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Newsletter #83, May 27th 2019

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Engineering Report (courtesy of Jeff Zolkower)

The recent wet spring weather has tested the limits of the P48 dome weather resistance. During the week of May 13 during maintenance work inside the P48 telescope, a significant amount of water spotting was observed on the primary mirror surface. A definitive source of the water spots has not been confirmed, but it's believed to be the result of wind driven rain leaking through the dome shutter seal, dripping onto the telescope, and finding a path into the telescope tube. On May 18, support astronomers Carolyn Heffner and John Baker cleaned the primary mirror in place with very good results. They also took reflectivity measurements of the primary after cleaning and found the reflectivity within 2% of the values measured from the new mirror coating applied over 2 years ago. The plan is to inspect the dome shutter seal and make necessary repairs, and visually inspect the primary weekly until the wet spring weather is behind us.

DQA & calibration

Significant progress has recently been made in understanding the systematics within the ZTF photometry. This should soon enable to calibrate the PSF photometry to better than 1%

News from AMPEL

"We are happy to report that the system for the immediate trigger of SEDM follow-up of nearby infant SNe detected by AMPEL is now operational. Now we only need the right candidate (and some good weather)."

News from working groups

Supernovae and relativistic explosions: "This week, Maayane Soumagnac discussed her paper on SN2018fif (ZTF18abokyfk) -- the draft is available in the papers section on the twiki. We also discussed the new, nearby SN IIb in M100 (SN2019ehk / ZTF19aatesgp), and the long-lived mystery transient ZTF19aaniqrr, which shows some similarities to both TDEs and SLSNe, with the closest observed analog probably being iPTF14aon."

AGNs & TDEs: "The ZTFbh SWG has several active TDEs that we are following up with Swift, VLA, and XMM. We reported our latest TDE discovery, "Brienne of Tarth" (ZTF19aarioci) in Atel #12789. We have several more TDE candidates that we are hoping for clear skies to get spectra with at DCT and Palomar

in the next week. TDE Bran Stark (ZTF19aapreis) is particularly exciting because it is bright in the soft X-rays, and has been detected in the radio. ”

Multimessenger, EM/GW and Neutrino Counterparts: (1)The DECam-GROWTH team wrote 2 papers presenting the follow-up of gravitational wave events from neutron star mergers. The first paper (<https://arxiv.org/pdf/1905.06980>) describes the follow-up of S190426c, likely the first neutron star – black hole merger ever detected, with focus on our transient detection pipelines. The second paper (soon on ArXiv) presents the follow-up of the S190510g gravitational-wave candidate, with focus on the observing strategy. (2) A special gravitational wave detection made many people jump on their seats: the S190518bb event was classified as a binary neutron star merger located only 20Mpc away! Unfortunately, the event re-classified as terrestrial (non-astrophysical) within 1hr and it was retracted by the LIGO/Virgo Collaboration.

The papers corner:

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

“The European Union is the world’s most successful invention for advancing peace” – John
Bruton

Have a great and productive week!

Thomas and Maayane