

## History and Future of PANOPTES

Steven Gomez

PANOPTES (Panoptic Astronomical Networked Observatories for a Public Transiting Exoplanets Survey) is a project attempting to create a low-cost networked system of robotic telescopes designed to discover transiting exoplanets. Its plan is to have many of these relatively small telescopes capturing images of the sky around the world, thus providing data (images) that is owned by the public. This can then be analyzed to see if an exoplanet exists around a star. The main difference between PANOPTES and other exoplanet detection projects is that PANOPTES is inexpensive and gives citizen scientists an opportunity to research. It does so using parts easily accessible to the public. For instance, among other electronics, regular digital single lens reflex cameras (DSLR) are used. They are able to capture light from the sky, and with enough data photometry, can be used to potentially help locate an exoplanet. The project was first developed by researchers in Hawaii who came to the conclusion that having a cost-efficient system that was adaptable for more people to use, was a way of having their own Kepler. After creating the first PANOPTES structure, and figuring out the electronics, they were able to set up the first unit near the top of Mauna Loa mountain in Hawaii. From this first unit, an easily accessible guide was made to show others how to build units of their own. Eventually, WISRD found the project and started to build a unit of their own. The goal for WISRD is to be able to create a functioning unit and find an optimal space for it where it can capture the sky and aid in finding exoplanets.

## References

The Editors of Encyclopaedia Britannica. (2017, April 27). Photometry. Retrieved from Britannica Student database.

Guyon, O., Walawender, J., Jovanovic, N., Gee, W. T., Butterfield, M., & Tong, J. (n.d.). Project PANOPTES. Retrieved November 8, 2018, from Project PANOPTES website:

<https://projectpanoptes.org/>

PANOPTES, P. (2016, June 12). *Project panoptes: Open source planet discovery* [Video file].

Retrieved from <https://www.youtube.com/watch?v=qgpx9VefgzE&t=8s>