotations are suppressed by default to keep the size of each candidate fixed. You can click on your program to expand. Click on the annotation to sort by it as usual.

5. If you are seeing too many bright stars passing your filter since the new RB implementation, consider raising the RB threshold to $RB > 0.3$.

In preparation of the collaboration meeting, send us the questions you would like to discuss:

To help the organisers manage the discussion on the most important topics, please let us know if you have the answer to/have been investigating already one of the above questions, and if there are other important subjects you find particularly important to discuss:

1. What is the RB distribution of transients saved by scanners. Where can we put the Cut?
2. How good is the Photometry? Comparisons to other pipelines or other surveys, for different magnitudes slots.
3. How complete are we? Do we find all/some/most of the SNe reported in ATELS?

Reminder: Public Alerts flow now!:

There is a [link](#) to the alerts archive on the [website](#)!

There is also an [ATel](#) about the public alert stream.

The public alert stream was also advertised on Twitter!

Reminder: ZTF monitoring, more dates have been added, please sign up again:

More dates have been added for monitoring the telescope. It is an important task with a high ratio of (learning)/(time spent) and it turned out to be very helpful in the last months!

Please sign up using this [Doodle](#)

And see the [instruction](#)

For further discussions, there is now a Slack channel: #monitoring-ztf

Reminder: Please sign up to the next collaboration meeting:

We would like all of you who are planning to attend the meeting in August to sign up ASAP. Directions to near-by hotels have now been added to the registration page by the organisers:

<http://agenda.albanova.se/confRegistrantsDisplay.py/list?confid=6506>

News from working groups

Machine learning: “We have automated the generation of new RB models to the extent where weekly builds are possible. Whether those builds are deployed depends upon whether performance is demonstrably improved and the pipeline team has the resources to deploy that week. For example, a new version was built last week, but not deployed as performance between that version and the current deployment did not change significantly. The current deployed RB version is t8_f5_c3, which was trained on data through May 7, 2018, and deployed on May 29, 2018.

In the coming weeks, we will focus on retrieving and vetting real examples from alert packet light curves. This should increase the number of real objects significantly, though we must assess the level of contamination in this set. Two other planned tasks are investigations of how to improve RB scoring of bright star artifacts as well as objects in the galactic plane. Thank you to those who have provided example artifacts, especially Ragnhild Lunnan who provided many examples with RB scores over 0.3. If there are other types of artifacts that are frequently encountered, please send us those examples (please include both the candid as well as the ZTF object name).

Finally, we are also working on a public zooniverse campaign for MSIP data. Ashish Mahabal will provide more details when he’s back from vacation next week.”

SN Ia cosmology “On Monday we had our first night using SNIFS to follow up on some of the SNe found through the public survey. Unfortunately we could only get a few usable spectra due to bad weather. Furthermore there is now a science program for gravitationally lensed SNe on the marshal.”

AGNs and TDEs: “The ZTFbh SWG is busy scanning 40-60 nuclear transients each night. We find that the RB score is working better. We are trying to be wary of young, rising SNe Ia that masquerade as blue, nuclear transients. We have automated rankings for TDE and CLAGN candidates for spectroscopic follow-up. We have two T0 filters operating in AMPEL, and are looking forward to the AMPEL team to get the output of those channels integrated into Slack and the Growth Marshal. ”

Multimessenger: “We received the first IceCube neutrino ToO in form of a doublet of 1TeV neutrinos separated by 0.3 sec in time and 3 deg in space. The alert was shared as a private GCN through the MoU between IceCube and ZTF. We observed for two subsequent nights with two 300 sec exposures in each night. Candidates were filtered in AMPEL and pushed into the marshal. No convincing candidate was found.”

SNe and relativistic explosions: “The Supernovae and Relativistic Explosions working group are busy planning our first round of ZTF early science papers, mainly focusing on interesting individual objects and small samples. We continue to improve our filters and search for interesting transients -- this week, we had a same-night Gemini trigger on a young supernova, ZTF18aazixbw. (Alas, it turned out to be SN Ia rather than a core-collapse with flash spectroscopy features, but it was a useful test for our machinery.)”

Galactic/M31: “We continue the evaluation of the PSF photometry on the science images. So far we find very good lightcurve quality. We will continue our evaluation also at denser/lower Galactic latitudes fields.”

Reminders:

- 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 Secret of your future is hidden in your daily routine” (Mile Murdock)

Have a great and productive week!
Thomas and Maayane