EXOPLANET WATCH

Inviting Citizen Scientists to Observe Transiting Exoplanets

Dr. Rob Zellem (he/him)

OVERVIEW

- Announcing the general audience launch of Exoplanet Watch: a citizen science project to monitor transiting exoplanets
  - Limited launch with amateur and professional astronomers since 2021
  - Anyone and everyone can participate!
  - Learn how exoplanet science is really done!
TRANSITS

• Measures the change in brightness as the planet passes in front of or behind its host star

• Also allow us to study a planet’s atmosphere
  • Exoplanet Watch refines transit times
  • You can help!

JWST - NASA/Goddard
Citizen science project to routinely observe transiting exoplanets to keep their transit times precise.

You will help enable NASA science!
• Collaborative effort to complement existing surveys
• Data is immediately public
• Target requests by professional astronomers
• Observers are listed as co-authors
• Part of NASA’s Universe of Learning
GOALS

- **Education goals:** to engage and teach the public about exoplanets and enable them to do science

- **Science goals:** to ensure efficient use of large telescopes; discover and confirm new exoplanets; monitor stellar variability
USER EXPERIENCE

Plan

Observe

AstroImageJ

Analyze

Upload

Publish

REQUEST DATA

Bryan Martin

Harvard/CfA
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Harvard/CfA
• EXOplanet Transit Interpretation Code
• Real astronomy analysis tool
• Teach you how science is done
• Have step-by-step tutorials on how to use

Zellem et al. 2020
DEC 2021 OBSERVING CAMPAIGN

24 facilities; <=0.7-m (30-in)

Pearson et al. (2022)
EXOPLANET WATCH

Get started here: exoplanets.nasa.gov/exoplanet-watch

Exoplanet Watch Workshop
Jan 18, 2023, 4 PM EST