

Programme of 13th SCSLSA

Venue: Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade, Serbia
Hall 513, 5th floor

The time zone is CEST

Monday, August 23, 2021

14:30 - 15:30 *Registration*

15:30 - 16:00 *Opening ceremony (G. Peach and L. Č. Popović)*

SPECTRAL LINE SHAPES FROM LABORATORY TO SPACE PLASMA

Chair: **M. S. Dimitrijević**

16:00 - 16:30 *Evgeny Stambulchik* Spectral line merging in hydrogen-like species for diagnostic of laboratory and space plasmas

16:30 - 17:00 *Joel Rosato* Addressing the accuracy of the computer simulation method involved in Stark broadening calculations

17:00 - 17:30 *Andrea Petric* Obscured AGN at the Cosmic Noon

17:30 - 18:00 *Gisella de Rosa* The AGNSTORM 2 program: A detailed view of gas flows in MRK817

18:00 - 21:00 *Welcome reception*

Tuesday, August 24, 2021

SPECIAL SESSION DEDICATED TO VICTOR L. AFANASIEV: AGN Polarization

Chair: **L. Č. Popović**

9:00 - 9:30 *Serguei Dodonov* Multi Object Methods for finding and study QSO's and Galaxies

9:30 - 10:00 *Martin Roth* 25 years of integral field spectroscopy - from the BTA to the VLT

10:00 - 10:30 *Alexei Moiseev* Observations of large-scale ionizing cones in Seyfert galaxies

10:30 - 10:50 *Roman Uklein* Universal reducer for small telescopes

10:50 - 11:10 *Eugene Malygin* The photometric reverberation mapping of active galaxies in SAO RAS

11:10 - 11:30 *Coffee break*

SPECIAL SESSION DEDICATED TO VICTOR L. AFANASIEV: AGN Polarization

Chair: **S. Dodonov**

- | | | |
|---------------|-----------------------------|-------------------------------------------------------------------------------------------------------------|
| 11:30 - 12:00 | <i>Luka Č. Popović</i> | Polarization in broad emission lines of active galactic nuclei |
| 12:00 - 12:30 | <i>Elena Shablovinskaya</i> | New capabilities of AGN polarimetry |
| 12:30 - 13:00 | <i>Alexander Burenkov</i> | Monitoring of Seyfert 1 galaxies at the Special Astrophysical Observatory of the Russian Academy of Science |
| 13:00 - 13:20 | <i>Djordje Savić</i> | Broad emission line polarization of lensed quasars |
| 13:20 - 13:40 | <i>Daria Kozlova</i> | Ionized-gas clouds in the 2MASX J013130.00-062550.8 galaxy |
| 13:40 - 14:00 | <i>Alina Ikhsanova</i> | Gas and stars in the Teacup quasar |
| 14:00 - 15:30 | | <i>Lunch break</i> |

SPECTRAL LINE PHENOMENA IN STARS

Chair: **E. Stambulchik**

- | | | |
|---------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15:30 - 16:00 | <i>Friedrich Kupka</i> | Improvements to the short-characteristics method in 3D-RHDr simulations and some unsolved problems in spectral line shapes of a-type stars |
| 16:00 - 16:30 | <i>Antonios Antoniou</i> | A new method for calculating column densities using GR model. An application in the case of C IV, N IV and N V spectral lines in the uv spectrum of the o star HD 149757 (ζ OPH) |
| 16:30 - 16:50 | <i>Rihab Aloui</i> | Stark broadening of Strontium ion Sr V spectral lines in hot white dwarf atmospheres |
| 16:50 - 17:10 | <i>Rafik Hamdi</i> | Stark broadening effect in hot DA white dwarfs: ultraviolet lines of Fe V |
| 17:10 - 17:30 | | <i>Coffee break</i> |

POSTER SESSION: SPECTRAL LINES IN ASTROPHYSICAL AND LABORATORY PLASMA

Chair: **A. Kovačević**

- | | | |
|---------------|-----------------------|----------------------------|
| 17:30 - 19:00 | <i>Poster session</i> | <i>3 min presentations</i> |
|---------------|-----------------------|----------------------------|

Wednesday, August 25, 2021

SURVEYS AND SPECTRAL LINE VARIABILITY IN EXTRAGALACTIC OBJECTS

Chair: **D. Ilić**

- 9:00 - 9:30 **Victor Oknyansky** Changing Looks of the Nucleus of Seyfert Galaxy NGC 1566 in comparison with other CL AGNs.
- 9:30 - 9:50 **Pu Du** Density Waves of Ionized Gas in Broad-line Regions of Active Galactic Nuclei
- 9:50 - 10:10 **Sergey Kotov** Quasars physical properties study based on the medium-band photometric survey
- 10:10 - 10:30 **Iva Čvorović - Hajdinjak** Deep learning of AGN spectral variability
- 10:30 - 10:50 **Anastasia Yarovova** Modeling of the peculiar nebula in the low-metallicity galaxy NGC 4068
- 10:50- 11:10 **Yu Yang Songsheng** Geometric Distances of Quasars Measured by Spectroastrometry and Reverberation Mapping: Monte Carlo Simulations
- 11:10 - 11:40 *Coffee break*

