EPSC 2017

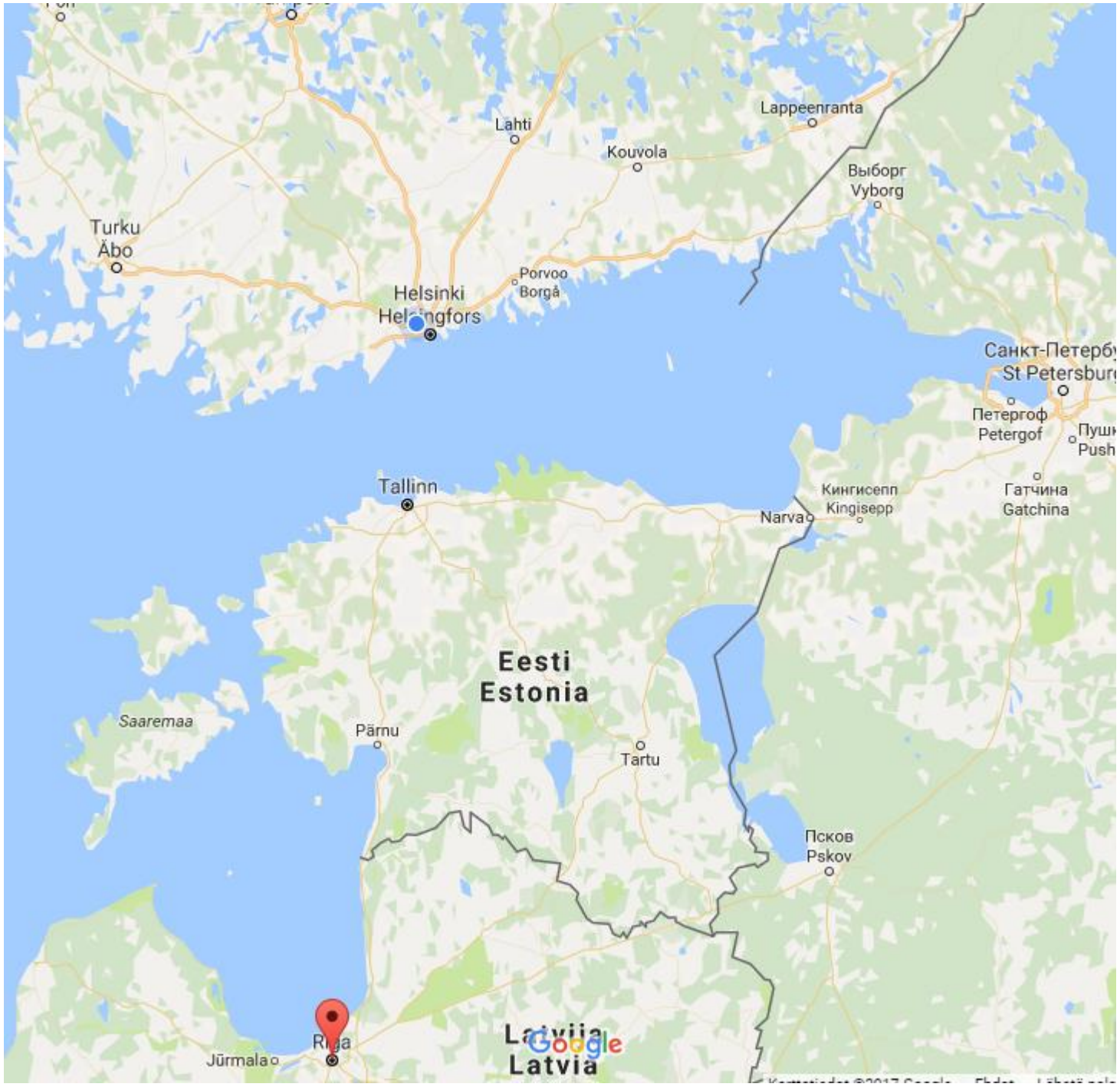
European Planetary Science Congress 2017

17–22 September 2017

Radisson Blu Hotel Latvija | Riga | Latvia

Paikka ja aika

- Riika, Latvia
- Syyskuun 17.-22. päivä
- Koko viikon ajan avaruusasiaa
- Suorat lennot
  - Helsinki
  - Tampere (alkaa vuonna 2017)

