

**Program of the XXIX-th International Workshop
on High Energy Physics**

**“NEW RESULTS and ACTUAL
PROBLEMS in PARTICLE &
ASTROPARTICLE PHYSICS and
COSMOLOGY”**

*IHEP, Protvino, Russia
June 26-28, 2013*



The Time Schedule

| Wednesday, June 26 | Thursday, June 27 | Friday, June 28 |
|-------------------------|---|-------------------------|
| <i>N. Tyurin</i> | <i>A. Sheshukov</i> | <i>A. Cherepashchuk</i> |
| <i>R. Nikolaidou</i> | <i>T. Dzhatdoev</i> | <i>A. Zakharov</i> |
| <i>G. Bernardi</i> | <i>M. Smy</i> | <i>M. Katanaev</i> |
| <i>F. Riva</i> | <i>N. Titov</i> | <i>A. Mitra</i> |
| <i>B. Arbuzov</i> | <i>A. Lubashevskiy</i> | <i>S. Crothers</i> |
| <i>A. Knochel</i> | <i>Yu. Kudenko</i> <i>(M. Khabibullin)</i> | <i>Panel discussion</i> |
| <i>Panel discussion</i> | <i>Panel discussion</i> | <i>E. Anderson</i> |
| <i>S. Kabana</i> | <i>O. Zenin</i> | <i>A. Mitra</i> |
| <i>O. Evdokimov</i> | <i>A. Bylinkin</i> | <i>V. Sokolov</i> |
| <i>E. Pozdeeva</i> | <i>D. Pszczel</i> | <i>A. Dolgov</i> |
| <i>V. Zakharov</i> | <i>A. Petrukhin</i> | <i>V. Rubakov</i> |
| <i>B. Adeva</i> | <i>V. Petrov</i> | <i>Panel discussion</i> |
| <i>C. Ferro</i> | <i>A. Bazilevsky</i> | |
| <i>F. Ratnikov</i> | <i>A. Prokudin</i> | |
| <i>K. Kotov</i> | <i>Panel discussion</i> | |
| <i>Panel discussion</i> | | |
| | CONCERT | |
| <i>Welcome drink</i> | <i>Workshop Dinner</i> | <i>Farewell Drink</i> |

Registration

Wednesday, June 26 - IHEP, Theoretical Division 9:00-10:30

See information desk for details

This Workshop is partly supported by

- the Russian Foundation for Basic Research, grant no. 13-02-06068-r
- Institute for High Energy Physics, Protvino
- Dynasty: a Non-Profit Foundation, Moscow

Wednesday, June 26

Morning session 9:30-13:15

Chairperson: *Alexander Zaitsev*

- 9:30 **Nikolai Tyurin** (IHEP, Protvino, Russia)
"Opening address"
9:40 **Rosy Nikolaidou** (CEA/IRFU, Saclay, France)
"Overview of the Higgs boson searches at the LHC"
10:10 **Gregorio Bernardi** (Fermilab, Batavia, USA)
"Higgs studies at the Tevatron"

10:40-11:00 Coffee break

Chairperson: *Vladimir Petrov*

- 11:00 **Francesco Riva** (EPFL, Lausanne, Switzerland)
"Higgs at least"
11:30 **Boris Arbuzov** (SINP, Moscow, Russia)
"On possible interpretation of the LHC Higgs-like state in the framework of the non-perturbative effective interaction of W bosons"
12:00 **Alexander Knochel** (ITTK RWTH, Aachen, Germany)
"The Higgs, a Higgs or Higgs-like alternatives?"

12:30-13:15 Panel discussion on Higgs boson

Moderator: *Valery Kiselev*

13:25-14:05 Lunch

Afternoon session 14:15-19:05

Chairperson: *Michael Smy*

- 14:15 **Sonja Kabana** (SUBATECH, Nantes, France)
"Review of the physics of Quark Gluon Plasma"
14:45 **Olga Evdokimov** (University of Illinois, Chicago, USA)
"Recent results on heavy ions at RHIC"
15:15 **Ekaterina Pozdeeva** (SINP MSU, Moscow, Russia)
"Quark-gluon plasma multiplicity from AdS spaces modifications"
15:30 **Valentin Zakharov** (ITEP, Moscow, Russia)
"Quark-gluon plasma, challenges to theory"

16:00-16:20 Coffee break

Chairperson: *Alexey Prokudin*

- 16:20 **Bernardo Adeva** (University of Santiago de Compostela, Spain)
"Recent results from the LHCb experiment"
16:50 **Cristina Ferro** (NCU, Taipei, Taiwan / CERN, Geneva, Switzerland)
"Top quark physics results from LHC"
17:20 **Fedor Ratnikov** (KIT, Karlsruhe, Germany)
"Searches for supersymmetry at LHC"
17:50 **Khristian Kotov** (Ohio State University, Columbus, USA)
"Exotica, beyond two generations"

