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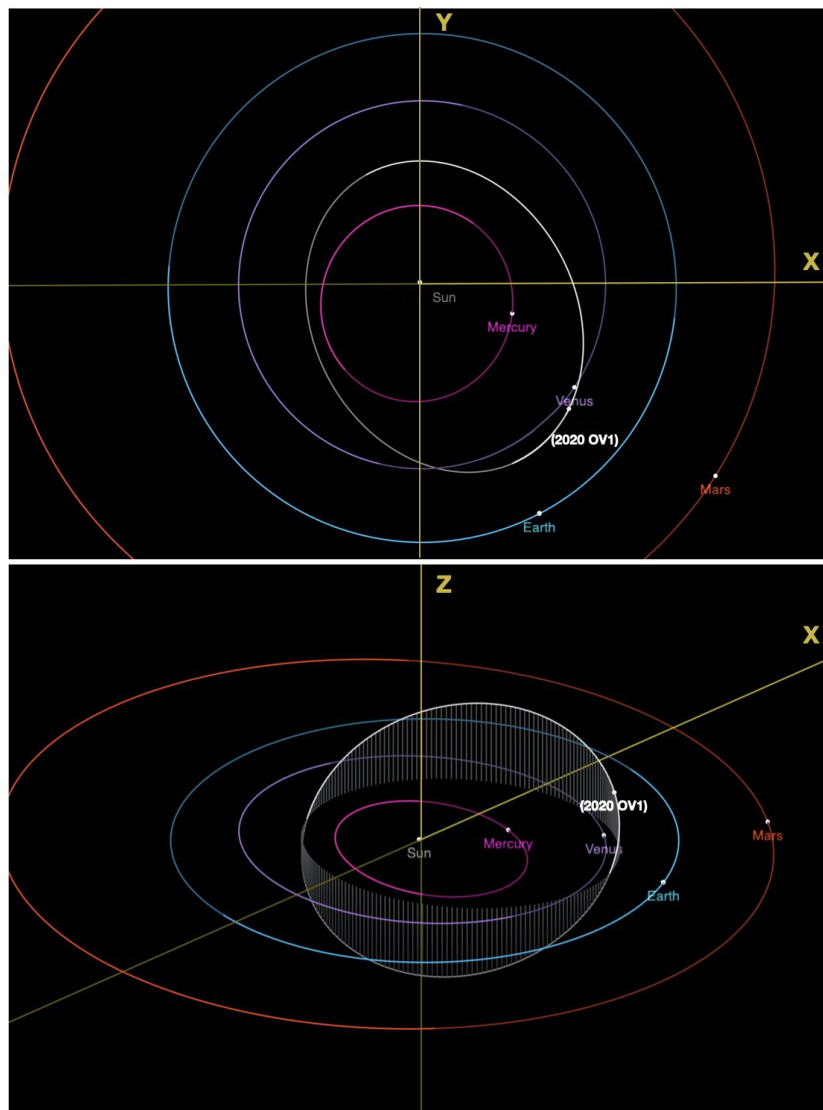
Newsletter #135 July 22nd 2020

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News from working groups

Solar System: “Our newest Twilight survey discovery was just announced by the Minor Planet Center, [2020 OV1](#). With an aphelion = 0.795 au, the object is an Atira-class asteroid, being contained entirely within the orbit of the Earth, has an orbital period of 185 days, a size of ~700 m in diameter and an inclination of 33 degrees. An orbital diagram of the inner Solar System planets including 2020 OV1 at the time of its discovery on 2020 July 19.48 UTC is shown below.”



AGNs and TDEs: "We are baffled by the extreme X-ray flares and dips of our most recent TDE ([ZTF18aakelin](#)), see ATel [13859](#), [13863](#), [13864](#). Plus the rapid temperature decrease of a different source ([ZTF20abgwfek](#)) has also been puzzling, could this be a SN?"

Physics of supernovae and relativistic explosions: "Rachel Bruch gave an update on her paper on infant supernovae. Her paper focuses on how common circumstellar material is around the progenitors of Type II SN, and, therefore, the recent mass-loss history of Red Supergiants. The sample includes 28 infant SNe from 2018. Among the eight infant SNe, for which her team obtained spectra within two days after explosion, 6 showed flash features. This high rate of Type II SN with nearby circumstellar material has implications on the understanding of the evolution and mass-loss of Red Supergiants before they go SN. Fun fact, the number of infant SNe detected in 1-year of ZTF data is close to the number of infant SNe in the entire PTF+iPTF survey!

Christoffer Fremling gave an update on the Bright Transient Survey. His team is working on a multitude of papers focusing on, e.g., light curves properties, Deep Learning techniques to automatically classify SNe, host properties, SN-Ia rates, SN-Ia luminosity function, SNe as tools to trace Large Scale Structures, neutrino correlations with CCSNe, and correlations between spectroscopic and light curve properties of Type II SNe.

Andy Tzanidakis gave an update on the SN-II luminosity function from the CLU survey. His sample includes 291 Type II SNe. He finds a possible bimodality in the distribution of the r-band peak luminosity. He also uses this sample to look for correlations between light curve properties."

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](mailto:ZTF.communication coordinators@gmail.com)

"I have a good idea every two years. Give me a topic, I will give you the idea!" - Fritz Zwicky

Have a good and productive week!

Erik and Igor