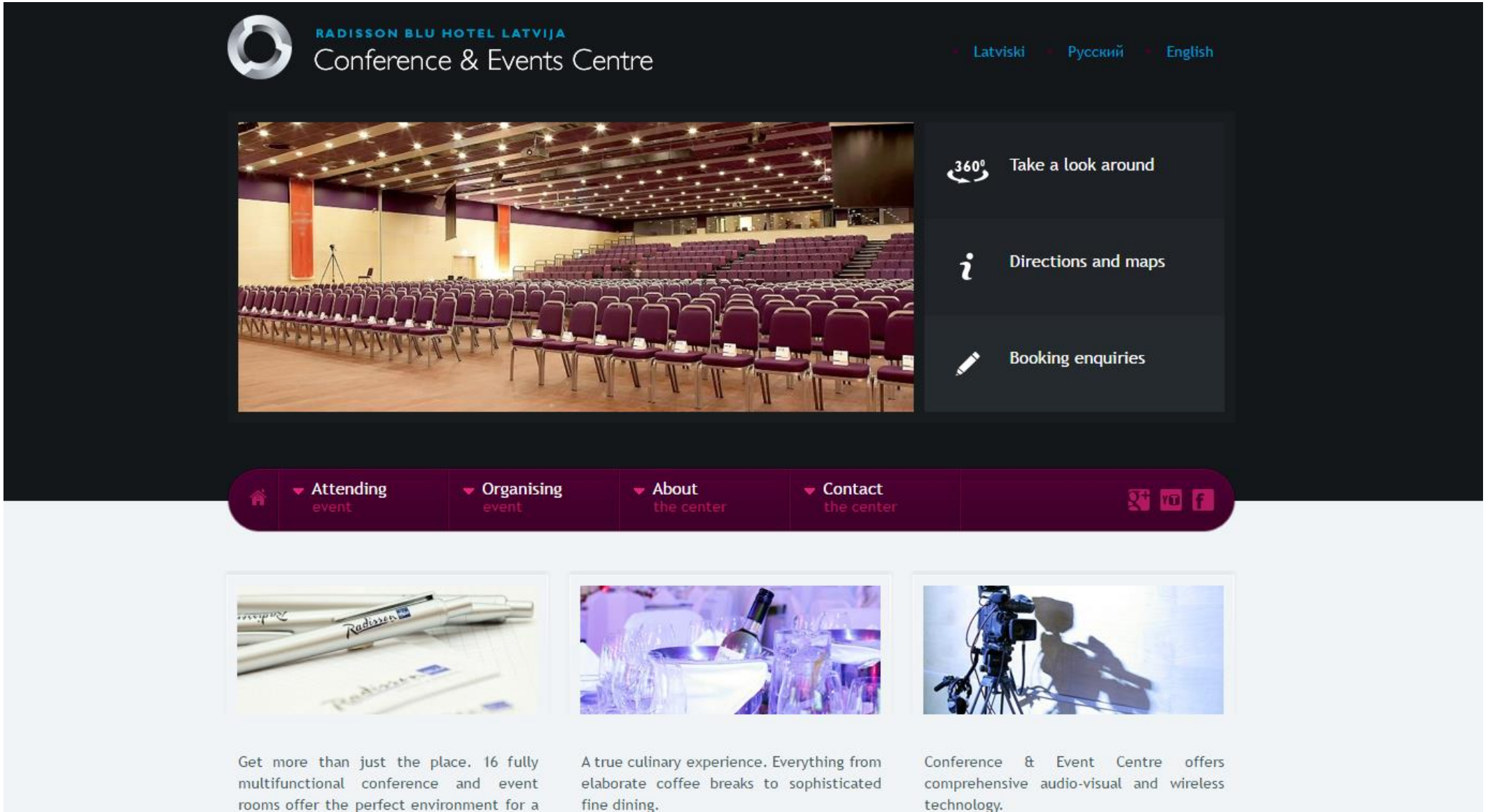


Paikka

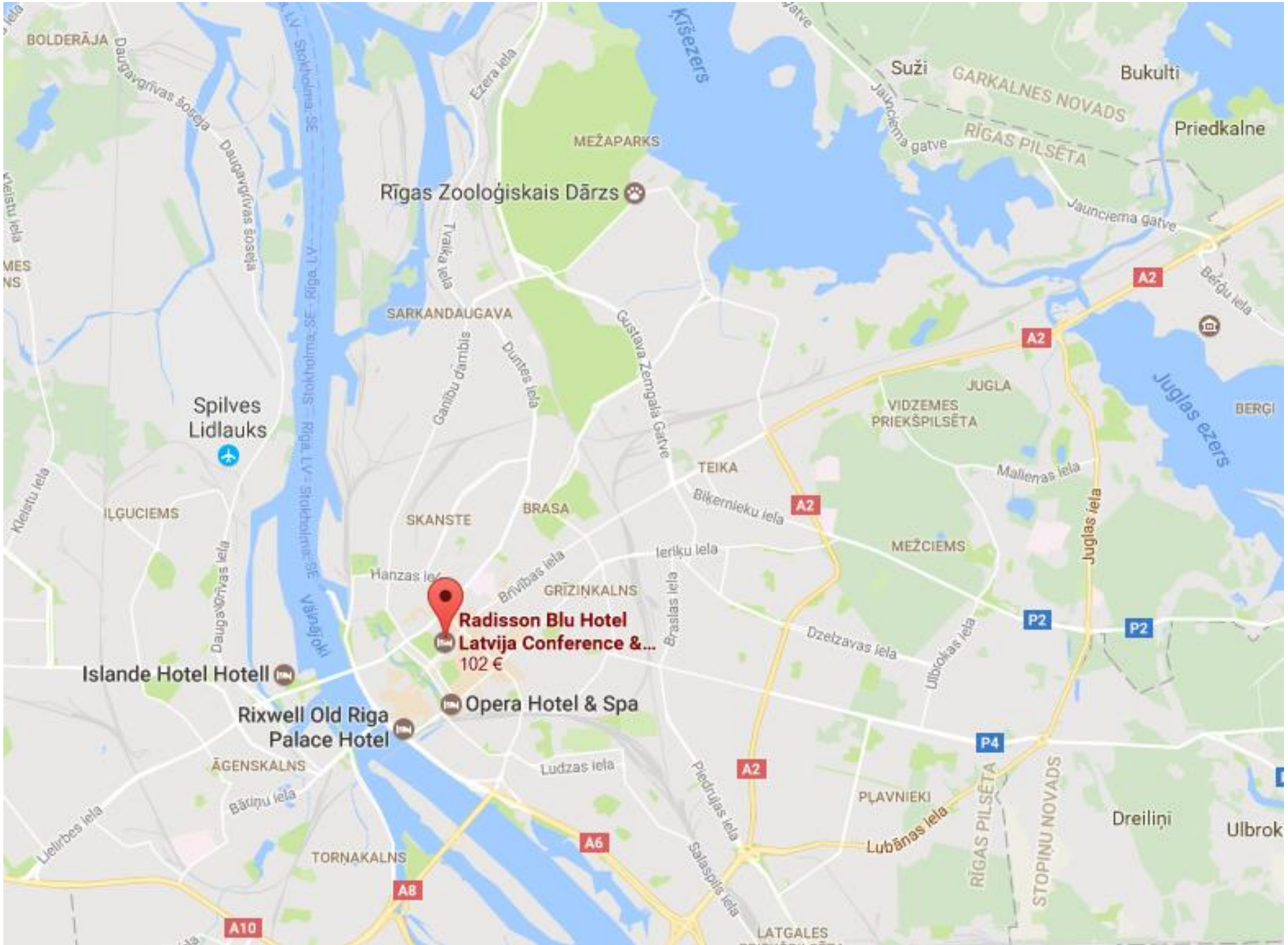
- Radisson Blu Hotel Latvija
- Riika, Latvia
- Konferenssihotelli keskellä Riikaa
- Koko hotelli konferenssihuoneineen käytössä
- Majoitus myös samassa paikassa, jos haluaa
  - Majoitusta tarjolla suhteellisen edullisesti myös muualla

Paikka

http://www.rigaconference.com/en



Paikka


Radisson Blu Hotel
Latvija Conference &...
102 €
Islande Hotel Hotell
Opera Hotel & Spa
Rixwell Old Riga
Palace Hotel
Rīgas Zooloģiskais Dārzs
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Juglas ezers
BOLDERĀJA
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TORŅAKALNS
PĻAVNIEKI
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Bukulti
Suži
GARKALNES NOVADS
RĪGAS PILSĒTA
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A2
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Paikka


