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Newsletter #82, May 20th 2019

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“How do I access the forced-photometry?”

Several of you have recently sent us this question. Make sure you have an account on IRSA and have access to the collaboration data. If you have neither the forced photometry tool will not work. To make it work, please create an IRSA account and send us your email address which you used for registration. We will forward your request to access the collaboration data which will then allow you to use the forced-photometry tool.

News from AMPEL

It has now been 6 months of submission of good ZTF candidates to the TNS! This warrants some kind of note. Below is a short summary about AMPEL status we received from the AMPEL team.

“The automatic submission of candidate extragalactic transients from the ZTF public extragalactic survey to the TNS has now been active for 6 months. Between 5 and 30 transients are submitted on an average night. The goal of this project has been to provide the community immediate access to high quality supernovae (and galaxy core variables), without requiring knowledge of the more technical aspects of the ZTF alert stream.

Notes regarding the submission:

- Two ZTF "senders" are currently active: ZTF_AMPEL_NEW submits only transients less than five days old at the time of submission. This is thus suitable for observers looking for e.g. young supernovae, but will by design omit slowly rising objects and be biased against regions with previous variability (e.g. central regions of galaxies). The ZTF_AMPEL_COMPLETE sender uses more relaxed age criteria and will thus encompass also such candidates.

- We work hard at keeping the contamination from variable stars low. This is currently estimated at below 5% for transients brighter than 19.5 mag. We thus use this as an upper mag limit for all submissions. This will only be increased once we can guarantee a low contamination also for fainter transients.

- If a bright ZTF candidate has not been submitted to the TNS there is usually a good reason for this. Selections are made using the AMPEL framework (or broker) and relies on a combination of cuts based

on alert properties as well as catalog matches. Catalog information is currently drawn from Gaia, SDSS, PanSTARRS, NED, Milliquas, AAVSOVSX and LAMOST. Please contact us if you have questions regarding a particular transient or have requests for what other transients we should look for!

More details regarding the selection methodology can be found in the AMPEL introduction: <https://arxiv.org/abs/1904.05922>. Instructions for how to create a channel to directly process the alert stream can as usual be found at <https://github.com/AmpelProject/Ampel-contrib-sample>."

News from working groups

Machine Learning: "A new RF based RB model (t17) has been implemented. Work is underway to implement the first deep RB model ("Braai"). We will want to revisit various marshall filters used by different science groups as some may become redundant, or could at least be tweaked to reduce computation time and get the same efficiency. Comparison of Zooniverse data and deep RB suggests that humans may need better training to separate astronomically bogus objects and objects that are bogus from a transient/variable perspective. A video tutorial is being mulled for low Galactic latitude objects. Summer students have started arriving to work on various ML projects."

Supernovae and relativistic explosions: "This week we discussed several interesting sources, including ZTF18acvgqiq which may be an analogue of the "impossible" supernova iPTF14hls; the very broad light curve stripped-envelope supernovae ZTF19aalouag and ZTF19aanijpu; and ZTF19aatImbo, a very nearby SN Ia with unusually high velocities."

Solar System: "ZTF found its first comet! The comet, now named as C/2019 J2 (Palomar), was first detected by ZTF on May 9. It will brighten to mag 16 in mid July. This is also the first comet discovery at Palomar since 2013."

Cosmology with SNe Ia: "With the first year's public data released, we are now building a data set of the complete lightcurves of all SNe Ia found in 2018. This will allow us to perform the first cosmological analyses of ZTF data, e.g. testing isotropy, very soon."

The papers corner:

The Zwicky Transient Facility: Surveys and Scheduler by Bellm et al. 2019, PASP;

<http://adsabs.harvard.edu/abs/2019PASP..131f8003B>

Please send us your published papers, they will be advertised here.

Please send Joy Painter, the Astronomy Librarian at Caltech, links to papers as soon as soon as they are published. They will be kept track of [here](#).

Reminder: Save the date! September 3-5: ZTF fall collaboration meeting

Please save the date for the fall ZTF collaboration meeting, to be held on the University of Washington campus September 3-5. Space will be available on September 6 for further breakouts and hack sessions.

Reminders:

- PublicAlerts: 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

“Eurovision is the granddaddy of all talents shows and the Superbowl of singing” – Ben Silverman

Have a great and productive week!

Thomas and Maayane