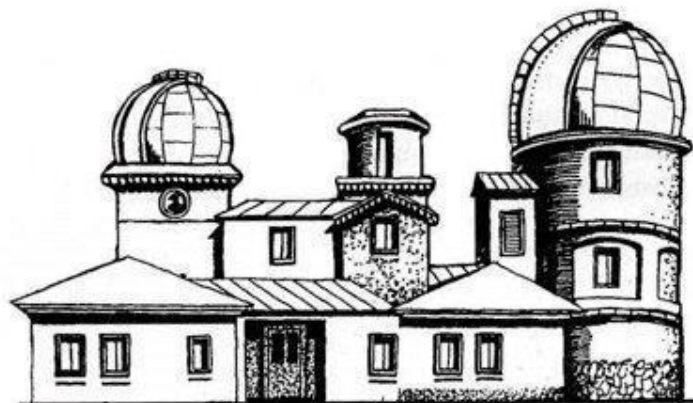


# 24th SOLAR PHYSICS MEETING

Kežmarok, Slovakia, 21 – 25 May, 2018

Slovak Central Observatory Hurbanovo



**Solar Section**

**Slovak  
Astronomical  
Society**  
at Slovak Academy of Sciences

**Solar Section**



# PROGRAMME

## 21 May 2018, Monday

16.30 - 20.00 – Registration

18.30 – Dinner

## 22 May 2018, Tuesday

7.30 - 9.00 – Breakfast

8.00 - 9.00 – Registration

9.00 – Opening Ceremony

*Chairperson: J. Rybák*

### **Sun - New picture from Space research** (review talk)

*A. Kučera*

### **Latest results and work in progress from the Austrian High Resolution Solar Physics Group**

*Utz D., Campos Rozo J. I., Kühner O., Hofmeister S., Krikova K.*

### **100 years of the Czech Astronomical Society and its Solar section**

*E. Marková, M. Sobotka*

10.30 - 11.00 – Coffee break

### **Modelling the solar photospheric plasma and magnetic field dynamics during the emergence of AR 11190**

*Campos Rozo J. I., Utz D., Vargas Domínguez S.*

### **Temporal evolution of the magnetic field vector of a sunspot**

*Benko M., Balthasar H., Gömöry P., Kuckein C., Jurčák J.*

### **On memory of Dr. Václav Bumba** (review talk)

*P. Kotrč*

12.30 – Lunch



15.00

*Chairperson: A. Kučera*

**Novelties in the sunspot research III (review talk)**

*M. Sobotka*

**Whole atmosphere unitary behaviour and cylindrical wave trains above sunspot umbra**

*H. Mészárosová, J. Rybák, P. Gömöry*

**Small-scale magnetic field dynamics and their chromospheric response**

*Fischer C., Rezaei R., González N. B.*

**Effects of non-thermal electron distribution in the SDO/EVE flare spectra**

*E. Dzifčáková, A. Zemanová, J. Dudík, Š. Mackovjak*

16.40 - 17.10 – Coffee break

**\* Poster Session:**

**European solar research with ALMA: Czech node of the European ALMA Regional Center as your supporting infrastructure**

*M. Bárta, I. Skokič, R. Brajša a kol. českého uzlu Evropského regionálního centra ALMA*

**Total solar eclipse 2017 – Columbia (MO, USA)**

*L. Dorotovič, L. Pastorek*

**Diagnostics possibilities of the solar atmosphere with ALMA interferometer**

*N. Muratova, A. Berlicki*

**The first results of solar observations with the new radiospectropolarimeter (SSMD)**

*N. Muratova, A. Muratov, L. Kashapova, A. Berlicki*

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**Analysis of the solar flare on July 18, 2016**

*Karlovský J., Karlovský V.*

**Analysis of solar flares on March 27 and April 3, 2017**

*Karlovský J., Karlovský V.*

**The Analemma - the rhythm of the Sun**

*M. Zapiór*

18.45 - Dinner



## 23 May 2018, Wednesday

7.30 - 9.00 – Breakfast

9.00

*Chairperson: M. Bárta*

### **Possible mechanisms of hard X-ray and microwave emission of occulted solar flares**

*L. Kashapova, A. Lysenko, S. Lesovoi, H. Hudson*

### **Modelování chromosférických rentgenových zdrojů ve vícevláknových konvergentních erupčních smyčkách**

*M. Varady, Z. Moravec, J. Kašparová*

### **Observations and modelling of the UV and optical compact bursts in solar atmosphere**

*A. Berlicki*

### **An interesting radio burst and a falling blob of EUV plasma**

*M. Karlický, A. Zemanová, J. Dudík, K. Radziszewski*

10.20 - 10.40 – Coffee break

### **Cold plasma rotation in the tornado-like prominence of July 13, 2014: a real motion or an illusive effect?**

*J. Rybák, J. Ambróz, P. Gömöry, J. Kavka, J. Koza, M. Kozák, A. Kučera,  
P. Schwartz, S. Tomczyk, S. Sewell, G. Capobianco, S. Fineschi, M. Temmer, V. Posch*

