

Fincospar 2019, Helsinki
Unioninkadun juhlahuoneisto, Unioninkatu 33, Helsinki

Wednesday 28.8.2019

09:00 – 09:45 Registration

Space physics:
Chair: Emilia Kilpua

- 09:45 – 10:00** **Opening:** Palmroth, M., Chair of Finnish Cospar National Committee
- 10:00 – 10:30** **Keynote:** Mursula, K., Short history of the Sun: Contributions of ReSoLVE to Space climate (25+5)
- 10:30 – 10:45** **Invited:** Morosan, D. Shock Signatures of Solar Coronal Mass Ejections at Radio Wavelengths (12+3)
- 10:45 – 11:00** **Invited:** Kay, C., Physics-Driven CME Modeling from Sun to Earth (12+3)
- 11:00 – 11:15** Asvestari, E., Dissauer, K., Holzkecht, L., Temmer, M., Kilpua, E., Pomoell, J., Veroning, A., Scolini, C., Good, S., Price, D. J., Lumme, E., Constraining the CME input parameters to EUHFORIA (12+3)
- 11:15 – 11:30** Turc, L., Roberts, O.W., Archer, M.O., Palmroth, M., Battarbee, M., Brito, T., Ganse, U., Grandin, M., Pfau-Kempf, Y., Escoubet, C.P., Dandouras, I., Disruption of the Earth's foreshock wave field during magnetic clouds (12+3)
- 11:30 – 11:45** Johlander, A., Battarbee, M., Pfau-Kempf, Y., Turc, L., Ganse, U., Brito, T., Grandin, M., Dubart, M., Vaivads, A., Khotyaintsev, Yu V., Caprioli, D., Schwartz, S. J., Palmroth, M., Global effects on ion acceleration at the Earth's bow shock (12+3)

11:45 – 12:45 Lunch

Space physics, space technology
Chair: Urs Ganse

- 12:45 – 13:00** Dubart, M., Ganse, U., Osmane, A., Grandin, M., Brito, T., Battarbee, M., Pfau-Kempf, Y., Turc, L., Palmroth, M., Investigation of ion-scale waves within a global hybrid-Vlasov simulation (12+3)
- 13:00 – 13:15** Osmane, A., Beyond quasi-linear transport of electrons in the radiation belts (12+3)
- 13:15 – 13:30** Gieseler, J., Oleynik, P., Hietala, H., Vainio, R., Hedman, H.-P., Peltonen, J., Punkkinen, A., Punkkinen, R., Sääntti, T., Hæggeström, E., Praks, J., Niemelä, P., Riwanto, B., Jovanovic, N., Mughal, M. R., Radiation Monitor RADMON aboard Aalto-1 CubeSat: First results (12+3)
- 13:30 – 13:45** **Invited:** Vanhamäki, H., Workayehu, A., Pedersen, M., Aikio, A., Käki, S., Viljanen, A., Global ionospheric current system - View on storms and hemispheric asymmetry (12+3)
- 13:45 – 14:00** Bredenbeck, A., Contact Plan Design Scheme for Space-Terrestrial Networks (12+3)

14:00 – 14:15 Mughal, M.R., Praks, J., Niemelä, P., Bosser, A., Bagus, R., Nemanja, J., Slavinskis, A., Foresail1: Overview and current status (12+3)

14:15 – 14:45 **Coffee**

Space technology, planets, astrophysics

Chair: Jens Pomoell

14:45 – 15:00 Oleynik, P., Vainio, R., Hedman, H.-P., Punkkinen, A., Punkkinen, R., Salomaa, L., Säntti, T., Tuominen, J., Virtanen, P., Bosser, A., Janhunen, P., Kilpua, E., Palmroth, M., Particle Telescope aboard FORESAIL-1: simulated performance (12+3)

15:00 – 15:15 Kahanpää, H., Dust Devils on Mars (12+3)

