Tuesday: September 18

09:10 – 09:30  Registration of the participants

Morning Session Chair: David Sarkisyan

09:30 – 09:40  Conference opening: Welcome talks

  Nitrogen-vacancy centers in diamond: physics and some applications

09:40 – 10:30  Dmitry Budker
  HIM JGU Mainz and UC Berkeley

  Hyperfine level structure in nitrogen-vacancy centers near the
  ground-state level anticrossing

10:30 – 11:00  Andris Berzins
  University of Latvia

  Coffee Break
  11:00 – 11:40

Morning Session Chair: Goran Pichler

  Mirrorless degenerate lasing in Fe > Fg atomic system: the overview
  of ongoing experiments

11:40 – 12:10  Aram Papoyan
  Institute for Physical Research, NAS of Republic of Armenia

  Far infrared optics of pair-interacting few-particle harmonium atom

12:10 – 12:40  Hayk Sarkisyan
  Russian-Armenian University

  Bi-confluent Heun potentials for a stationary relativistic
  wave equation for a spinless particle

12:40 – 13:00  Hrayer Azizbekyan
  Institute for Physical Research, NAS of Republic of Armenia
Lunch
13:00 – 14:30

Evening Session Chair: Dmitry Budker

Generation of extended rubidium plasma by ultra-short quasi-resonant laser radiation: Experiment and Theory
14:30 – 15:00 Gagik Djotyan
Wigner Research Center for Physics, Hungary

Study of Hyperfine Paschen-Back regime of potassium $D_2$ line
15:00 – 15:30 Armen Sargsyan
Institute for Physical Research, NAS of Republic of Armenia

Concentration Effects of Er$^{3+}$ Ion on Upconversion Luminescence in YAG Crystals
15:30 – 16:00 Pavel Muzhikyan
Institute for Physical Research, NAS of Republic of Armenia

Welcome party
16:20 – 19:30

Bus to Yerevan
19:30
Wednesday: September 19

Morning Session Chair: Gagik Djotyan

Relativistic laser plasma dynamics and particle acceleration

09:30 – 10:20  Sargis Ter-Avetisyan  
ELI-ALPS, Szeged, Hungary

Peculiarities of Dark Resonances on $^{87}\text{Rb}$, $D_2$ line using ”forbidden” atomic transitions

10:20 – 10:50  David Sarkisyan  
Institute for Physical Research, NAS of Republic of Armenia

Composition dependence of the electro-optic properties of iron doped lithium niobate

10:50 – 11:10  Anush Danielyan  
Institute for Physical Research, NAS of Republic of Armenia

Coffee Break  
11:10 – 11:50

Morning Session Chair: Claude Leroy

Low-frequency electromagnetic radiation of hydrogen molecular gas

11:50 – 12:20  Vladimir Krainov  
Moscow Institute of Physics and Technology, Russian Federation

SPDC field in the atmosphere: two photon speckle, mode analysis, aberration analysis

12:20 – 12:40  Hakob Avetisyan  
Institute for Physical Research, NAS of Republic of Armenia

Optical Magnetometry using alkali Nanocells

12:40 – 13:00  Emmanuel Klinger  
Institute for Physical Research, NAS of Armenia and Laboratoire Interdisciplinaire Carnot de Bourgogne, Université Bourgogne Franche-Comté, France
Evening Session Chair: **Sargis Ter-Avetisyan**

A hierarchy of Schrödinger potentials solvable via a two-term Hermite-function ansatz.

**14:30 – 15:00** **Artur Ishkhanyan**  
Institute for Physical Research NAS of RA

Optical generation of continuous-wave (coherent phonons flow) in ruby at ambient temperature.

**15:00 – 15:20** **Vladimir Arakelyan**  
Institute for Physical Research, NAS of Republic of Armenia

Regular light patterns formation by a Gaussian beam in a photorefractive LiNbO$_3$:Fe crystal.

