

PPS010-09

Room: 201A

Time: May 27 16:00-16:15

## Measurements of the Transit Timing Variations (TTVs) using 61cm telescope in New Zealand

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About 400 extra-solar planetary systems have been found by several techniques so far. It appears that more than 10% of them have multiple planets, and studying them is important to understand the planetary evolution process.

Transiting planet has a special orbit of passing in front of the host star which can be seen as periodical dimming of the host star's brightness. If an unknown additional body exists in the system, the transit period can change due to mutual interactions. This effect, known as the Transit Timing Variations (TTVs), can be used to detect an additional planet. The signals can be found by moderate-size (0.5-2m) ground telescopes even if the third body has only an earth mass.

I present the measurements of the TTVs of several transit systems in the southern hemisphere by using 61cm B&C telescope in New Zealand.

Keywords: extra-solar planet, transit