The small reduction of a stellar flux produced by the transit of a planet in front of its disc is a powerful tool to detect extra-solar planets, including terrestrial ones. It requires the photometry of a stellar field with a large number of objects, either from the Ground (giant planets) or Space (giant and terrestrial planets).

If the observation duration is continuous and long enough, a criterion to identify such events is the strict equality of time intervals between transits. When this is not possible, we show that photometry in different colors allows discriminating between planetary transits and stellar variation mimics.

For a given observational run, this can extend detection to planets further away from their star e.g. in the Habitable Zone.