iPad
12:47
80%
Amphora
Jautrais maiznieks
Burga
Steak Point
Jeruzalemes iela
Double coffee
Valdemārs
Tejnīca
Costa Coffee
Elizabetes iela
Narvesen
The Latvian National Museum of Art
Skolas iela
El Divino
Honkonga
Jam Store
Grande Brasserie Riga
Brown Sugar
Shogun
Radisson Blu - Hotel Latvija
Barklaja de Tolli piemineklis
Esplanāde
SMP banka
Street Burger
Gan Bei
Armenia
Rimi
Tinto
Jumava
Ministru kabinets
Rīgas apgabaltiesa
Double Coffee
UniCredit Bank
La Kanna
Arka
Tokyo city
Lido Vērmanītis
Krustpunkts
Latvijas balzams
Large size shoes - Apavi 40+
Lāčplēša iela
Krišjāņa Valdemāra iela
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delicio
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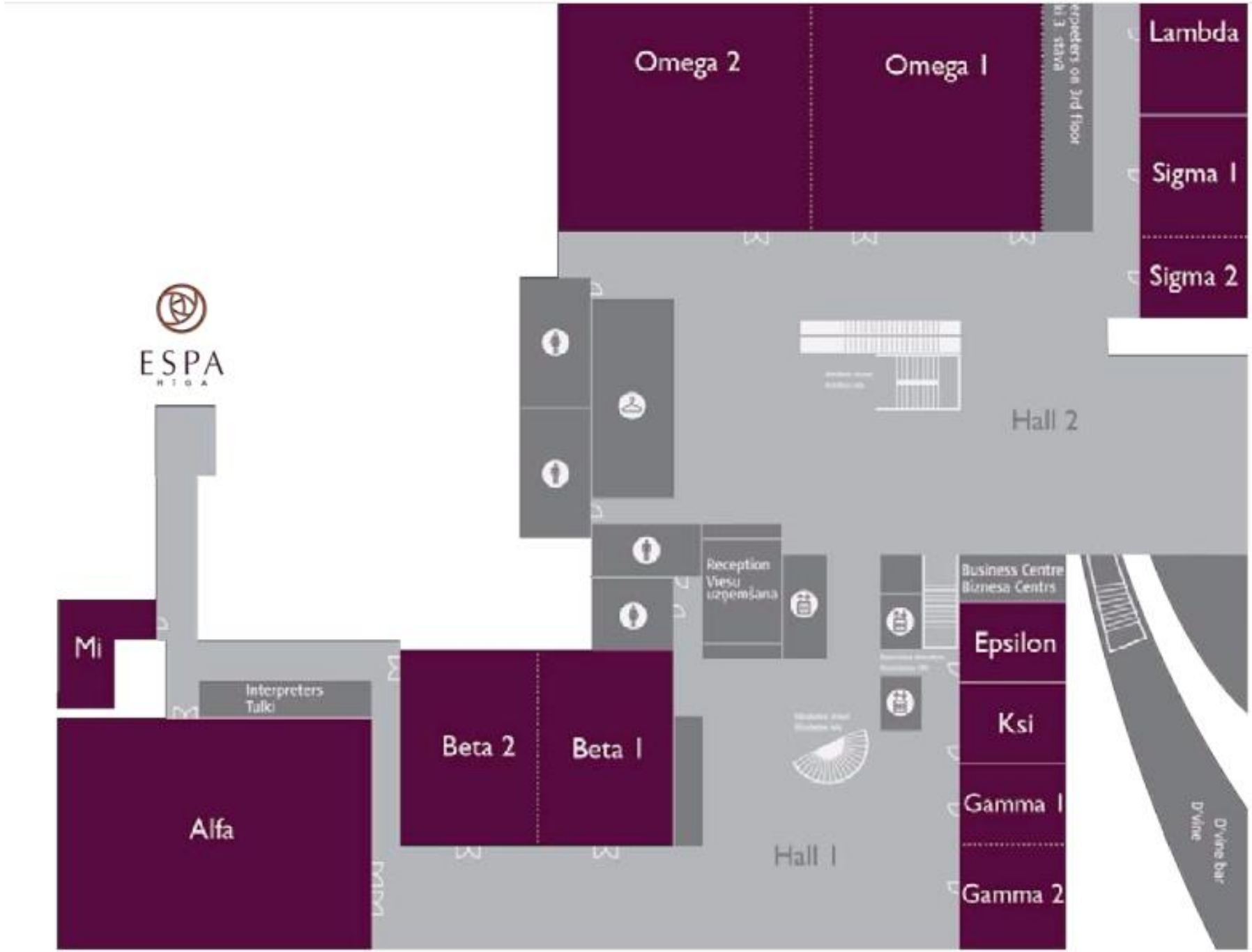
4 DecorAsian
Wishes
Daily
Mazā kaņepe
Baltie gadalaiki
Dr. J. Ģīļa privātklīnika
Pie Kristapa kunga
Raušu meistars
Akselon
MiiT Coffee
Seventh-day Adventist Church
Citi laiki
Burbuļnīca
Latvijas pasta banka
Drogas
Viptattoo
Artishok
Julia Apartments
Costa Coffee
Rūdolfa Blaumaņa iela
Terra
Sala

Paikka


Omega 2
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Interpreters
Tulki
Beta 2
Beta 1
Alfa
Hall 1
D'vine bar
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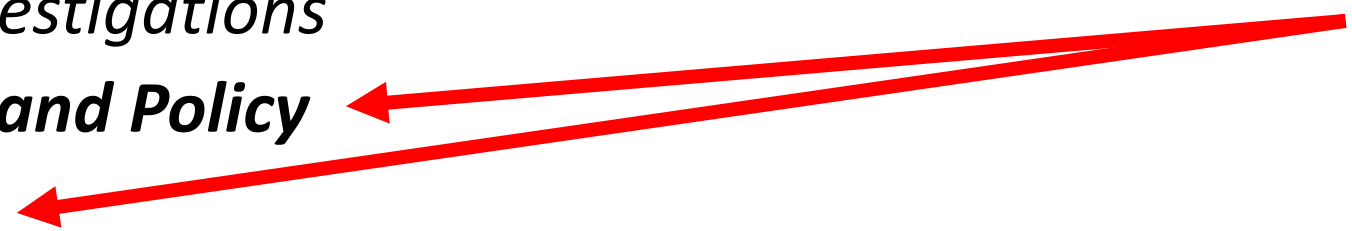
Sessiot

- *TP Terrestrial Planets*
- *LSE Lunar Science and Exploration*
- *OPS Outer Planet Systems*
- *MG Magnetospheres and Space Physics*
- *MT Missions, Techniques and Industry*
- *EX Exoplanets and Origins*
- *AB Astrobiology*
- *SB Small Bodies*
- *LF Laboratory and Field Investigations*
- ***OEP Outreach, Education, and Policy***
- ***AM Amateur Astronomy***



Sessiot

AM – Amateur Astronomy

- **AM1**
  Amateur collaborations in small bodies, terrestrial, giant and exo planets professional studies
  Convener: M. Delcroix | Co-conveners: C. Pellier , R. Hueso , A. A. Christou , P. A. Yanamandra-Fisher , H. Haukka

