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Newsletter #117, February 27th 2020

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Presentations at the Spring 2020 ZTF collaboration meeting (Jakob, Anna and Marek):

The [spring 2020 collaboration meeting](#) will take place March 23-25 in Berlin, followed by the [real-time multi-messenger workshop](#) on March 26-27. Some notes:

- As usual, the ZTF WGs will be asked to present an overview of their results and outlook for the future.
- Please let us know before February 28 (this Friday!) if you wish to present a topic in more detail, or have other program suggestions.
- We will try to accommodate remote participation. To make this as efficient as possible, it would be great if you could let us know already now which sessions you might want to connect for.

News from the GROWTH marshal (Ashot Bagdasaryan)

This week we added light curve binning for ZUDS candidates and sources, available for viewing on the scanning page and the source photometry page.

News from working groups

Galactic and M31 Science: “It’s relatively quiet for our working group; the Galactic Plane is not visible at the moment. We are using the time to analyze all the archival data released since DR2. This includes papers on individual sources or small samples of sources (double white dwarfs, AM CVn systems, subdwarf binaries, outbursting X-ray sources, microlensing events, YSOs, Be-stars, etc) and are also making progress with the overall identification/classification of all ZTF persistent sources (stars & AGN).”

Solar System: “Our harvest of NEOs continues! In the last week, the following five NEOs were discovered by ZTF: [2020CB3](#), [2020DD2](#), [2020DF2](#), [2020DH2](#), [2020DJ2](#) ”

AGNs and TDEs: “In the last few days we published two ATels following the recent SRG/eROSITA transients announcements ([#13507](#), [#13513](#)). Both X-ray transients are detected in ZTF, but both are very different. The ZTF flare for the first one is off-center from its host galaxy (which happens to be an AGN). The last one is only detected in the ZUDS co-add data, and could perhaps be an optical-faint TDE, but more observations are needed.

More news for one of our seventeen known TDEs. One of the most spectacular TDEs from 2019 (Brienne, ZTF19aarioci) is now detected in ZTF data again, showing a beautiful late-time plateau in the light curve.”

Cosmology with SNe Ia: “The [first ZUDS ATEL](#) is out! Contains classifications of targets observed with the February 18th Keck run.”

Physics of supernovae and relativistic explosions: “At last week's telecon, we discussed three topics: i) forced photometry, ii) SN pre-cursors and iii) a GRB afterglow detected during an EM counterpart hunt of a LIGO source. Jakob presented a framework developed by Simeon Reusch (DESY) that uses Mickael's Rigault's and Yuhao Yao's forced photometry pipelines. It is fast and can be used through slack. Nora presented the first results of her systematic search of SN pre-cursors. Currently, this project is limited to archival ZTF data. Soon, she wants to identify pre-cursors in real-time and obtain spectra of this elusive phase in the evolution of a massive star before the SN explosion. Dan told us about a GRB afterglow, with no recorded gamma-ray photons, detected during the EM-counterpart hunt of a GW event. The GRB afterglow is sadly unrelated to the GW event. Observations from the radio to the X-rays were triggered to study the broad-band afterglow evolution. Thanks to TESS observations, he was able to narrow down the explosion time to within 1.5 hours.”

The papers corner:

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 they are published. They will be kept track of [here](#).

Reminders:

- PublicAlerts: There is a [link](#) to the alerts archive on the [website](#)!
- Please help us keep 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)

“Research is formalized curiosity. It is poking and prying with a purpose.”

Zora Neale Hurston

Have a great and productive week!
Igor and Erik