18:20-19:05 Panel discussion on QGP

Moderator: *Valentin Zakharov*

19:10 Welcome Drink

Thursday, June 27

Morning session 9:30-13:20

Chairperson: *Fedor Ratnikov*

- 9:30 **Andrey Sheshukov** (*JINR, Dubna, Russia*)
"OPERA experiment"
9:55 **Timur Dzhatdoev** (*PNPI MSU, Moscow, Russia*)
"Search for neutrino oscillations in appearance mode with the OPERA experiment"
10:15 **Michael Smy** (*University of California, Irvine, USA*)
"Super-Kamiokande results"

10:50-11:10 Coffee break

Chairperson: *Gregorio Bernardi*

- 11:10 **Nikita Titov** (*INR, Moscow, Russia*)
"KATRIN experiment: status and perspectives 2013"
11:30 **Alexey Lubashevskiy** (*MPIK, Heidelberg, Germany*)
"Status and results of the GERDA experiment"
11:55 **Yury Kudenko, Marat Khabibullin** (*INR, Moscow, Russia*)
"Neutrino oscillations: recent results and perspectives"

12:35-13:20 Panel discussion on Neutrino Problems

Moderator: *Vladimir Obraztsov*

13:30-14:30 Lunch

Afternoon session 14:40-18:45

Chairperson: *Sergey Troshin*

- 14:40 **Oleg Zenin** (*IHEP, Protvino, Russia*)
"SM and QCD results at the LHC"
15:10 **Alexander Bylinkin** (*ITEP, Moscow, Russia*)
"DIS at HERA and new phenomenological model for hadroproduction"
15:30 **Damian Pszczel** (*NCNR, Warsaw, Poland; Uppsala University*)
"Search for the U boson in WASA@COSY experiment"
15:50 **Anatoly Petrukhin** (*MEPhI, Moscow*)
"What can we learn from nuclei-nuclei interactions at LHC?"

16:10-16:30 Coffee break

Chairperson: *Bernardo Adeva*

- 16:30 **Vladimir Petrov** (*IHEP, Protvino, Russia*)
"High-energy scattering from a space-time perspective"
17:00 **Alexander Bazilevsky** (*BNL, New York, USA*)
"Spin results at RHIC"
17:30 **Alexey Prokudin** (*JLAB, Newport News, USA*)
"Inward horizons of the spinning nucleons"

18:00-18:45 Panel discussion on SM&Beyond

Moderator: *Alexey Prokudin*

19:00 CONCERT

20:00 Conference dinner

Friday, June 28

Morning session 9:30-13:00

Chairperson: *Valery Kiselev*

9:30 **Anatoly Cherepashchuk** (SAI MSU, Moscow, Russia)

"Black holes in binary systems and galaxy nuclei"

10:00 **Alexander Zakharov** (ITEP, Moscow, Russia)

"Supermassive black hole at the galactic center"

10:30 **Mikhail Katanaev** (MI RAS, Moscow, Russia)

"Point massive particle in general relativity"

10:55-11:15 Coffee break

Chairperson: *Alexander Knochel*

11:15 **Abhas Kumar Mitra** (BARC, Mumbai, India)

"Einsteinian revolution's misinterpretation: no true black holes, no information paradox, but just quasi-static balls of quark gluon plasma"

11:45 **Stephen Crothers** (AIAS, Sunshine Plaza, Australia)

"Theoretical flaws in black hole theory and general relativity"

12:15-13:15 Panel discussion on Black Holes

Moderator: *Skiff Sokolov*

13:25-14:20 Lunch

Afternoon session 14:30-18:45

Chairperson: *Yuri Zinoviev*

14:30 **Edward Anderson** (Cambridge University, DAMTP, UK)

"On semiclassical quantum cosmology becoming a numerical subject"

15:00 **Abhas Kumar Mitra** (BARC, Mumbai, India)

"Einsteinian revolution's wrong turn: lumpy interacting cosmos assumed as smooth perfect fluid: no dark energy"

15:30 **Vladimir Sokolov** (SAO RAS, Nizhnij Arkhyz, Russia)

"The gamma-ray bursts, core-collapse supernovae and global star forming rate at large redshifts"

16:00-16:20 Coffee break

Chairperson: *George Pronko*

16:20 **Alexander Dolgov** (University of Ferrara, Italy/NSU, Novosibirsk/ITEP, Moscow)

"High energy gravitational waves from the early Universe"

16:50 **Valery Rubakov** (INR, Moscow, Russia)

"Cosmological perturbations: what do they tell?"

