

Title:

Exoplanet research in a virtual environment at American Public University.

Presenters:

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Abstract:

As we prepare the next generation of space explorers, knowing how to learn, work, and research in a virtual environment is imperative. American Public University is home to a new exoplanet research team that is conducting exoplanet research using virtual environments to meet, plan, and discuss research.

APUS is currently composed of one team, with more teams planned in the future. Team 1 was started with the vision of conducting exoplanet research on both confirmed and candidate exoplanets and to determine whether working in a virtual environment would yield successful scientific results. The APUS exoplanet team is comprised of students, alumni, and professors with various backgrounds and skills. Leveraging these skills allows the team to complement each other and amplify research efforts.

During team meetings, exoplanets are chosen for transit method observation based on a spreadsheet reflecting which exoplanets would be available for the chosen telescopes. The team's current telescopes are located throughout the United States, with the primary telescope being APUS's own. When data is acquired via the transit method, the team then uses various software like Astro Image J and NASA's Exotic to generate light curves.

The efforts of Team 1, working in a virtual environment, have provided many opportunities to reconsider or solidify ongoing research methods. With the knowledge gained, the planning and formation of Team 2 is currently in the process. Additionally, Team 1 is currently in the process of securing telescope access in other parts of the world.