SPECTRAL LINE PHENOMENA IN QUASARS

Chair: **S. Simić**

- 11:40 - 12:10 **Paola Marziani** The quasar main sequence: recent developments
- 12:10 - 12:40 **Edi Bon** Exploring the orientation of radio-loud AGN
- 12:40 - 13:00 **Swayamtrupta Panda** Flattening of the curve: Diagnostics of the H β and optical Fe⁺ emission
- 13:00 - 13:20 **Tania Buendia Rios** Statistical analysis of the AlIII λ 1860 line as a virial black hole mass estimator
- 13:20 – 13:40 **Isidora Jankov** Representation and characterization of broad-line AGN spectra based on manifold learning
- 13:40 - 15:30 *Lunch break*
- 15:30 - *Conference excursion*

Thursday, August 26, 2021

ATOMIC PARAMETERS AND SPECTRAL LINE SHAPES

Chair: **R. Stamm**

- | | | |
|---------------|---------------------------|--------------------------------------------------------------------------------------------------------|
| 9:00 - 9:30 | <i>Vladimir Srećković</i> | Rydberg atoms in astrophysics: new results |
| 9:30 - 10:00 | <i>Mohammed Koubiti</i> | A prospective study on using machine learning from spectroscopic data for plasma parameter predictions |
| 10:00 - 10:20 | <i>Lamia Abu El Maaty</i> | Energy levels, oscillator strengths and transition probabilities for the Ti II ion |
| 10:20 - 10:40 | <i>Saïd Douis</i> | Statistical and dynamical properties in plasmas governed by H.G.K pseudo-potential |
| 10:40 - 11:00 | <i>Ibtissem Hannachi</i> | Calculating the simultaneous effect of ion dynamics and oscillating electric fields on Stark profiles |
| 11:00 - 11:30 | <i>Coffee break</i> | |

SPECTRAL LINE PHENOMENA IN EXTRAGALACTIC OBJECTS

Chair: **A. Moiseev**

- | | | |
|---------------|----------------------------------------|------------------------------------------------------------------------------------------|
| 11:30 - 12:00 | <i>Alice Machado</i> | Radio-loud population a quasars at high redshift |
| 12:00 - 12:30 | <i>Elena Dalla Bonta</i> | Black Hole masses from emission line widths |
| 12:30 - 12:50 | <i>Miroslava Vukcevic</i> | Spiral structure of the galactic disk and its influence on the rotational velocity curve |
| 12:50 - 13:10 | <i>Jelena Kovačević
Dojčinović</i> | The line profiles in AGNs type 1.8-2: unraveling the complex kinematical properties |
| 13:10 - 13:30 | <i>Aleksandra
Grokhovskaya</i> | Exploring the environment of active galaxies |
| 13:30 - 15:00 | <i>Lunch break</i> | |

ATOMIC PARAMETERS AND SPECTRAL LINE SHAPES

Chair: **V. Srećković**

- | | | |
|---------------|----------------------------|---------------------------------------------------------------------------------------------------------------------|
| 15:00 - 15:30 | <i>Nikolay Bezuglov</i> | Expressions of "fast" and "slow" chameleon dressed states in outler-townes spectra of alkali-metal atoms |
| 15:30 - 16:00 | <i>Nabil Ben Nessib</i> | Ab initio and semi-empirical atomic structure calculations. Applications to the 5s-6p transitions for the Mo II ion |
| 16:00 - 16:20 | <i>Joel Rosato</i> | Modeling of collisional redistribution of line radiation by computer simulations |
| 16:20 - 16:40 | <i>Magdalena Christova</i> | Stark broadening of B I spectral lines |
| 16:40 - 17:00 | <i>Zlatko Majlinger</i> | Systematic trends among the Stark widths of Co II spectral lines |
| 17:00 - 17:30 | <i>Coffee break</i> | |

SPECTRAL LINE PHENOMENA IN EXTRAGALACTIC OBJECTS

Chair: **V. Okyansky**

- 17:30 - 18:00 *Xinyu Dai* New Quasar Microlensing Constraints on the Spin of High Redshift Quasars
- 18:00 - 18:20 *Saloni Bhatiani* Hunting for planet-mass objects in extragalactic systems
- 18:20 - 18:40 *Jake Mitchell* The Paschen broad line region and torus in Mrk 509
- 18:40 - 19:00 *Hora Mishra* Dramatic variability in a changing-look blazar, B2 1420+32
- 19:00 - 19:30 *Martin Gaskell* Partial obscuration as a cause of asymmetries of broad Balmer line profiles in active galactic nuclei