15:15 – 15:30 Penttilä, A., Väisänen, T., Markkanen, J., Martikainen, J., Kohout, T., Videen, G., Muinonen, K. Space-weathering spectra explained with light scattering simulations (12+3)

15:30 – 15:45 Muinonen, K., Penttilä, A., Grön, J., Cellino, A., Wang, X., Tanga, P., Asteroid proper phase curves from Gaia photometry (12+3)

15:45 – 16:00 Granvik, M., Debaised estimates of the orbits and sizes of near-Earth objects (12+3)

16:00 – 16:15 Saajasto, M., Juvela, M., Pagani, L., Observing and modelling a star forming cloud L1512 (12+3)

16:15 – 16:30 Micelotta, E.R., Juvela, M., Padoan, P., Ristorcelli, I., Alina, D., Malinen, J., Dust polarisation studies on MHD simulations of molecular clouds (12+3)

16:30 – 16:45 Hakala P., Ramsay G., Potter S., Beardmore A., Buckley D., Wynn G., TESS observations of the asynchronous polar CD Ind: mapping the changing accretion (12+3)

Posters and ice breaker

16:45 – 18:15 Posters

1. Tammi, J., Kallunki, J., Mujunen, A., Aatrokoski, J., Tornikoski, M., Opening Metsähovi Radio Observatory's solar observations database
2. Pomoell, J., Price, D., Lumme, E., Kilpua, E., Data-driven time-dependent modelling of the solar coronal magnetic field
3. Battarbee, M., Ganse, U., Pfau-Kempf, Y., Turc, L., Brito, T., Grandin, M., Johlander, A., Koskela, T., Dubart, M., Palmroth, M., Non-locality of the Earth's quasi-parallel bow shock and injection of protons
4. Pfau-Kempf, Y., Battarbee, M., Brito, T., Dubart, M., Ganse, U., Grandin, M., Koskela, T., Turc, L., Johlander, A., Hoilijoki S., Palmroth, M., Dayside magnetopause reconnection in a quasi-3D global hybrid-Vlasov simulation
5. Ganse, U., Battarbee, M., Brito, T., Dubart, M., Grandin, M., Johlander, A., Pfau-Kempf, Y., Turc, L., Palmroth, M., Simulating Earth's Magnetosphere in all Six Dimensions
6. Kauristie, K., and the PECASUS Team, Space weather services for civil aviation
7. Meskanen, M., Toivanen, P., Envall, J., Haslam, S., Polkko, J., Janhunen, P., Mechanical Structure of Plasma Brake Experiment onboard FORESAIL-1

8. Oleynik, P., Vainio, R., Punkkinen, A., Dudnik, O., Gieseler, J., Hedman, H.-P., Hietala, H., Hægström, E., Niemelä, P., Peltonen, J., Praks, J., Punkkinen, R., Säntti, T., Calibration of RADMON Radiation Monitor Onboard Aalto-1 CubeSat
9. Hieta, M., Genzer, M., Schmidt, W., Kallio, E., Huovelin, J., Nikkanen, T., Meskanen, M., Haukka, H., Polkko, J. Harri, A.-M., Ongoing planetary instrumentation missions in Finnish Meteorological Institute
10. Mikkonen, A., Lindqvist, H., Kyrölä, E., Tukiainen, S., Tamminen, J., On Atmospheric Radiative Transfer simulator development for Earth Observation
11. Wilkman, O., Xu, G., Peltoniemi, J., Penttilä, A., Simulating radiation pressure forces on space objects
12. Polkko, J., Kivekäs, J., Janhunen, P., Envall, J., Toivanen, P., Haslam, S., Meskanen, M., High Voltage board of the Electrostatic Plasma Brake onboard ForeSail-1 cubesat
13. Grandin, M., Battarbee, M., Osmane, A., Ganse, U., Pfau-Kempf, Y., Turc, L., Brito, T., Koskela, T., Dubart, M., and Palmroth, M., Hybrid-Vlasov modelling of nightside auroral proton precipitation with the Vlasiator global kinetic model
14. Kohout, T., Wahlund, J.-E., and APEX team, Asteroid Prospection Explorer (APEX) CubeSat for Hera mission
15. Slavinskis, A., Näsilä, A., Pajusalu, M., Praks, J., Reinart, A., Iakubivskyi, I., Kohout, T., Snodgrass, C., Jones, G., Optical Imager for Comets (OPIC) for ESA's F-class mission Comet Interceptor

