

**XIV Hvar Astrophysical Colloquium  
26 – 30 September 2016 Hvar, Croatia**

**Programme**

Sunday, September 25, 2016

18:00 – 19:00	Registration
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Monday, September 26, 2016

8:00 – 8:30	Registration
8:30 – 9:00	Welcome and Opening Addresses

*Activity of the Sun and Solar-Like Stars I* chairperson: **B. Vršnak**

9:00 – 9:30	Arnold O. Benz: Electron Acceleration in Solar and Stellar Flares ( <i>Invited</i> )
9:30 – 9:50	Ilan Roth: Structures in solar magnetic field and predictions for the Solar Probe Plus
9:50 – 10:10	P. Gömöry, A. M. Veronig, Y. Su, M. Temmer, J. K. Thalmann: Chromospheric evaporation flows and density changes deduced from Hinode/EIS during an M1.6 flare
10:10 – 10:30	E. G. Kupriyanova, T. Van Doorselaere, G. Ramsay: Search for quasi-periodicities in the emission of late type stars observed with XMM/Newton
10:30 – 10:50	Michal Švanda, Marian Karlický: What do the flares on A-type stars tell us about the heating of solar corona?
10:50 – 11:20	coffee – break

*Activity of the Sun and Solar-Like Stars II* chairperson: **A. O. Benz**

11:20 – 11:40	D. Utz, T. Van Doorselaere, O. Kühner, N. Magyar, I. Calvo Santamaria, J. I. Campos Rozo: Expanding flux tubes, the scale height parameter, and statistical imprints of waves,...How does all of that fit together?
11:40 – 12:00	Maciej Zapiór, Ramon Oliver, Jose Luis Ballester, Petr Heinzel: Synthetic hydrogen spectra of oscillating prominence slabs
12:00 – 12:20	Myshyakov I.I., Kolobov D.Y., Rudenko G.V., Anfinogentov S.A., Fleishman G.D., Kochanov A.A.: Correction of magnetic field reconstruction with use of magnetic field measurements above the photosphere
12:20 – 12:40	I. Skokić, R. Brajša, D. Sudar, S. H. Saar: An Application of the Random-Walk Model to Proper Motions of Coronal Bright Points from SDO Data
12:40 – 13:00	S. Chupin, N. Kobanov, A. Chelpanov: Observations of torsional Alfvén waves in solar faculae
16:00 – 17:00	Splinter meetings

*Activity of the Sun and Solar-Like Stars III* chairperson: **M. Temmer**

17:00 – 17:20	Ya.I. Egorov, V.G. Fainshtein, G.V. Rudenko, S.A. Anfinogentov: Magnetic field variations in the vicinity of a CME-associated solar flare on June 7, 2011
17:20 – 17:40	Urszula Bak-Steslicka, Sarah E. Gibson, Ewa Chmielewska: Line-of-sight velocity as a tracer of coronal cavity magnetic structure
17:40 – 18:00	Aleš Kučera: Spectroscopy of a solar filament in Ca II H spectral line

18:00 – 18:20	Maciej Zapiór and David Martinez Gomez: Helical Magnetic Field Geometry from 3D Reconstruction of Prominence Knot Trajectories
18:20 – 18:40	E.W. Cliver: Recalibrating the sunspot number time series: Inhomogeneity in the observer normalization factors of the Hoyt and Schatten group sunspot number
18:40 – 19:00	P. Jelínek, M. Karlický, T. Van Dooresselaere Oscillatory processes in the vertical gravitationally stratified current-sheet
20:00	Welcome reception (Central Park Club)

Tuesday, September 27, 2016

*Eruptive Processes in the Solar Atmosphere I* chairperson: **B. Heber**

9:00 – 9:30	Schmieder B., Zuccarello F.P., Aulanier G., Chandra R., Joshi N., Filipov B.: Role of null point configuration in eruptive flares and filament interactions ( <i>Invited</i> )
9:30 – 9:50	O. N. Savina, P. A. Bupalov: Special features of acoustic-gravity waves propagation in the Solar chromosphere
9:50 – 10:10	M. Gryciuk, M. Siarkowski, J. Sylwester, S. Gburek, P. Podgórski, A. Kępa, B. Sylwester, T. Mrozek: Advanced determination of flare characteristics from X-ray lightcurves
10:10 – 10:30	B. Vršnak: The Role of Reconnection in Acceleration of CMEs
10:30 – 10:50	Lijuan Liu: Coronal mass ejections from the active regions
10:50 – 11:20	coffee – break