- **AM2**
  Juno Ground-Based Support from Amateurs
  Convener: M. Delcroix | Co-conveners: J. Rogers , C. Pellier , R. Hueso , G. S. Orton , L. Fletcher , P. A. Yanamandra-Fisher

- **AM3/OEP6**
  Citizen Science with Big Data: Intersection of Outreach, Crowd-Sourced Data and Scientific Research (co-organized)
  Convener: P. A. Yanamandra-Fisher | Co-conveners: M. Gritsevich , T. Heenatigala , A. Heward

Sessiot

Sessiot ovat:

- Posterisessioita
  - Posteri/juliste joka esittelee toimintaa
  - Yksi ilta, noin 3 tuntia, jolloin posterilla esitellään posterin sisältöä
- Puhesessioita
  - Puhe
  - Noin 10-15 min sisältäen kysymykset

Sessiot

Esimerkki posterista

- **Organized network for supporting the amateur–scientist co-operation in Finland**; V. Mäkelä, H. Haukka, A. Oksanen and V-P. Hentunen; European Planetary Science Congress 2014; Vol. 9, EPSC2014-168, 2014 [PDF]; Poster
- **Pro-Amateur Observatories as a Significant Resource for Professional Astronomers – Taurus Hill Observatory**; H. Haukka, V-P. Hentunen, M. Nissinen, T. Salmi, H. Aartolahti, J. Juutilainen and H. Vilokki; European Planetary Science Congress 2013; Vol. 8, EPSC2013-443, 2013 [PDF]; Poster
- **Amateur astronomy by Taurus Hill Observatory**; T. Salmi, V-P. Hentunen; European Week of Astronomy and Space Science (EWASS) 2013, Turku, Finland; Oral talk
- **Transit Observations in Taurus Hill Observatory**; H. Haukka, V-P. Hentunen, M. Nissinen, T. Salmi, H. Aartolahti, J. Juutilainen and H. Vilokki; European Planetary Science Congress 2012; Vol. 7 EPSC2012-169 2012 [PDF] [Kuvia tapahtumasta]; Poster
- **Ground Based Support for Exoplanet Space Missions**, Oral presentation; H. Haukka, V-P. Hentunen, M. Nissinen, T. Salmi, H. Aartolahti, J. Juutilainen and H. Vilokki; EPSC-DPS Joint Meeting 2011; Vol. 6, EPSC-DPS2011-683, 2011 [PDF, tiivistelmä] [Kuvia tapahtumasta]; Oral talk
- **Small telescope stellar object light curve measurements**; H. Haukka, V-P. Hentunen, M. Nissinen, T. Salmi and H. Aartolahti; European Planetary Science Congress 2010; Vol. 5, EPSC2010-170, 2010 [PDF]; Poster
- **Small Telescope Exoplanet Observations in Taurus Hill Observatory**; V.-P. Hentunen, M. Nissinen, H. Haukka and H. Aartolahti; European Planetary Science Congress 2009; Vol. 4, EPSC2009-119, 2009 [PDF]; Poster

P171, EPSC2014-168

Organized network for supporting the amateur–scientist co-operation in Finland

V. Mäkelä (1), H. Haukka (1,2), A. Oksanen (1,3) and V.-P. Hentunen (2)

((1) Ursa Astronomical Association, Finland (veikko.makela@ursa.fi / Tel. +358-50-5668023), (2) Taurus Hill Observatory, Finland, (3) Astronomical Association Jyväskylän Sirius, Finland

PROAM network is a working group of Ursa Astronomical Association [1] for supporting Finnish amateur astronomers participating to co-operation projects between professional and amateur astronomers. The network relays the information on projects, maintains professional contacts and arranges training on technical skills for research work.

Background

Finnish Observatory Network [2] was originally founded for co-operation between the observatories of Finnish amateur astronomical associations and private amateurs who were interested in professional–amateur astronomy. Its goals were to help amateurs and associations in communication between professional and amateur astronomers and to share know-how in construction and equipping of observatories.

Results and Main Interest

During the last ten years the teams and members of the network (figure 1) have participated in several professional research projects, eg.

- photometry of exoplanet transits [3] (figure 4)
- asteroid search and monitoring
- photometry of asteroids [7] [9]
- mutual phenomena of Galilean satellites [4] (figure 5)
- comet monitoring campaigns [5]
- supernova search and monitoring [8]
- photometry of variable stars [6]
- photometry of GRB optical afterglows [10]

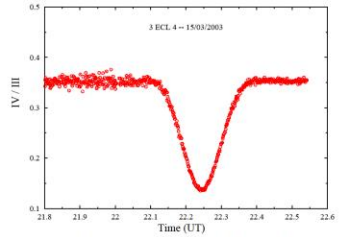


Figure 5: PHEMU03 [4] Campaign observations in Nyrola Observatory with 16-inch Meade LX200 and SBIG ST8XE CCD camera by A. Oksanen: Ganymede eclipsing Callisto on 15 Mar 2003.

