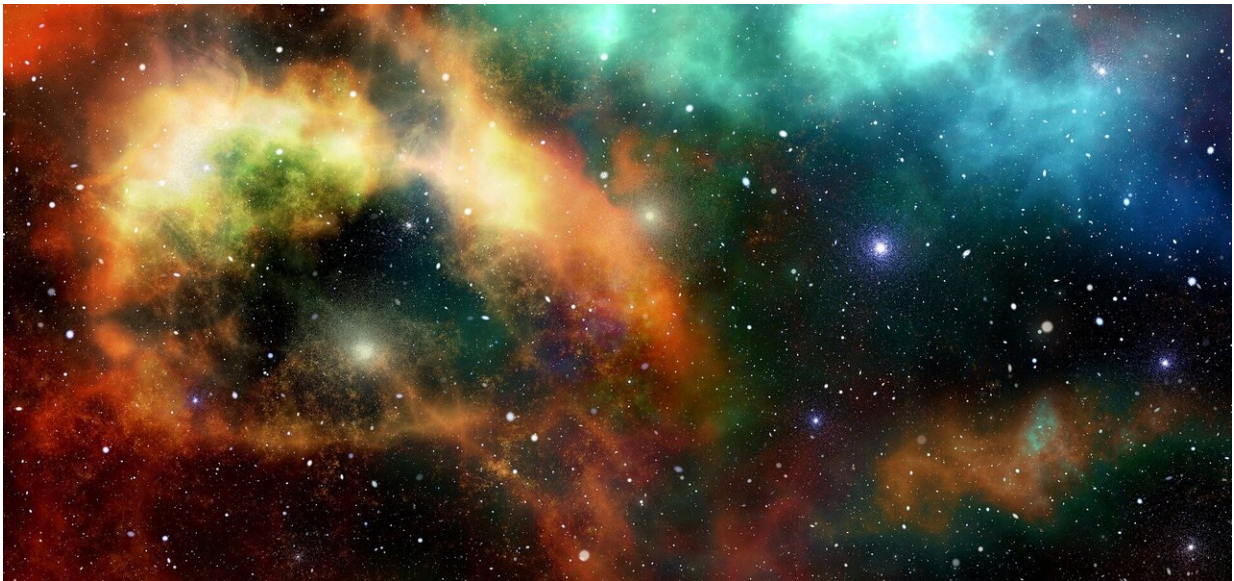# Data milestone achieved in variable star repository

October 17 2019, by Lindsay Ward

Credit: CC0 Public Domain

Compiling together multiple pieces of information for each of a million-plus objects is no easy or quick task, but that is exactly what Sebastián Otero, Patrick Wils, Patrick Schmeer, and Klaus Bernhard did. Due to this skilled team providing tremendous amounts of time, patience, and attention to detail, data and updated information on 1,391,103 variable stars (and counting) are now entered into the International Variable Star Index (VSX), owned and operated by the American Association of Variable Star Observers (AAVSO).

VSX was conceived and created in 2005 by AAVSO volunteer Christopher L. Watson, as a response to the AAVSO professional and amateur astronomer community's need for a database comprised of up-to-the-minute information on as many individual variable [stars](#) as possible. What started as an online catalog of information on objects with variability that can be detected from the ground (an amplitude of more than 0.001 mag.), evolved to become the backbone of the AAVSO's online tools, infrastructure, and databases, and an essential resource for the astronomical researcher community. VSX includes all known data on the logged stars, such as their variability type, stellar spectral type and period, bibliography, and finding charts. This information is sourced and reviewed from an abundance of star catalogs, including surveys such as WISE, CoRoT, Kepler/K2, ASAS-SN, and OGLE.

VSX also provides opportunities for any observers to report their newly discovered variable objects and be credited for their discoveries. VSX moderators review all new variable detections and publications before implementing them or updating the information in VSX to ensure the accuracy of the database. An open-source repository, anyone can also search for a star in VSX and view its data. VSX Team leader and AAVSO employee Sebastián Otero says, "It is always a work in progress, but we are proud to improve VSX every day to provide the community with a reliable online resource when it comes to [variable stars](#). When we correct a mistake, when we add a newly discovered variable—or hundreds of thousands, like we did recently, we feel that we are closer to reaching that goal." Working alongside Sebastián Otero is Patrick Wils, a dedicated volunteer who maintains the database and helps Sebastián check for duplicate entries and scan literature for new catalogs and new data to be imported. Other knowledgeable volunteers who are part of the VSX Team are Klaus Bernhard, who prepares lists of stars for import, and Patrick Schmeer, who helps add or revise information on stars published in alert pages, including those of Gaia, VSNET, ATels, and ASAS-SN.

Of this [collaborative effort](link) between observers, volunteers, and staff, the AAVSO's Executive Director Stella Kafka explains that, "Our aspiration is to offer a resource that provides accurate information on as many stars as possible. Although the catalog is by no means comprehensive, our team is working hard to include all confirmed variables, ensuring that VSX remains relevant and valuable to researchers worldwide. As we celebrate this milestone, I am grateful to our staff and volunteers whose dedication and hard work provide this substantial resource to our community."

Provided by AAVSO