##################

Newsletter #124, April 22nd 2020

##################

If the newsletter does not look good in your email, check the pdf here!

News from the GROWTH marshal (Ashot Bagdasaryan)

This week we have updated the spectroscopy page with a more accurate formula for converting line rest wavelengths to observed wavelengths, from:

$$\lambda_{observed} = \lambda_{emitted} \frac{1+z}{1+v/c}$$

to:

$$\lambda_{observed} = \lambda_{emitted} \frac{(1+z)\sqrt{1-v/c}}{\sqrt{1+v/c}}$$

News from working groups

Solar System: "With the break in the weather, we managed to discover a new NEO, 2020 HH!"

AGNs and TDEs:"Our search for TDEs continues with new candidates awaiting Swift observations (eg, ZTF20aamqmfk, aka Shae), plus the occasional SN interlopers (eg, ZTF20aartnkv). Meanwhile Jaime (ZTF17aaazdba), one of our golden TDEs from last year, shows the power of ZTF for low-redshift sources. Today, more than 400 days post-peak, we are still detecting transient emission. showing a beautiful plateau phase. This source will likely remain detectable in ZTF for a few more years. Finally, the paper on high-energy neutrino coincident with our TDE Bran should be submitted to Nature when this newsletter goes live."

Cosmology with SNe Ia: "For this week, Mickael Rigault has been working on a tool to analyse ZTF data called ZTF Image and their group is working on developing a PSF model. ZTF image mainly opens images, deals with the ztf bitmask, deals with background, matches catalog (incl the PS1 calibrator on), runs a python version of sextractor to detect sources. It is currently under development but feel free to use it. It can be found here."

Physics of supernovae and relativistic explosions: "Assaf Horesh and Anna Ho gave updates on two projects. Assaf presented his paper the Type Ic SN 2020oi in M100. Thanks to the small distance, Assaf managed to obtain an exquisite data set of radio observations covering the evolution up to 100 days. This rich data set allowed Assaf to deduce the properties of the CSM and the mass-loss history of the progenitor. Anna is also finishing a paper on the Type Ic-BL SN 2020bvc in UGC 9379, which also hosted SN2013cu and SN2019ehk. Remarkable about the SN is the UV bump that was only seen in the GRB-SN 2006aj before. Anna showed with radio and X-ray observations that the SN had a mildly relativistic

outflow. However, its low radio luminosity is an order of magnitude smaller than that of low-luminosity GRB afterglows, disfavouring a classical GRB jet.“

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

“Science has never drummed up quite as effective a tranquilizing agent as a sunny spring day”
Wilton Earle Hall

Have a great and productive week!
Igor and Erik