References

[1] http://www.ursa.fi

[2] http://www.ursa.fi/torniverkko/english.html

[3] http://var2.astro.cz/ETD/index.php

[4] *The PHEMU03 catalogue of observations of the mutual phenomena of the Galilean satellites of Jupiter*; Arlot, J.-E., et. al.; Astronomy and Astrophysics, Volume 493, Issue 3, 2009, pp.1171-1182

[5] http://stsp.astro.umd.edu/

[6] http://www.aavso.org/

[7] *Asteroids' physical models from combined dense and sparse photometry and scaling of the YORP effect by the observed obliquity distribution*; J. Hanuš, et. al.; Accepted for publication in A&A, January 15, 2013

[8] *A low-energy core-collapse supernova without a hydrogen envelope*; S. Valenti, et. al.; Nature 459, 674-677 (4 June 2009); Nature Publishing Group, 2009

[9] *Lightcurve inversion for asteroid spins and shapes*; J. Torppa; University of Helsinki, Faculty of Science, Department of Astronomy; Doctoral dissertation; 2007

[10] *Afterglow Upper Limits for Four Short-Duration, Hard Spectrum Gamma-Ray Bursts*; Hurley, K., et. al.; The Astrophysical Journal, Volume 567, Issue 1, 2002, pp. 447-453

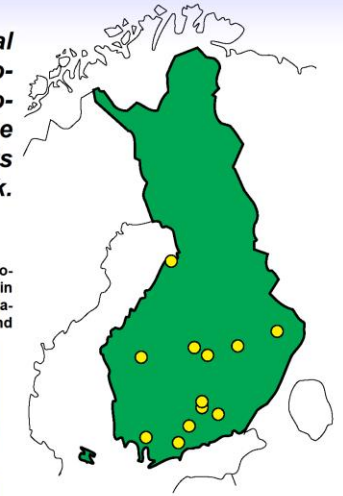


Figure 1: The map presenting the teams and members of the Finnish Observatory Network in Finland.

Figure 2: Hankasalmi observatory on winter. Photo: Arto Oksanen.

Figure 3: Taurus Hill Observatory on summer. Photo: Jari Juutilainen.

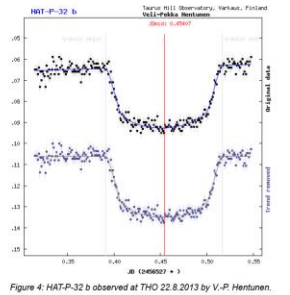


Figure 4: HAT-P-32 b observed at THO 22.8.2013 by V.-P. Hentunen.

Goals of the PROAM Network

The main goals of Finnish PROAM network are:

1. Relay information on professional research projects, campaigns and observational requests where amateur contribution is needed
2. Be a contacting channel between professional astronomers and Finnish amateur astronomers
3. Help and train the network members in research skills, eg. photometry and data processing

The network have own web pages [2] and use e-mail and other electronical channels for communication.

Present Network

Recently the scope of the network is focused more on private amateurs interested in scientific work in professional-amateur projects, and the working group is renamed as Finnish PROAM network. The interest to scientific work among Finnish amateur astronomers is rising. There are plenty of high quality instruments and observatories in Finland. There is obvious need for information and support on research work.

Acknowledgements

Authors wants to give acknowledgements to all individual members and observatories who have involved in Finnish PROAM network. Also we want to give thanks to the scientists and institutes who have supported the network.

Poster design: Harri Haukka

Pro-Amateur Observatories as a Significant Resource for Professional Astronomers–Taurus Hill Observatory

H. Haukka, V-P. Hentunen, M. Nissinen, T. Salmi, H. Aartolahti, J. Juutilainen and H. Vilokki

Taurus Hill Observatory, Finland (harri.haukka@kassiopeia.net / Tel: +358-443406510)

http:/www.taurushill.net

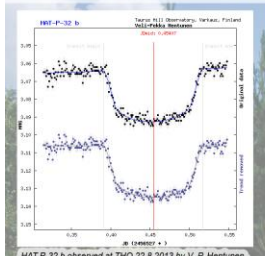
Taurus Hill Observatory (THO), observatory code A95, is an amateur observatory located in Varkaus, Finland. The observatory is maintained by the local astronomical association Warkauden Kassiopeia.

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] and [7] and got very supportive reactions from the European planetary science community.

OJ287 Observation Campaign 2006 - 2008

OJ287 was observed at THO from December 2006 to October 2008 about 50 times. The measurements were made normally once a week according to the prevailing weather conditions. The target was usually imaged with the exposures of 300 or 600 seconds through the photometric R-filter and on each observation night 3 - 6 times. In photometric measurements THO reserarch team used the finding chart and the brightness list of the check stars which are listed on the project pages of OJ287: *www.astro.utu.fi/OJ287MMVI/*. The observation results were submitted to Dr. Kari Nilsson from Tuorla Observatory. We usually achieved brightness precision of 0.01 magnitudes. Our results were in harmony with the measurements done by others around the world. Also, THO's measurements of OJ287 measurements were used in the article that was published in Nature, April 2008 [2].

OJ287 is an Active Galactic Nuclei (AGN) that is located about 4,3 billion light years from Earth. There has been a variation in the brightness of the OJ287 in 12 years cycle. Photo: V.-P. Hentunen and M. Nissinen.



