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Newsletter #80, May 6th 2019

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Updates from the GROWTH Marshal (by Ashot Bagdasaryan)

“1) New spectral line plotting on the spec: O, O II, O III, NII, NIII, He, Mg. 2) A second time stamp on the scanning page for each candidate that indicates the date of the most recent alert. 3) An update to the uploading of automatic photometry, no longer requiring the regular use of the 'Update ZTF Data' button.”

SEDM camera change:

“In addition to changing the pickoff and fold mirrors of SEDM, the SEDM team took the opportunity to swap out a thermal control board on the IFU camera that they knew was bad. In order to do this, the IFU camera was replaced with the original IFU camera on April 24th and sent back to Princeton Instruments. It was found that the original IFU camera does not perform as well as the newer IFU camera, especially in the blue.

The newer IFU camera will be shipped back sometime this week and will replace the original IFU camera as soon as possible. In the meantime, the exposure time was increased by 25% to help offset the lower performance of the original IFU camera. It will be kept and used only as a spare. With the newer IFU camera thermal board upgrade, we don't anticipate the need to change cameras once it is re-installed in SEDM.”

News from working groups

Multimessenger: “This was an exciting week for the EM-GW group. Two events happened just within 30 hours. The first, a likely NS-NS merger, S190425z was localized to a pi of the sky! 10,000 sq deg didn't give us pause and we were able to cover most of it within 3 hours of mergers with ZTF. The team was very quickly able to systematically go through order of 100,000 ZTF alerts a night (many thanks to MSIP survey). We narrowed the list of candidates to just two events that were consistent with being the kilonova in every respect with all the information in-hand: luminosity, age, host galaxy redshift, color etc. Both were in CLU galaxies. The whole world undertook follow-up and they turned out to be young supernovae.

S190426c came just 30 hours later and was localized to 2000 sq deg but 375 Mpc! The larger distance and most of the probability being at the celestial pole didn't stop us. With ZTF + GROWTH-India + DECAM, we were set to cover over 90% of the area (until the sky map changed). The co-ordinated mapping worked well for us. ZTF had a new challenge sifting through candidates with S190426c. Half the

localization was crossing the Galactic plane (literally). The list of candidates was also much longer with jdstarthist > merger time. Nevertheless, the team did a simultaneous editing of a table along various dimensions, with a 4 hour zoom call, to get the candidate list shortened and reject candidates systematically. We have one remaining candidate for S190426c that hasn't been completely ruled out yet."

The papers corner:

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

"The fruit derived from labor is the sweetest of pleasures" (Luc de Clapier)

Thomas and Maayane