*Eruptive Processes in the Solar Atmosphere II* chairperson: **E. Wiehr**

11:20 – 11:50	A.M. Veronig, K. Vanninathan, K. Dissauer, M. Temmer, N. Nitta, B. Vrsnak, P. Mesa Ortega: Kinematics and DEM analysis of a Moreton/EUV wave ( <i>Invited</i> )
11:50 – 12:10	Andrey Afanasyev and Andrei Zhukov: Numerical Simulations of Large-Scale Coronal Wave Interaction with Coronal Magnetic Structures
12:10 – 12:30	Arun Kumar Awasthi, Arkadiusz Berlicki and Powel Rudawy: Multi-wavelength diagnostics of the emission during a B6.4 flare of August 20, 2005
12:30 – 12:50	K. Dissauer, M. Temmer, A. M. Veronig, K. Vanninathan, J. Magdalenic Investigating projection effects in coronal dimmings and associated EUV wave event
12:50 – 13:10	Dudik J., Zuccarello F., Aulanier G., Janvier M., Schmieder B., Gilchrist, S Coronal response to eruptive flares

*Eruptive Processes in the Solar Atmosphere III* chairperson: **D. Sudar**

16:00 – 16:20	Dzifcakova Elena, Dudik Jaroslav, Zemanova Alena: EUV signatures of the non-Maxwellian kappa-distributions in the solar corona and flares
16:20 – 16:40	Jürgen Hinterreiter, Astrid M. Veronig, Julia K. Thalmann, Johannes Tschernitz, Werner Pötzi: Characteristics of ribbon separation in H $\alpha$ two-ribbon flares
16:40 – 17:00	S. Jejič , P. Heinzel, R. Susino, A. Bemporad, U. Anzer: CME plasma diagnostics using space coronagraphs
17:00 – 17:20	L.K. Kashapova, E.G. Kupriyanova, Z. Xu, D.A. Zhdanov: Quasi-periodic pulses in the circular ribbon flare as indicator of acceleration processes
17:20 – 17:40	E. Wiehr and G. Stellmacher: The Na I and Sr II resonance lines in solar prominences
17:40 – 18:00	J. Kasparova, P. Heinzel, M. Varady: Role of the non-thermal collisional rates in solar flare modelling
18:00 – 20:00	Poster and Beer Session (Loggia)

Wednesday, September 28, 2016

*Eruptive Processes in the Solar Atmosphere IV* chairperson: **A. Veronig**

9:00 – 9:30	P. Heinzel, K. Mikula, W. Liu, A. Berlicki: IRIS Observations and Modeling of Cool Flare Loops ( <i>Invited</i> )
9:30 – 9:50	P. Kotrč, M. Zapior, P. Heinzel and O. Prochazka: A new concept of the Balmer continuum flux measurement in solar flares
9:50 – 10:10	Ledentsov L.S., Somov B.V.: The thermal instability of the reconnecting current layer in solar flares
10:10 – 10:30	Żaneta Szaforz, Michał Tomczak: Quasi-periodic pulsations of partially occulted flares
10:30 – 10:50	Tsvetan Tsvetkov, Nikola Petrov: Velocity variations of eruptive prominences
10:50 – 11:20	coffee – break

*Eruptive Processes in the Solar Atmosphere V* chairperson: **P. Heinzel**

11:20 – 11:40	Kamalam Vanninathan, Astrid Veronig, Karin Dissauer, Iain Hannah, Manuela Temmer, Eduard Kontar: Plasma Diagnostics of CME related dimmings
11:40 – 12:00	V. K. Verma: Relationship of EIT Waves Phenomena with Solar Coronal Mass Ejections
12:00 – 12:20	Kolomanski S., Mrozek T., Chmielewska E.: (Un)observable structure of coronal X-ray sources
12:20 – 12:40	Varady, M., J. Kašparová, Z. Moravec: Hybrid simulations of chromospheric HXR flare sources
12:20 – 12:40	M. Kuhar, S. Krucker: NuSTAR observations of high-altitude post-flare loops one day after the flare

*Solar-Terrestrial Connection and the Heliosphere I* chairperson: **E. Cliver**

16:00 – 16:30	Kalevi Mursula and Ilpo Virtanen: Rebirth of the Bashful ballerina: Multi-instrument verification and recent behaviour ( <i>Invited</i> )
16:30 – 16:50	Galsdorf, D., Heber, B., Köhl, P., Vršnak, B., Čalogović, J., Dumbović, M., Temmer, M., Veronig, A., Moestl, C., Herbst, K., Belov, A.: Investigation of Forbush decreases on the basis of a simplified process chain
16:50 – 17:10	P. Köhl, N. Dresing, B. Heber and A. Klassen: Solar energetic particle events with protons above 500 MeV between 1995 and 2015 measured with SOHO/EPHIN
17:10 – 17:30	A. Klassen, N. Dresing, R. Gómez-Herrero, B. Heber, and R. Müller-Mellin: Intensity distribution and onset delays of solar electron events observed by closely spaced STEREO spacecraft
17:30 – 17:50	coffee – break

