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Newsletter #167 May 5th 2021

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News from working groups

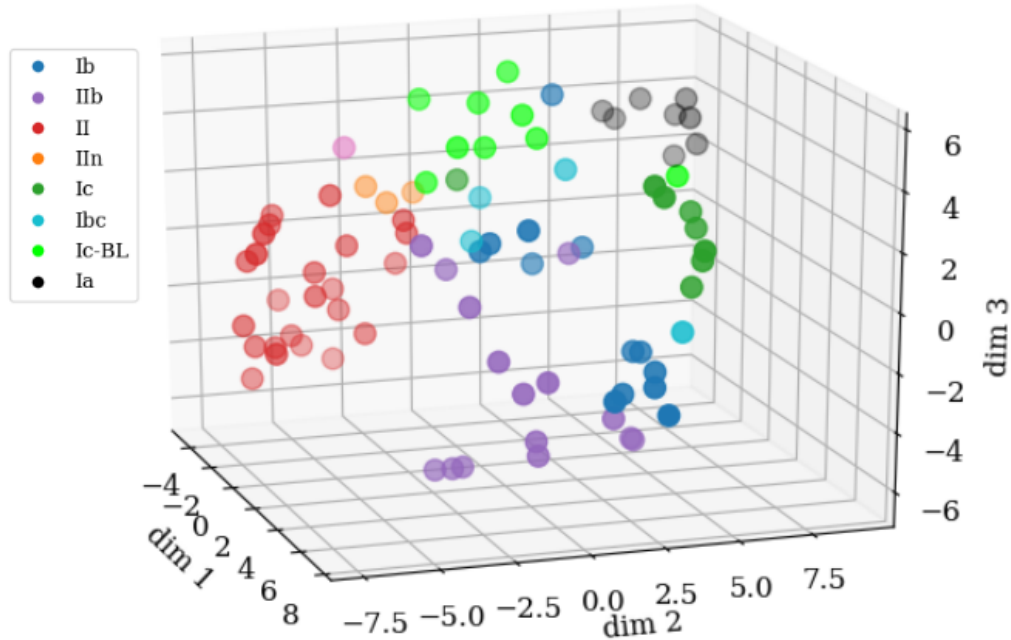
Solar System:

“According to ZTF, comet C/2020 R4 (ATLAS) had a double outburst, the first occurring between 2021 Apr 20 and 24, the second between 2021 Apr 25 and 27. Both are about -1 mag in strength. A pair of strong outbursts so close together in time is rare (except at the enigmatic comet 29P). The last seen with ZTF was in July 2018, when C/2017 S3 (PanSTARRS) had two outbursts near -2 to -3 mag in strength before disintegrating. A telegram is in preparation.

Also, we have a new paper in press: [Six Outbursts of Comet 46P/Wirtanen](#), Kelley et al., accepted for publication in The Planetary Science Journal - The paper describes a year-long lightcurve of comet 46P/Wirtanen, characterizes 6 outbursts discovered therein, and compares the events to the mini-outbursts more commonly observed by spacecraft missions to comets. We suggest the frequency of outbursts is correlated with the evolutionary state of the nucleus, and that comet Wirtanen is evolved rather than primitive.”

Physics of supernovae and relativistic explosions:

“Ofek Bengiat uses multiband light curves and spectra of well observed SNe to test whether the established SN classes are recovered by a random forest classifier. As expected, SNe Ia form a clearly distinct SN class and the algorithm finds that CCSNe of the same type are similar to each other, but there might be a continuum rather than separate classes. Type Ib SNe are split into two classes with low- and high-velocity spectral features. His work can moreover be used to define quantitative and objective criteria for SNe classification and he can pinpoint how much and which data we need for a reliable classification, such that we can deploy follow-up resources optimally.



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

“Logic is a wonderful thing but doesn't always beat actual thought”

- Terry Pratchett

Have a good and productive week!

Erik and Igor