19:00 – 21:00 Dinner at Svenska Klubben, Maurinkatu 6, Helsinki

Thursday 29.8.2019

09:00 – 10:30 Panel discussion: The role of FinCospar in space administration in Finland + ESA programme opinions (Chair: Minna Palmroth)

10:30 – 11:00 Coffee

Space law, atmospheric physics, astrophysics

Chair: Minna Palmroth

11:00 – 11:30 Keynote: Jenni Tapio, A brief introduction to space law – international and national perspectives (25+5)

11:30 – 11:45 Invited: Lindqvist, H., Hakkarainen, J., Kivi, R., Kivimäki, E., Heikkinen, P., Lamminpää, O., Tamminen, J. Space-based measurements of atmospheric CO₂: achievements and future challenges (12+3)

11:45 – 12:00 Ulich, Th., Jia, J., Nilsen, K., Kivi, R., Newnham, D., Maxfield, D., Ozone Monitoring in the Arctic Mesopause Region (12+3)

12:00 – 12:15 Valtonen, M.J., Space observations of OJ287 in July/August 2019 (12+3)

12:15 – 12:30 Mönkkönen, J., Tsygankov, S., Mushtukov, A., Doroshenko, V., Poutanen, J., Power spectra of X-ray pulsars as a probe of their magnetic field configuration (12+3)

12:30 – 12:45 **Public keynote: Jean-Yves Le Gall, President of CNES, Chair of ESA Council: The CNES president views on the Future of the European Space Research**

12:45 – 13:45 Lunch

Astrophysics

Chair: Diana Morosan

13:45 – 14:00 Berton, M., Björklund, I., Lähteenmäki, A., Järvelä, E., Congiu, E., Terreran, G., La Mura, G., Spectral line shapes in narrow-line Seyfert 1 galaxies: tracing AGN evolution? (12+3)

14:00 – 14:15 Zschaechner, L.K., Walter, F., Bolatto, A.D., Kruijssen, J.M.D., Krieger, N., Veilleux, S., Mills, E.A.C., Leroy, A., Meier, D.S, Ott, J., Herrera, C., Refined Molecular Outflow Masses, Geometries, and Energetics of the Highly-Resol (12+3)

14:15 – 14:30 **Invited:** Savolainen, T., and the Event Horizon Telescope Collaboration, Event Horizon Telescope and the portrait of a black hole (12+3)

14:30 – 14:45 **Coffee**

Astrophysics

Chair: Eleanna Asvestari

14:45 – 15:00 **Invited:** Lindfors, E. and the MAGIC Collaboration, Blazars and Gamma ray bursts (12+3)

15:00 – 15:15 Johansson, P., Dynamical modelling of supermassive black holes in galactic-scale simulations (12+3)

15:15 – 15:30 Chamani, W., Koljonen, K., Savolainen, T., Spin estimation of the supermassive black hole in the Seyfert I galaxy III Zw2 (12+3)

15:30 – 15:45 Juvela, M., Galactic star formation with past and future space-borne telescopes (12+3)

16:15 – 17:00 **Public keynote lecture:** Jari Mäkinen: The Apollo program (Porthania PII, Yliopistonkatu 3) **Chair: Emilia Kilpua**

17:00 – 19:00 **The annual meeting of the Finnish Astronomical Society (Holvikellari)**