*Solar-Terrestrial Connection and the Heliosphere II* chairperson: **K. Mursula**

17:50 – 18:10	Heber, B., Theesen, S., Dresing, N., Klassen, A. Efficiency of Particle Acceleration at Interplanetary Shocks: Statistical Study of STEREO Observations
18:10 – 18:30	Ali Kilcik, Burcin Donmez: Effect of CMEs on Geomagnetic Activity
18:30 – 18:50	J. Čalogović, M. Dumbović, B. Vršnak, B. Heber, M. Temmer, A. Veronig: Cosmic Ray modulation and geoeffectiveness of Corotating Interaction Regions derived from coronal hole area measurements
18:50 – 19:10	M. Lazar: Suprathermal populations in the solar wind: from observational evidences to realistic modelling and interpretation

Thursday, September 29, 2016

*Solar-Terrestrial Connection and the Heliosphere III* chairperson: **C. Möstl**

9:00 – 9:30	John D. Richardson and the Voyager Team: Voyager observations at the edge of the heliosphere ( <i>Invited</i> )
9:30 – 9:50	N.L. Borodkova, V.A. Parkhomov, V.G. Eselevich, Yu.I. Yermolaev: Large and Sharp Increases in Sporadic Solar Wind Dynamic Pressure and Their Effect on the Earth Magnetosphere
9:50 – 10:10	A.V.Kudryavtseva, D.V.Prosovetsky: Definition of the solar wind dynamical characteristics and its sources by STEREO and SDO data.
10:10 – 10:30	O. V. Sapunova, N. L. Borodkova, G. N. Zastenker, Yu. I. Yermolaev: Fine Structure of the Interplanetary Shocks Observed by BMSW Experiment Onboard the SPEKTR-R
10:30 – 10:50	A. Kilcik, V. Yurchyshyn, B. Donmez, J.P. Rozelot, A. Ozguc: Temporal Variation of Different Categories Sunspot Groups since 1996: Their Relation with Geomagnetic Ap and Dst Indices
10:50 – 11:20	coffee – break

*Space Weather and Space Climate Forecasting I* chairperson: **J. D. Richardson**

11:20 – 11:50	V.N. Ishkov: Solar Activity in the 21st Century: Experience of the Forecast ( <i>Invited</i> )
11:50 – 12:20	J. Guo, R. Wimmer, C. Zeitlin, B. Heber, A. Posner and D. Hassler: Space Weather at Mars based on the past 4 years of MSL/RAD measurements on Mars ( <i>Invited</i> )
12:20 – 12:40	Konstantin Herbst, Raimund Muscheler and Bernd Heber: The new Local Interstellar Spectra and Their Influence on the Production Rates of the Cosmogenic Radionuclides $^{10}\text{Be}$ and $^{14}\text{C}$
12:40 – 13:00	Yu. Shugay, V. Slemzin, I. Veselovsky, D. Rodkin: About the possible causes of the discrepancy between the forecasted and observed parameters high solar wind streams

*Space Weather and Space Climate Forecasting II* chairperson: **A. Kučera**

16:00 – 16:30	Christian Möstl, Tanja Rollett, Manuel Kubicka, Peter Boakes, and the HELCATS team: Solar coronal mass ejection catalogues observed with the Heliophysics System Observatory ( <i>Invited</i> )
16:30 – 16:50	M. Temmer, K. Dissauer, J.K. Thalmann, A.M. Veronig, L. Rodriguez, J. Tschernitz, J. Hinterreiter: Relating flare-CME characteristics from remote-sensing image data to ICME in-situ measurements for an Earth-affecting event
16:50 – 17:10	A.Shanmugaraju, K. Suresh, V. Vasanth, G. Selvarani: DH and Interplanetary type II radio bursts and the role of CMEs and solar flares
17:10 – 17:30	M. Dumbović, N. Srivastava, Yamini, A. Devos and B. Vršnak Validation of the CME Arrival Time and Geomagnetic forecast alerts under COMESEP
17:30 – 17:50	Darije Maričić, Dragan Roša and Mile Karlica: On the relationship between Earth directed interplanetary coronal mass ejection and magnetic clouds
20:00	Conference dinner (Restaurant Park Hvar)

