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Newsletter #165 April 21st 2021

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

News from Fritz (Ari Crellin-Quick):

- Aux alert data endpoint has been moved here.
- Users can now choose to invert grayscale thumbnails (via the profile page)
- New cone search functionality on the alerts page
- Many other new features, and dozens of performance improvements and bug fixes

News from working groups

Galactic and M31 Science:

“We have been working on a variable 'field guide'; an overview of different types of variable objects with example ZTF lightcurves. The guide now contains a few types; but we are using continuous integration to manage the project (implemented by Dima Duev), and users are rapidly adding more types. Contributions are welcome.

A few papers are in the final stages, you can find them on the papers twiki page:

- A paper on the Period-Luminosity and Period-Luminosity-Color Relations for Late-Type Contact Binaries in globular clusters has been submitted by Chow-Choong
- The sample of ZTF cataclysmic variables from year 2 is close to submission by Paula Szkody
- a paper that presents a search for rare AMCVn systems with ZTF will be submitted this week”

Solar System:

“This week we've discovered a new outburst of comet 22P/Kopff on 2021 April 19 UTC, and confirmed it with GROWTH India Telescope and Las Cumbres Observatory data. This is 22P's second outburst observed by ZTF, and the 44th outburst overall.”

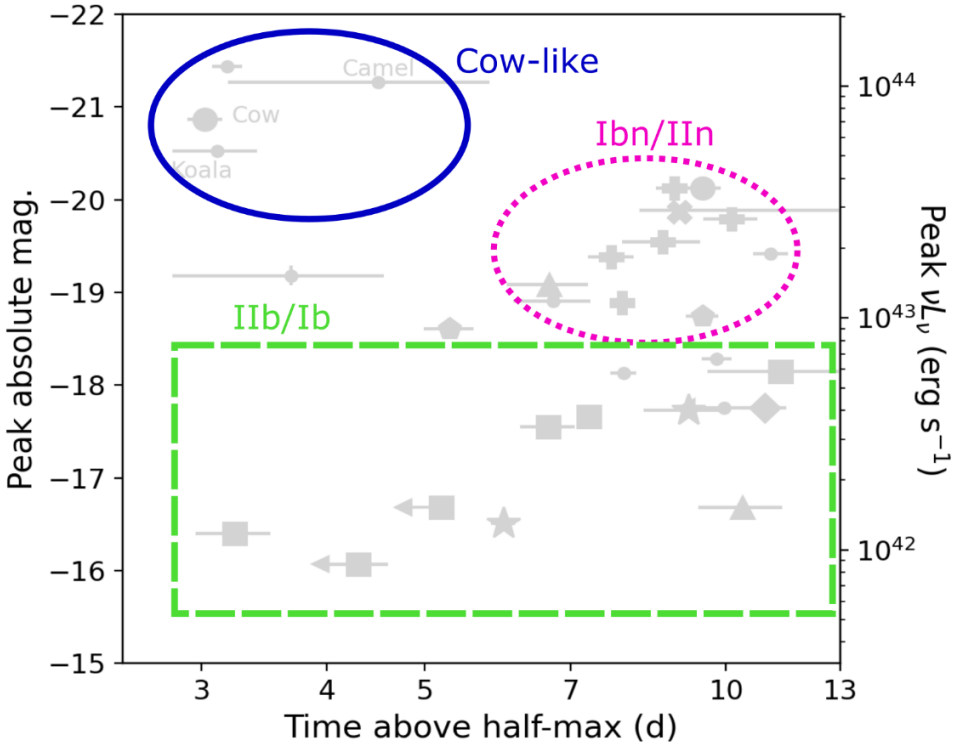
Cosmology with SNe Ia:

“Last week the SNIa group focused on growth of structure: how to measure it and how well can we measure it. Bastien Carreres and Julian Bautista from Marseille talked us through ongoing efforts to measure fsigma8 from ZTF. Bastien showed off some realistic simulations aimed at understanding how SNe intrinsic scatter affects the recovered value of fsigma8, while Julian talked us through how the methodology used to infer fsigma8 influences the best-fit value. Pop over to the TWiki page for insights and, more importantly, their slides. Beyond that, the physicists amongst us were overwhelmed with

interesting targets; from the close (ZTF21aaqytjr), to the bumpy (ZTF21aapehpx) to the remote (ZTF21aaqwjlz), last week saw them all.
This week: selection functions! Key to cosmology, it's time to figure out what they are and what to do about them. Join us as Jakob reveals all :)"

Physics of supernovae and relativistic explosions:

"Anna Ho compiled the so far largest sample of spectroscopically classified fast blue optical transients (FBOTs) considering both objects discovered by ZTF and from the literature. She finds that FBOTs can be subdivided into three different groups: The brightest and shortest FBOTs are extreme events like AT2018cow (about 0.1% of all CCSNe), bright and longer-lasting FBOTs are often interacting SNe of classes IIn or Ibn (rate of 0.3-0.5%), while the faintest transients are Type Ib or IIb SNe that show a shock-breakout peak, but no second peak powered by radioactivity. With a rate of 1-10% of all CCSNe this class is quite common, but hard to detect due to the short durations and low peak luminosities."



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 communication coordinator Ivona Kostadinova: ivonata@astro.caltech.edu
- 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 Ivona Kostadinova at ivonata@astro.caltech.edu

"Mathematics are well and good but Nature keeps dragging us around by the nose."
- Albert Einstein

Have a good and productive week!

Erik and Igor