HAT-P-32 b observed at THO 22.8.2013 by V.-P. Hentunen.

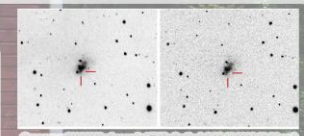
Transit Observations of Exoplanets

Exoplanets have been one of the specialties of the THO research team in Finland. The team has made for now many years transit and light curve measurements about the exoplanets. To this date the team has measured over 40 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 mainly using EDT maintained by Variable Star and Exoplanet of Czech Astronomical Society. Some of the measurements have been send to the Pulkovo Observatory (Russia) for further analysis.

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.

Supernovae Discoveries and Monitoring

THO has been the most active supernovae observer in Finland. The observatory research team has discovered eigth new supernovae from the northern part of the sky. Observatory has also monitored few interesting supernovae. For example, the measurements of the supernova SN 2008ha were used in the Nature article [3] published in June 2009.



Supernova SN 2008ha imaged at THO. On the left 28.11.2008 18:06 and on the right 28.11.2008 18:37. Both images are unfiltered 4x300 sec.

References

[1] *Lightcurve inversion for asteroid spins and shapes*; J. Torppa; University of Helsinki, Faculty of Science, Department of Astronomy; Doctoral dissertation; 2007

[2] *A low-energy core-collapse supernova without a hydrogen envelope*; S. Valenti, A. Pastorello, E. Cappellaro, S. Benetti, P. A. Mazzali, J. Manteca, S. Taubenberger, N. Elias-Rosa, R. Ferrando, A. Harutyunyan, V.-P. Hentunen, M. Nissinen, E. Pian, M. Turatto, L. Zampieri and S. J. Smartt; Nature 459, 674-677 (4 June 2009); Nature Publishing Group, 2009

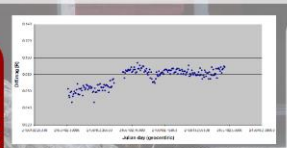
[3] *A massive binary black-hole system in OJ 287 and a test of general relativity*; M. J. Valtonen, H. J. Lehto, K. Nilsson, J. Heidt, L. O. Takalo, A. Sillanpää, C. Villforth, M. Kidger, G. Poyner, T. Pursimo, S. Zola, J.-H. Wu, X. Zhou, K. Sadakane, M. Drozdz, D. Kozieł, D. Marchev, W. Ogloza, C. Porowski, M. Siwak, G. Stachowski, M. Winiarski, V.-P. Hentunen, M. Nissinen, A. Liakos, S. S. Dogru; Nature - Volume 452 Number 7189 pp781-912; Nature Publishing Group; 2008

[4] *Small Telescope Exoplanet Observations in Taurus Hill Observatory*; V.-P. Hentunen, M. Nissinen, H. Haukka and H. Aartolahti; Vol. 4, EPSC2009-119, 2009; European Planetary Science Congress 2009

[5] *Small telescope stellar object light curve measurements*; H. Haukka, V.-P. Hentunen, M. Nissinen, T. Salmi, and H. Aartolahti; Vol. 5, EPSC2010-170, 2010; European Planetary Science Congress 2010

[6] *Ground Based Support for Exoplanet Space Missions*; H. Haukka, V-P. Hentunen, M. Nissinen, T. Salmi, H. Aartolahti, J. Juutilainen and H. Vilokki; Vol. 6, EPSC-DPS2011-683, 2011, EPSC-DPS Joint Meeting 2011

[7] Transit Observations in Taurus Hill Observatory, H. Haukka, V-P. Hentunen, M. Nissinen, T. Salmi, H. Aartolahti, J. Juutilainen and H. Vilokki, Vol. 7 EPSC2012-169, European Planetary Science Congress 2012



Asteroid 22 Kalliope light curve measured at THO 19./20.4.2013.

Asteroid Light Curve Measurements

The Taurus Hill Observatory research team has measured dozens of light curves of different asteroids at THO since 2006. Because the rotation period of an asteroid is often 5 - 10 hours this usually means that the measurements take all night. Because of the quite fast relative motion of asteroids the exposure time must be short, about one minute. However, this is usually enough when using photometric R-filter since the brightness of the objects are between 11 and 13 magnitudes. Some of our measurements were submitted to Dr. Johanna Torppa who analyzed them. Her doctoral thesis "*Light curve inversion for asteroid spins and shapes*" [1], was accepted in December 2007 and THO asteroid measurements were part of the thesis.

THO has also made asteroid observation for the Pulkovo Observatory (Russia). One of them is 22 Kalliope that was observed at THO April 2013. Pulkovo Observatory is interested in multiply asteroids. These asteroids have unique "zik-zak" -shape of light curve that is also clearly visible in THO measurements.

More information about the Taurus Hill Observatory research

If You would like to get more information about the research work made at the THO, please visit our website in the address ***http://www.taurushill.net***. We recommend that You also visit the Transitsearch (*http://www.transitsearch.org/*) and AXA (*http://brucegary.net/AXA/x.htm*) websites. We are grateful to the Finnish Meteorological Institute who sponsored this poster.