**15:20 – 15:40** **Lusine Tsarukyan**  
Institute for Physical Research, NAS of Republic of Armenia

**Lab Tour**  
**15:40 – 16:50**

**Bus to Yerevan**  
**17:00**
Tuesday: September 20

Morning Session Chair: **Aram Papoyan**

- Photoionization of heteronuclear and homonuclear alkali molecules
- **Goran Pichler**
  Department of Physics, Kuwait University

**Poster session**

- **10:20 – 12:30**

  Please hang the posters from the first day of the conference. For the list of posters please refer to the last part of the program

**Lunch**

- **12:30 – 13:30**

**Sightseeing Tour**

- **13:30**
Morning Session Chair: Gayane Grigoryan

Defect behavior in Ce-doped garnet scintillators with aliovalent impurities

09:40 – 10:30 Ashot Petrosyan
Institute for Physical Research, NAS of Republic of Armenia

The development of non-volatile memory structure and investigation of their properties

10:30 – 10:50 Arsen Igityan
Institute for Physical Research of NAS of Republic of Armenia

Self-consisting theory of selective reflection for a dilute Fabry-Perot interferometer

10:50 – 11:10 Davit Khachatryan
Institute for Physical Research, NAS of Republic of Armenia

Coffee Break
11:00 – 11:50

Morning Session Chair: Artur Ishkhanyan

Optical generation of continuous-wave (coherent phonons flow) in ruby at ambient temperature

11:50 – 12:10 Vladimir Arakelyan
Institute for Physical Research, NAS of Republic of Armenia

The Performance Investigation of the Bulk Heterojunction Organic Solar Cells by a Drift-diffusion Model

12:10 – 12:40 Zeinab Ebrahimpour
Research Institute for Applied Physics amp; Astronomy (RIAPA), University of Tabriz, Tabriz, Iran
Comparison of Specifications of Thermoelectric Single-Photon Detector on the Base of Lanthanum and Cerium Hexaborides

12:40 – 13:00  Armen Kuzanyan
Institute for Physical Research, NAS of Republic of Armenia

Lunch
13:00 – 14:30

Evening Session Chair: Rafayel Drampyan

Non-equivalence of traveling wave and standing wave bases for the quantized field-two level atom system in the free space

14:30 – 15:00  Atom Zh. Muradyan
Yerevan State University, Dep. of Physics

Preparation and Investigation of Multifunctional ”Core-Shell” Magnetic Nanoparticles for Medical Applications

15:00 – 15:20  Aram Manukyan
Institute for Physical Research, NAS of Republic of Armenia

Closing remarks
15:30 – 16:45

Bus to Yerevan
17:00
POSTER PRESENTATIONS


4. **Mangesh Bhattarai**, Tuning of the Hanle effect from EIT to EIA using spatially separated probe and control beams


6. **H. Gharagulyan**, Optical Properties of Polymer-Dispersed Cholesteric Liquid Crystalline Wedge-Cell

7. **M. Burkova**, Photodesorption of alkali metal atoms from the glass and sapphire surfaces

8. **T. Sarukhanyan**, Lasing in Cholesteric-Polymer Wedge-Cell System

9. **M. Derdzyan**, Effects of non-isovalent impurities on optical absorption and gamma-ray induced coloration in YAG single crystals

10. **A. Sargsyan**, Faraday Rotation in Rb atomic vapor layers with the thickness of few tens of nm.

11. **A. Sargsyan**, Investigation of Faraday Rotation effect in Cs nano-layers

12. **S. Pashayan**, Copper oxide targets for pulsed laser deposition of thin films: synthesis and investigation

13. **N. Babajanyan**, Raman spectrometry characterization of iron doped different composition lithium niobate crystals

14. **N. Mkhitaryan**, Electro-optic properties of rare earth ions doped lithium niobate

15. **A. Harutyunyan**, A new exactly integrable hypergeometric potential for the Schrödinger equation

16. **A. Movsesyan**, Ho-doped lithium niobate thin films: creation and characterization
17. **Narine Babajanyan**, Raman spectroscopy and luminescence of Ho-doped lithium niobate crystals

18. **Arturs Mozers**, Ground-state angular-momentum alignment-to-orientation conversion

**IMPORTANT INFORMATION**

- **08:30** Precise! Bus departure every day from *France Square station* in Yerevan
- **08:45** Precise! Minibus departure every day from *National Academy of Science of Armenia* in Yerevan

![Figure 1: Bus and mini bus leaves places](image-url)