Friday, September 30, 2016

*Observing techniques, Campaigns and Databases I* chairperson: **I. Roth**

9:00 – 9:30	M. Barta, I. Skokić, R. Brajša & the Czech ARC-node team: ALMA Observatory and Solar Research ( <i>Invited</i> )
9:30 – 9:50	R. Brajša et al.: On image reconstruction and calibration of solar measurements in the mm and sub-mm wavelength range
9:50 – 10:10	W. Pötzi, A. Veronig, M. Temmer, D. Baumgartner, H. Freislich, H. Strutzmann: 70 years of Sunspot Observations at Kanzelhoehe Observatory
10:10 – 10:30	Vojislava Protitch-Benishek, Darko Jevremovic, Vladimir Benishek: Serbian Virtual Observatory: Belgrade Astrophotographic Plate Archive of Solar Observations
10:30 – 10:50	Ingolf E. Dammasch, Marie Dominique, Janet Machol: Rescaled PROBA2/LYRA data used as GOES X-ray flux proxy
10:50 – 11:20	coffee – break

*Observing techniques, Campaigns and Databases II* chairperson: **P. Kotrč**

11:20 – 11:50	Nandita Srivastava, Sajal Dhara and Shibu K. Mathew: Recent observations from the Multi-Application Solar Telescope (MAST) of Udaipur Solar Observatory ( <i>Invited</i> )
11:50 – 12:10	Mrozek Tomasz, Gronkiewicz Dominik, Kolomanski Sylwester, Chmielewska Ewa, Chruslinska Martyna: Semi-automated method for failed eruptions search in SDO database: methodology and first results
12:10 – 12:30	Marek Stęślicki, Arun Kumar Awasthi, Janusz Sylwester, Barbara Sylwester, Rajmal Jain: Periodicities in the X-ray emission from the solar corona: SphinX and SOXS observations
12:30 – 12:50	Theodosios Chatzistergos, Ilaria Ermolli, Sami K. Solanki, Natalie A. Krivova: Exploring historical Ca II K spectroheliogram archives
12:50 – 13:10	S.V. Lesovoi, A.T. Altyntsev, E.F.Ivanov, V.V.Grechnev, A.V.Gubin, L.K.Kashapova, A.A.Kochanov, A.A. Kuznetsov, N.S.Meshalkina, D.A.Zhdanov: The first results of the flare observations by the Siberian Multiwave Radioheliograph

13:00 – 13:30	Closing words and End of XIVth Hvar Colloquium
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17:00	Visit to Hvar Fortress "Fortica"
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## List of Posters

M. Barta, R. Brajsa, I. Skokic & the Czech ARC-node team: European ALMA Regional Center: User-support infrastructure for your research with ALMA

G. A. Bazilevskaya, Yu. I. Logachev, V. N. Ishkov: Solar Proton Events in Solar Activity Cycles 21–23 and 24

M. Dumbović, M. Luna, J. L. Ballester, P-F. Chen, J. Čalogović, H. Gilbert, J. Karpen, K. Knizhnik, N. Magyar, M. Ruderman, P. Schuck, J. Terradas, B. Vršnak, Q. Zhang: Catalog of Large-Amplitude Oscillations in Solar Prominences

S. Gunar, P. Heinzel, M. Barta, D.H. Mackay, U. Anzer: Prominences in the era of ALMA: Synergies between high-resolution radio and optical observations and 3D modeling

P. Heinzel, Y. Kupryakov, P. Schwartz, M. Zapiór: MgI lines detected in solar prominences

D. Kramoliš, M. Varady, M. Bárta: Acceleration of electrons in a cascading current sheet using test particle approach

M. Karlicky, K. Jiricka, M. Barta: Frequency oscillations of drifting pulsating structures

Henning Lohf: Cirs Observed By MSL/RAD on the Martian Surface

S. Lulić, T. Žic, B. Vršnak: Formation of Coronal Shock Waves

A. A. Mansoori and P. K. Purohit: Investigation of Solar Flare Effects on GPS TEC and their positional dependence at Low, Mid and High Latitudes

Isabel Piantchitsch: First Applications of a newly developed two-fluid 2.5D code to dynamics in the solar atmosphere

R. Vašková, A. Kučera, A. Veronig, P. Gömöry and J. Rybák: Kinematic characteristics of the M5.4 solar flare

G. Verbanac, M. Bandić, V. Pierrard: MLT Dependence in the Relationship between Plasmopause, Solar Wind and Geomagnetic Activity Based on CRRES: 1990-1991 - the Newest Results

A. Vogt, B. Heber, D. Galsdorf, K. Herbst, P. Kühl, B. Vršnak, M. Dumbović, J. Čalogović, O. Sternal, P. Dunzlaff: A SDE based setup to calculate the influence of CMEs on charged particle fluxes in the inner heliosphere

Maciej Zapiór: Solargraphy - new tool for public outreach of astronomy