Poster design: Harri Haukka

Background image: Jari Juutilainen

Mitä kannattaa esitellä?

Kaikkea mikä vähänkin liippaa tiedettä

Suomalaiset ovat Euroopan tasolla todella **PROAM**

- Fotometriset mittaukset
- Planeettakuvat
- Meteorit
- Komeetat
- Kaikki mikä on vähänkin ”erikoisempaa”
- Yleistä toimintaa Suomessa/paikkakunnalla

How to submit an abstract?

- Thank you very much for your interest in the European Planetary Science Congress 2017. The following steps should give you a guideline for the submission of your abstract. You are kindly asked to prepare your abstract as PDF file locally on your own computer, using the templates supplied below, and then to submit the PDF you have generated. We encourage you to make use of the two pages available to produce a high quality abstract. These will be available on line, and to search engines.
- Browse through the session programme and select the session of your interest;
- Use the link "Abstract submission" at the respective session;
- You are asked to login to the Copernicus Office Meeting Organizer. Use your account data or create a new account;
- Fill in the submittal information about title, author(s), and affiliation(s) of author(s);
- Use the template for WORD (doc) or LaTeX (tex) to generate your two page abstract as a PDF file; **important: please check that the page size of your generated PDF file is 237 (height) x 180 (width) mm;**
- Upload your prepared abstract PDF file via the "Browse" button;
- Provide a summary of your contribution (e.g. the content of your "Abstract" paragraph) in the text box. Please note that this summary will later be used for indexing your abstract.
- The online system then embeds **your** abstract PDF file in an umbrella template including the automatic generation of the actual citation header. The outcome is a complete abstract PDF file including citation;
- If the conversion of your abstract fails, please specify your problems, we will then take care of solving these problems.
- In case any questions arise, please contact us at epsc2017@copernicus.org

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17–22 September 2017
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Aims & scope

The intention of the European Planetary Science Congress 2017 is to cover a broad area of science topics related to planetary science and planetary missions. The programme of the congress will contain oral and poster sessions, and it will emphasize workshops and panel discussions in order to have a strong interaction between the participants.

The Scientific Organizing Committee of the EPSC2017 invites all planetary scientists to participate in the congress, submit contributions to the topical sessions and share their research with colleagues and friends. We look forward to welcoming you in Riga, Latvia.

Latest information

- Abstract submission deadline: **3 May 2017, 13:00 CEST**

http://www.epsc2017.eu/

Deadlines & milestones

Date	Task	Group
14 December 2016–31 January 2017	Call-for-sessions: public can suggest sessions in the various Programme Groups	Community
01–08 February 2017	Session Programme Finalisation based on the Call-for-Sessions suggestions	SOC
15 February 2017	Call-for-abstracts, start of the abstract submission	Community
03 May 2017, 13:00 CEST	Abstract submission deadline	Community
04–17 May 2017	Convener Part 1 + 2 (SOI + II) Convener Part 1: acceptance, rejection, transfer of abstracts to other sessions (no oral/poster selection at this stage), additional upload of abstracts by conveners are possible Convener Part 2: Session Tagging, i.e. conveners communicate wishes and requirements regarding room size, time blocks, no-overlap requests, to SOC	Conveners
18–23 May 2017	PCI (SOC Part 1): evaluation of rejected and unassigned contributions, finalization of sessions that have not completed SOI task	SOC
24 May 2017	Letter of acceptance (information to authors if their abstract is accepted and in which session, no information about oral or poster decision)	Copernicus
25–31 May 2017	PCII (SOC Part 2): assigning of time blocks, rooms, days and exact session times to each session on the basis of convener requests and consistency for the programme	SOC
01–14 June 2017	Convener Part 3 (SOIII): oral/ poster selection (according to assigned timeblocks), ordering of presentations	Conveners
15–21 June 2017	PCIII (SOC Part 3): finalization of programme	SOC
22 June 2017	Letter of schedule (information to authors with precise information regarding session, time and length of presentation, etc.) Upload of conference programme on website	Copernicus
13 July 2017	Deadline for information to be included in programme book (welcome text, adverts, etc.)	SOC
15 August 2017	Deadline for letter of invitation requests	Community
31 August 2017	Deadline for daily programme	Conveners
17–22 September 2017	European Planetary Science Congress 2017	Community

Mitä seuraavaksi?

- Aikataulun mukaan mennään
- Tiivistelmät pitää lähettää aikataulussa
- Aikataulu, mm. Sessioiden aikataulu, ratkeaa myöhemmin
- Harrastajien pitää miettiä osallistuminen
  - Posteri/puhe ei pakollinen
  - Hinta harrastajille noin 50...75e koko tapahtumasta

Kehen yhteyttä?

- Allekirjoittaneeseen harri.haukka@fmi.fi
- Sessioiden pitäjiin → yhteystiedot
- LOC
  - Amara Graps (Chair), graps@psi.edu
  - Manuel Grande, m.grande@aber.ac.uk
  - Copernicus Meetings, Mario Ebel, epsc2017@copernicus.org