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Warkauden Kassiopeia

Mitä tapahtunut sitten viime Cygnuksen

Kerhotalo valmistui

- Härkämäen kerhotalo valmistui keväällä 2013 lähes aikataulussa
- Avajaiset pidettiin 19.5. ja paikanpäälle saapui satakunta ihmistä.

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Kerhotalo valmistui

- Katolla aurinkoke-räimet joilla saadan lämmitys noin 8kk/vuosi

- Luontopolku observatorion ympäristöön valmistumassa

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Nettisivut uudistuivat

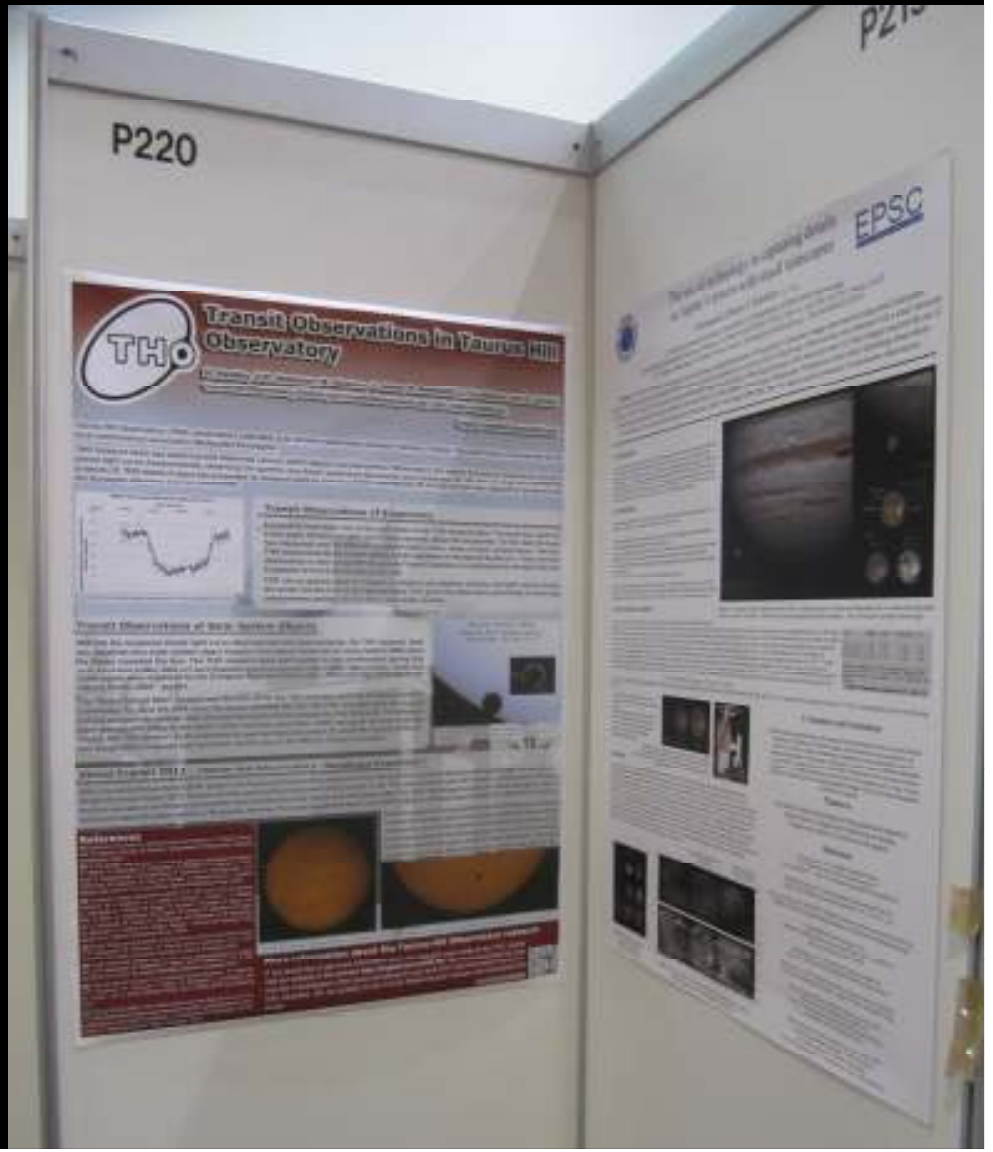
- Nettisivu-uudistus valmistui keväällä 2013
- Pohjana toimii WordPress helppokäytettävyyden takia
- Kalenteri yms. uudistuksia

