

#####

Newsletter #72, March 11th 2019

#####

If the newsletter does not look good in your email, check the pdf [here!](#)

“News from the front”: Engineering Update (Richard Dekany)

Observing Efficiency Optimization Complete

A series of investigations pursuing optimization of observing efficiency have concluded, with an approximately 2% increase in the number of images acquired each night (~20 images per winter night). Reed Riddle will present some details of system timing in Israel, but the key improvements were found by streamlining the commands sent to arm the CCD controllers to prepare an exposure and detailed optimization of the relationship between shutter motion and camera control. This improvement is the culmination of the low-cost efficiency improvements and no further timing optimization is expected.

Flexure Compensation System Update

Work continues on optimization of both open-loop flexure calibration and closed-loop tip/tilt/focus control using the 4 auxiliary focuser CCDs in the ZTF cryostat. Noise performance of the “T1” focuser CCD is lagging that of the T2-4 detectors and optimal usage of this data is under investigation. Data quality scientist Andrew Drake has recently begun to partner with the development team to relieve a labor bottleneck and drive forward improvements to open-loop and close-loop flexure compensation performance. Improving uniformity of delivered image quality across all 64 ZTF tiles remains the highest engineering priority.

Cryocooler Performance

The previously problematic “Southwest” cryocooler continues to exhibit very slowly dropping cryoline pressure, requiring daytime recharging of the cryogen approximately every two months, behavior not observed in the “Central” cryocooler system. Investigations have suggested any potential leak is transitory, and we are considering strategies for more continuous leak monitoring. Proactively, due to their long lead time, we have ordered two spare cryocoolers to protect against possible observing disruption should the root cause originate in the cooling head itself.

Updates from the GROWTH marshal (Ashot Bagdasaryan)

i) Users can now filter the spectra on the Spectra Summary page by the option 'NotClassified' to show only spectra for objects that have not been classified. ii) A bug has been fixed on the object photometry page that prevented users from seeing data ingested from the iPTF database using the 'update iPTF data'

button on that page if the filter used was 'r'. iii) The candidate lists on the examine page are now sorted by date.

News from working groups

Supernovae and relativistic explosions: “During the last telecon, we discussed the properties of the intermediate-luminosity red transient (ILRT) ZTF19aadyppr in M51. What is remarkable about this object is its rich archival data set. It allowed Jacob Jencson and his team to identify possible previous eruptions and even detect the progenitor. His team is preparing a quick paper about the event history and the recent outburst.”

AGNs & TDEs: “The ZTFbh SWG is pursuing 3 more TDE candidates...including a spectacular, optically bright ($r=16$ mag), UV-bright ($uv_{m2}=14.8$ mag) nuclear transient in a nearby ($z=0.022$) E+A galaxy (JaimeLannister: ZTF17aaazdba/AT2019azh) that is most likely a TDE, but has not yet developed line features in its blue featureless spectrum.

****If anyone is at a spectrograph, and wants to help out and take a spectrum of a very bright source ($r=16$ mag), please do!****

This source is also detected by ASAS-SN. The 17 in the ZTF name is due to some early bogus detections. The host galaxy has a very compact stellar nucleus.

The papers corner:

The ZTF Scheduler paper ("The Zwicky Transient Facility: Surveys and Schedule") has been accepted by PASP.

(Please remember to let us know if your paper was submitted/accepted. We will let the collaboration know here. Below are the papers from the press release now on the arxiv).

The March collaboration meeting in Israel is happening this week!

Please have a look at the final program [here](#).

Looking forward to seeing you in Rehovot on Tuesday!

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 sweetness of reunion is the joy of heaven” (Richard Paul Evans)

Have a great and productive week!

Thomas and Maayane