20:00 - *Conference Dinner*

Friday, August 27, 2021

SPECTRAL LINE RESEARCH: NEW FRONTIERS

Chair: **E. Lyratzi**

- 9:30 - 10:00 *Jian-Min Wang* Accretion-modified Stars in Accretion Disks of Active Galactic Nuclei
- 10:00 - 10:30 *Djordje Spasojević* Study of UV Ne II line shapes in the cathode sheath of an abnormal glow discharge
- 10:30 - 11:00 *Andjelka Kovačević* Spectral variability of active galactic nuclei in the context of large time-domain surveys
- 11:00 - 11:30 *Coffee break*

SPECTRAL LINE VARIABILITY

Chair: **P. Marziani**

- 11:30 - 11:50 *Ting Feng Yi* Detection of quasi-periodic oscillations in γ -ray and optical light curves of the BL Lac 4FGL J0650.7+2503
- 11:50 - 12:10 *Marzena Sniegowska* Modelling changing-look (CL) AGN phenomenon using accretion disk instabilities
- 12:10 - 12:30 *Dimitrios Stathopoulos* On the variability of Ly α , N V, Si IV and C IV BAL components of the BALQSO J131912.39+534720
- 12:30 - 12:50 *Martin Ochmann* Mrk 926 reveals discrete line satellites during a drastic phase of decline
- 12:50 - 13:10 *Daniel Kynoch* Variability of the near-infrared coronal emission lines in the active galaxy NGC 5548
- 13:10 - 13:30 *Official closing of the conference*
- 13:30 - 15:00 *Lunch break*

POSTERS

P01	Daniela Barrientos, Arjen van der Wel, Maarten Baes	Stellar kinematics of simulated galaxies from synthetic spectroscopic observations of optical lines using radiative transfer
P02	Avinanda Chakraborty	The radio dichotomy in extreme objects: Studying quasars with FWHM greater than 15000 km/s
P03	D. Dias dos Santos, A. Rodríguez-Ardila, M. Marinello	Properties of continuum and broad line emission gas in AGNs FeII emitters
P04	Milan S. Dimitrijević, Magdalena D. Christova, Sylvie Sahal-Bréchet	Stark broadening of Fe XXV lines for neutron star spectra research
P05	Ivan Dojčinović, Jelena Kovačević- Dojčinović, Luka Č. Popović	The flux ratio of the [N II] 6548, 6583 a lines in sample of AGNs type 2
P06	Karla Garnica Luna, Paola Marziani, A. Negrete	Metallicity in highly accreting quasars
P07	Martin Gaskell	The location and nature of the Fe II emitting region in active galactic nuclei
P08	Ljubinko M. Ignjatović, Vladimir A. Srećković, Milan S. Dimitrijević	The quasi-molecular absorption bands caused by the non-symmetric ion-atom radiative processes in alkali plasmas
P09	Alexander Landstorfer	Resolving power of spectrographs: Impact of the spectral line spread function
P10	Aleksandr Murmantsev, A. Veklich, M. Kleshych, S. Fesenko, V. Boretskij	Peculiarities of optical emission spectroscopy of copper-chromium-air plasma
P11	Aleksandra Nina, G. Nico, S. T. Mitrović, V. M. Čadež, I. R. Milošević, M. Radovanović, L. Č. Popović	$\text{Ly}\alpha$ influence to ionospheric D-region: quiet ionospheric d-region (QIONDR) model
P12	Nemanja Rakić, Dragana Ilić, L. Č. Popović	Virilization of the broad line region in the SDSS sample of type 1 AGNs
P13	Saša Simić, Luka Č. Popović, Andjelka Kovačević, Dragana Ilić	Influence of the SMBBH to the broad line asymmetry in the case of low mass ratio systems
P14	Vladimir A. Srećković, Lj. M. Ignjatović, M. S. Dimitrijević	The collisional atomic processes in geo-cosmical plasmas: data needed for spectroscopy
P15	Vladimir A. Srećković, D. M. Šulić, V. Vujčić	Modeling the atmosphere under the influence of intense solar X-ray radiation

P16	Jonathan Targaczewski, Dragana Ilić, Jochen Liske	Exploring the spectra of active galactic nuclei from the GAMA database
P17	Shimeles Terefe, Ascension Del Olmo Orozco, Paola Marziani, Mirjana Pović	Dichotomy of Radio Loud (RL) and Radio Quiet (RQ) Quasars In Four Dimensional Eigenvector 1 (4DE1) Parameter Space
P18	Heechan Yuk, Xinyu Dai, T. Jayasinghe, Hora D. Mishra, Hai Fu, Christopher S. Kochanek, Benjamin J. Shappee, and K. Z. Stanek	Variability Selected Low Luminosity Active Galactic Nuclei from ASAS-SN Survey
P19	Djamel Eddine Zenkhri, Mohammed Tayeb Meftah, Fethi Khelfaoui	Effect of ion shell structure on the spectral line broadening by electron collisions in alkali plasmas