### **Selected solar radio bursts in the years 2016-2017 registered using radio spectrometers in Hurbanovo and Hlohovec**

*I. Dorotovič, J. Karlovský, V. Karlovský*

11.45 – Lunch

12.40 – Departure from the Hotel CLUB

13.00 – Visit to the Castle of Kežmarok

14.15 – Departure from Kežmarok to the Bachledova Valley

14.45 – The treetop walk and free program

18.15 – Departure to Ždiar

18.30 – Dinner in the Goral Pub-Restaurant in Ždiar



20.00 – Departure to the Hotel CLUB

## 24 May 2018, Thursday

7.30 - 9.00 – Breakfast

9.00

*Chairperson: E. Dzifčáková*

**Signatures of hot plasma in a quiescent prominence observed in the He I D3 line**

*J. Koza, J. Rybák, P. Gömöry, M. Kozák*

**Estimation of the total mass of quiescent prominences based on multi-spectral observations**

*M. Bodnárová, P. Schwartz, P. Heinzel*

**Reconstruction of a helical prominence in 3D from IRIS spectra and images**

*M. Zapiór*

**Non-LTE modelling of active filaments observed in the H<sub>α</sub> line using two-dimensional flux-tube model**

*P. Schwartz, S. J. Gonzales Manrique, J. Koza, P. Gömöry, J. Rybák, A. Kučera, P. Heinzel, H. Balthasar, C. Kuckein, M. Verma, J. Jenkins, D. Long*

10.20 - 10.50 – Coffee break

**Magneto-hydrostatic equilibria in the solar atmosphere: Calculations for coronal seismology**

*M. Bárta, P. Jelínek, D. Utz*

**Automatic detection of chromospheric plages in the Coimbra Observatory**

**Spectroheliograms**

*T. Barata, S. Carvalho, I. Dorotovič, F. J. G. Pinheiro, A. Garcia, J. Fernandes, A. M. Lourenço*

**Gradient Path Labeling method used to refine the solar corona differential rotation profile**

*A. Mora, I. Dorotovič, A. Coelho, R. Pires, R. Ribeiro, J. Rybák*

**Solar corona differential rotation profile as derived using the cross-correlation method**

*I. Dorotovič, M. Rybanský*



12.30 – Lunch

15.00

*Chairperson: M. Sobotka*

**Total solar eclipse 2017 and processing of the solar corona images using available software**

*R. Barsa, S. Kaniansky, J. Mäsiar*

**What is the mechanism of extreme magnetic disturbances at mid-latitudes? (review talk)**

*F. Valach, P. Hejda, M. Revallo, J. Bochníček*

**Peculiar properties in the behavior of energetic charged particles and in total electron content variations during geomagnetic storm on March 17, 2013**

*O. V. Dudnyk, Y.M. Zanimonskiy*

16.20 - 16.50 – Coffee break

**Space weather versus weather at the Earth (review talk)**

*M. Jarošová*

**The solar activity and the accumulation of energy in the Earth's crust determine the climate on the Earth**

*P. Kalenda, I. Wandrol, K. Frydryšek, V. Kremlík*

**Estimation of mass of planet IX based on solar activity**

*P. Kalenda, P. Pintr, V. Mikula*

18.45 – Conference Dinner

## 25 May 2018, Friday

7.30 - 9.00 – Breakfast

9.00

*Chairperson: F. Valach*

**The European Solar Telescope (review talk)**

*P. Gömöry and the EST team*

**Development of the Solar ALMA Observing Mode 2014-2017: Goals, the story, results,**



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at Slovak Academy of Sciences



Czech Astronomical Society

**and Czech participation in this project**

*M. Bárta, I. Skokič, R. Brajša a kolektiv českého uzlu Evropského regionálního centra ALMA*

10.20 - 10.50 – Coffee break

**Measurements of solar optical continua**

*P. Kotrč*

**Solar patrol**

*M. Exnerová*

12.00 – Lunch

14.00 – End of the meeting – departure of participants

## POSTERS

**European solar research with ALMA: Czech node of the European ALMA Regional Center as your supporting infrastructure**

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## PHOTOEXHIBITIONS

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