

Observations of extrasolar planets by the transit method

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We have observed the extrasolar planets by transit method from summer of 2005 at Nayoro city-run astronomical observatory, Kihara, Hokkaido. We use a 25cm reflecting telescope and a CCD detector, SBIG STL1001E. We observed TrES-1 at August 31, 2005. The star is well known, transitsearch.org (<http://transitsearch.org>). When we observed TrES-1, the weather was fine, but thin cloud sometimes passed. Therefore, we used a IR band filter to be unaffected by the water vapor. Exposure time was 20 seconds. Image size was 1024 x 1024 pixels. Number of images was 537. The magnitudes of the stars in images were checked by Mira, photometry software. As a result of observation, we confirmed that a planet had passed through the front of main star (fixed star). Our method is able to observe the extrasolar planets. However, some dispersion occurred, when the number of serial photographing was more than 200 images.

It is due to CCD detector characteristics.