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Newsletter #151 January 6th 2021

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News from Fritz (Ari Crellin-Quick):

We have made great progress on a complete permissions schema overhaul which will greatly simplify, centralize and streamline the permissions checking process. We've completed many important bug fixes, added new configuration options to the news feed, and are underway with several new features.

News from working groups

AGNs and TDEs:

"Working with the Russian SRG group we are writing two papers: optically detected TDEs and X-ray bright but optically dim TDEs. Following the Russian Xmas we will have a joint workshop between the ZTF group and the Russian SRG group focused on TDE/AGN.

The TDE/AGN group has grown and is now 14-person strong: S. Bradley Cenko (JSI, GSFC), Andrew Drake (Caltech), Dmitri Duev (Caltech), Suvi Gezari (STScI, collaborator), Matthew Graham (Caltech), Erika Hammerstein* (UMd), S. Kulkarni (Caltech, Chair of SWG), Wenbin Lu (Caltech), Vikram Ravi (Caltech), Jean Somalwar* (Caltech), Daniel Stern (Caltech/JPL), Lin Yan (Caltech), Yuhan Yao* (Caltech), Sjoert van Velzen (Leiden, collaborator). The three graduate students are marked by (*). Not only have we good demographics but in addition, as expected of any quality SWG, we have a pet theorist (Wenbin Lu). We can go from filters to interpretation in the same meeting."

Multimessenger:

"The last high-energy neutrino alert of 2020, concluding a busy year, was IC-201222A. We were able to follow-up this one, but did not detect any counterpart candidates."

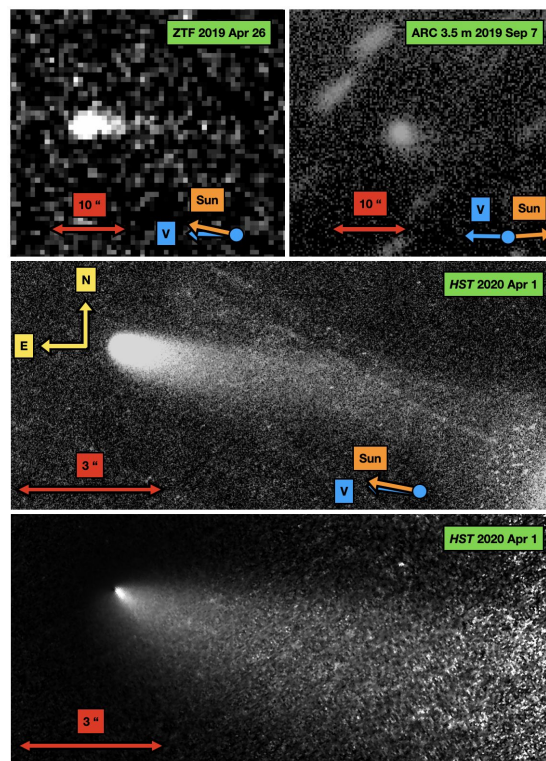
Physics of supernovae and relativistic explosions:

"At the last SN telecon, we discussed three major projects. 1) Tuomas works on H-rich SLSNe that show no clear signs of CSM interaction. This sub-class was known before the start of ZTF. However, only a few objects were known hindering drawing any firm conclusion on their origin. In the meantime, the SLSN group has detected a growing number of this sub-class. They also secured vital data sets for each object. Tuomas is working on characterising this sub-class to reveal what sets this rare sub-class apart from H-poor SLSNe and interaction-powered SLSNe. 2) Sheng presented his work on the faintest SN detected

in ZTF-I. ZTF20aapchqy is a Type II SN with a peak magnitude of only -14. It is among the least-luminous CCSN known. These low-luminosity SNe are thought to originate from 8-10 M_{sun} stars with low explosion energies. Up to now, only 20-30 of them have been described in the literature. ZTF20aapchqy is well observed, including several spectra and Swift observations. Sheng and his team study this SN to constrain the explosion properties and what could have been the progenitor system. The current results point to a very low nickel mass of only 0.005 solar masses and a progenitor mass of less than 12 solar masses. 3) Adam presented a new citizen science project led by ZTF BTS. This project aims to classify the ~9000 SN spectra collected by the Bright Transient Survey. Already shortly after the launch, 300 people signed for this project and scored 3000 spectra. When all spectra are classified, Adam and Xander will examine the results. If you want to help to answer questions of the citizen scientists get in touch with Adam Miller.“

The papers corner:

- A paper by **Bryce Brolin et al.** which includes ZTF data of active Centaur P/2019 LD2 was just accepted to AJ. A highlight of the paper is that we use long-term monitoring photometry of the comet obtained serendipitously by ZTF throughout 2019 to determine that the activity of the comet was steadily increasing as the comet reached perihelion suggesting that the activity was driven by the sublimation of volatiles near the comet's surface as it became increasingly heated by the sun. Below is shown In clockwise order, an image of the comet from ZTF, the ARC 3.5 m and HST. It can be found on arxiv here: <https://arxiv.org/abs/2011.03782>



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

*“An optimist stays up until midnight to see the new year in.
A pessimist stays up to make sure the old year leaves.”
- Bill Vaughan*

Have a good and productive year!!

Erik and Igor