# PROGRAMME Meetings of the RAS Council on Heavy-Ion Physics

Friday, 1 December 2017

International Conference Hall, Dubna

9:30

- I. Topics and results of previous meetings 9:30-9:40 I. Isosimov 10'
- II . Nuclei structure as a key issue of the physics of atomic nuclei

Investigations of nuclei far away from the  $\beta$ -stability line as one of three FLNR fields of research. Introduction. 9:40-10:00 Yu. Oganessian 20'

- III. Synthesis, properties and interaction of nuclei far away from the stability line
- 1. Investigations into physics of exotic nuclei in laboratories worldwide.

Marek Lewitowicz (GANIL) 10:00-10:30 25'+5'

2. Research in frame of the Seven-Year Plan of FLNR, JINR. The expected results.

G. Ter-Akopian **10:30-10:50 15'+5'** 

- a) Development of ACCULINNA-II separator. New prospects and challenges.
- S. Krupko / A. Yukhimchuk (All-Russian Scientific Research Institute of Experimental Physics)

  10:50-11:20 25' +5'

## Coffee break 11:20-11:40 20'

b) Reconstruction and upgrade of the U-400M cyclotron. The energy and intensity increase of the primary beam. U-400M operating modes. Systems of the ion beam extraction to the production target.

11:40-12:05 G. Gulbekian 20'+5'

c) The 14-GHz and 18-GHz ECR sources of multicharged ions developed at FLNR, JINR. Design and development of 28 GHz ECR source.

**12:05-12:20** S. Bogomolov **10' +5'** 

d) Active gas catcher: an interface transforming the flux of radioactive nuclei stopped in gas into a high-quality beam with the energy of 30-50 keV. Prospects for the development of the facility in frame of the Seven-Year Plan. Contributions of collaborators.

12:20-12:45 Christoph Schiedenberger (GSI) 20'+5'

**14:00-14:30** *G. Trubnikov* **25' +5'** 

#### IV. Objectives of a new Seven-Year Plan

14:30-14:45

Yu. Oganessian 15'

a) Prospects for the investigation of exotic nuclei structure and nuclear reactions using high precision beams of radioactive ions.

14:45-15:15 A. Fomichev 25'+5'

b) Development of an efficient linear accelerator for production of high-quality radioactive nuclei beams of variable energy.

**15:15-15:45** S. Polozov (Moscow Engineering Physics Institute) /
T. Kulevoy (NRC KI - Institute of Theoretical and Experimental Physics) **25'+5'** 

## Coffee break 15:45-16:05 20'

# V. Setting course for new horizons.

16:05 -16:25

Yu. Oganessian 20'

a) Electron-Ion Collider. Scientific programme. Keys aspects.

16:25-16:45

L. Grigorenko **15'+5'** 

b) The use of an electron-ion collider for nuclear structure studies.

16:45-17:05

Haik Simon (GSI) 15'+5'

c) Possible physics program at a low-energy storage ring.

17:05 PM-17:25 Yuri Litvinov (GSI) 15' +5'

d) Project review on electron-ion collider for FAIR.

17:25-17:45 P. Shatunov (Budker Institute of Nuclear Physics) 15'+5'

e) The electron-ion collider using crystalline ion beams.

17:45-18:05 I. Meshkov 15'+5'

Discussion on possible development of a high-luminosity electron-ion collider.

**18:05-18:30** E. Levichev, V. Parkhomchuk, I. Meshkov,

Yu. Shatunov and others. 25'

Moderator B. Sharkov.

**RECEPTION (18:30 – 21:00)**