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Newsletter #98, September 20th 2019

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

News from the front: engineering reports (from Reed Riddle and Richard Dekany)

“Over time, we have noticed that the ZTF focusing system has regularly shown discontinuities in DIQ on the two sides of a filter exchange, hinting that using a single correction term for all of the filters may be inadequate. To test this, a new ROS build was installed that implements storage of a different focus correction for each filter, and reloading of these after every exchange. This has mitigated, though not completely eliminated, image quality spikes (e.g. dynamic and thermal changes still seem capable of inducing an DIQ spike). Overall, this has improved DIQ, which was already meeting performance requirements. With more experience with the new implementation, we may be able to further improve the system”.

News from the GROWTH Marshal (Ashot Bagdasaryan)

- i) An issue that caused the source transfer page to crash has been fixed.
- ii) Spectral lines have been added on the source spectroscopy pages for higher wavelengths.”

News from working groups

SNe and relativistic explosion:“At last week’s telecon, we discussed the strategy for the partnership survey in winter. Ariel Goobar proposed to carry out a uniform depth survey with an intra-night cadence of 2xg, 2xr and 2xi. This proposal aims to accommodate different science cases, e.g., TDEs, SLSNe, red/reddened transients and gravitationally lensed SNe, but also fast transients and infant SNe.”

Galactic Science:“We had many great talks about variable stars during the meeting partnership meeting in Seattle; we heard about RR Lyrae, white dwarfs, CVs, stellar microlensing and variable classification. We took the opportunity to update the Twiki page with the different variable star projects. **If you are working on some variable star project with ZTF data, please put a ~2 line description on the Twiki page** (or email jvanroes@caltech.edu). In addition, the partnership observations of the Galactic Plane are set the end in a few days.”

EM/GW and Neutrino counterparts: “The past month has been particularly active on the EMGW side. Work is in progress to wrap up the results on the follow-up of the well-localized NS-BH merger S190814bv. Three new GW events possibly including at least one neutron star were detected, namely S190901ap, S190910d, S190910h. All of them were poorly localized, up to more than half of the sky for the single-detector trigger S190910h. Within our collaboration, electromagnetic counterparts were

searched in particular using ZTF and Gattini-IR thanks to their wide field of view. ZTF ToO observations were triggered for S190901ap and S190910d, while we relied on serendipitous discoveries during the regular ZTF survey for S190910h. Candidates of interest were followed up and classified, although none has been associated with a GW event. Interestingly, one candidate discovered during the follow-up of S190901ap, ZTF19abvizsw, was classified to be an un-triggered GRB afterglow at redshift $z=1.26$.”

Machine learning: “Many ML related projects were discussed at the team meeting in Seattle, both during talks, and during the breakout and hackathon sessions. We are starting to take stock of all the projects, and connect people working on their own. If **you are working on a project, do please get in touch.** aam@astro.caltech.edu”

The papers corner:

A new class of extreme quasars was discovered by ZTF! [Frederick et al 2019](#) has now been accepted by ApJ.

Please keep us updated about your submitted/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](#).

Please upload your talk from last ZTF meeting!

If you presented at the team meeting two weeks ago but still have not uploaded your presentation to the [Wiki](#), **please do so as soon as you are able** - it helps people who were not able to attend see what was talked about and is also a useful reference point for the project when we have to write reports.

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](mailto:ZTF.communication coordinators@gmail.com)

“By all these lovely tokens September days are here, With summer's best of weather And autumn's best of cheer.” – Helen Hunt Jackson

Have a great and productive week!

Thomas and Maayane