Starlight Express Oculus All Sky -kamera

- Heinäkuussä 2013 Härkämäelle asennettiin All Sky –kamera
- Tarkoitus kuvata mm. meteoreja.
- Tulevaisuudessa tuorein kuva suoraan nettisivuille

Härkämäki maailmalla

- Härkämäen havaintoja esiteltiin EPSC 2012 (Madrid) syyskuussa 2012
- Tuomo Salmi piti puheen EWASS 2013 (Turku) heinäkuussa 2013



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Tulevaisuus

- Vuosittainen aurinkopäivä 4.8.2013 Härkämäellä
- Posteriesitys EPSC 2013 (Lontoo)
- Supernovahavainto-toiminnan aloittaminen uudelleen

EPSC Abstracts
Vol. 8, EPSC2013-443, 2013
European Planetary Science Congress 2013
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Pro-Amateur Observatories as a Significant Resource for Professional Astronomers – Taurus Hill Observatory

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Abstract

Taurus Hill Observatory (THO), observatory code A95, is an amateur observatory located in Varkaus, Finland. The observatory is maintained by the local astronomical association of Warkauden Kassiopeia [8].

THO research team has observed and measured various stellar objects and phenomena. Observatory has mainly focused on asteroid [1] and exoplanet light curve measurements, observing the gamma rays burst, supernova discoveries and monitoring [2]. We also do long term monitoring projects [3]. THO research team has presented its research work on previous EPSC meetings ([4], [5], [6], [7]) and got very supportive reactions from the European planetary science community.

The results and publications that pro-amateur based observatories, like THO, have contributed, clearly demonstrates that pro-amateurs are a significant resource for the professional astronomers now and even more in the future.

1. High Quality Measurements

The quality of the telescopes and CCD-cameras has significantly developed in 15 years. Today it is possible for pro-amateur astronomers to make high quality measurements with the precision that is scientifically valid. For example in THO we can measure exoplanet transits < 10 millimagnitude precision when the limiting magnitude of the observed object is 15 magnitudes. At very good conditions it is possible to detect as low as 1 to 2 millimagnitude variations in the light curve. As shown in figures 1 and 2 [9], the quality of the measurements today is as good as in many Earth based professional observatories less than 10 years ago.

2. Transit Observations in THO

Exoplanets have been one of the specialties of the THO research team. The team has made for some years transit and light curve measurements about the exoplanets. To this date the team has measured over 30 different exoplanet light curves, some of them several times. The first THO measurements have been added to AXA-database is maintained by Bruce L. Gary and now observatory is also using EDT (Exoplanet Transit Database) maintained by Variable Star and Exoplanet of Czech Astronomical Society [9].

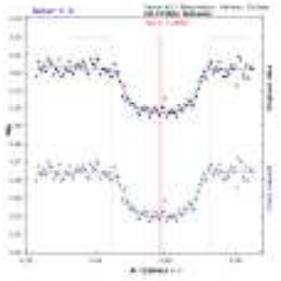

Figure 1: THO measurement from the exoplanet Qatar-1b (1.5.2013). Figure: THO / TRESCA.

THO site is optimal place in Finland to observe and measure transits and light curves during the winter due the lack of the light pollution. This gives the observatory possibility to have long measurement periods during these dark winter months.