

To Calculate the Radius of Exoplanets by Observing Multicolor Transit

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Last school year, the exoplanet research group from this school observed two fixed stars which we predict to have exoplanets using the transit method. Regarding this, the radius that we predicted was 10~20% larger than literature data. We think that the cause is an exoplanet's atmosphere, so we used four types of filters; B, V, Rc, Ic, and performed multicolor photometry to observe the transits. As a result, using a shorter wavelength filter, the exoplanet's radius was larger than with a filter of long wavelength. This is thought to be by the scattering by the atmosphere of exoplanets.

Keywords: Exoplanet, Transit, Multicolor photometry observation