17:20-18:20 Panel discussion on Cosmology

Moderator: *Edward Anderson*

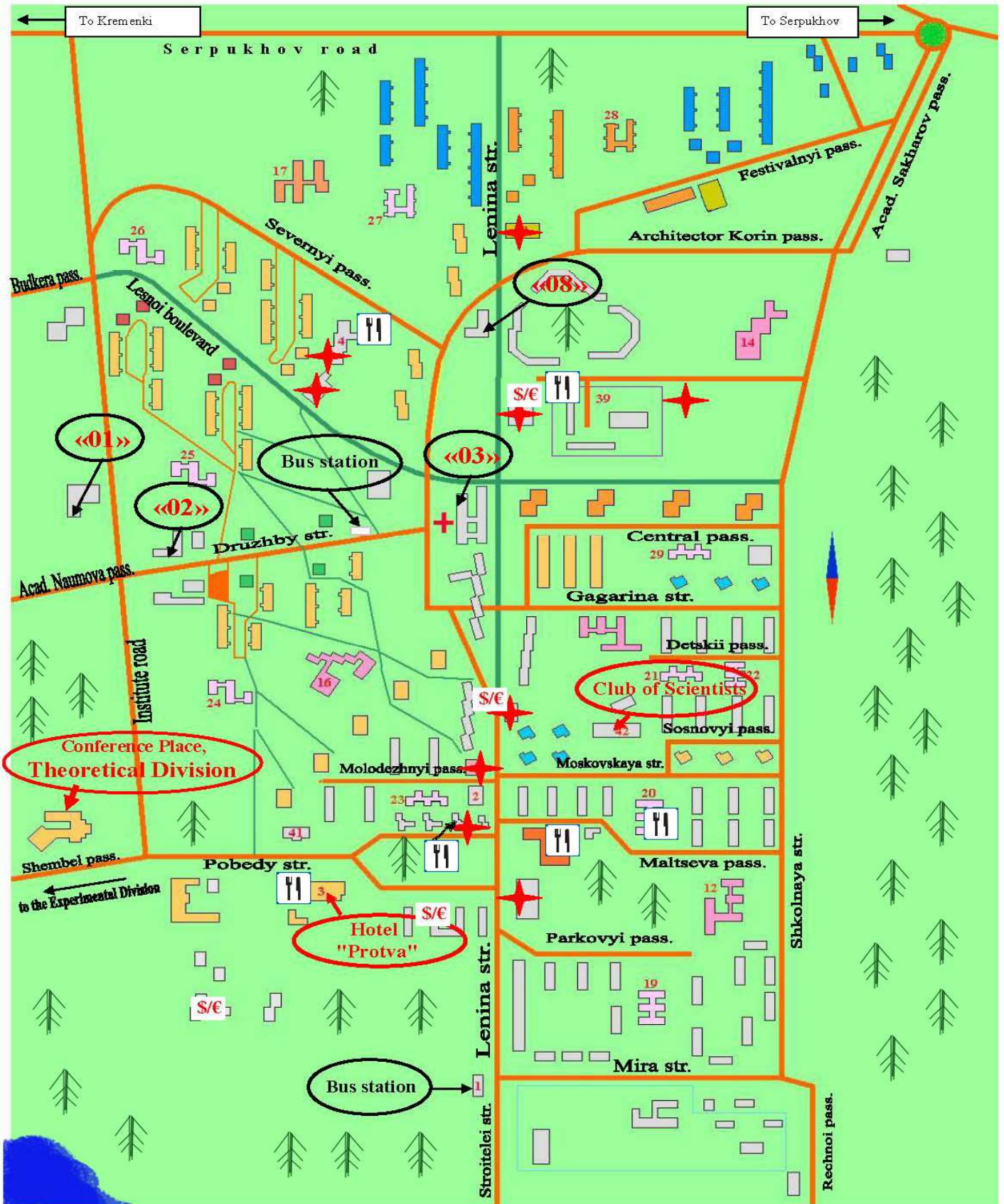
18:20 **Vladimir Petrov** (IHEP, Protvino, Russia)

"Closing address"

18:50 Farewell drink

List of participants

| | | | |
|------------------------------|---|---------------------------|----------------------------------|
| Adeva Bernardo | Univ. of Santiago de Compostela, Spain | Riva Francesco | EPFL, Lausanne, Switzerland |
| Anderson Edward | Cambridge Univ., DAMTP, UK | Rubakov Valery | INR, Moscow |
| Arbuzov Boris | SINP MSU, Moscow, Russia | Sheshukov Andrey | JINR, Dubna |
| Bazilevsky Alexander | BNL, New York, USA | Sibiriyakov Sergey | INR, Moscow |
| Bernardi Gregorio | Fermilab, Batavia, USA | Smy Michael | Univ. of California, Irvine, USA |
| Bylinkin Alexander | ITEP, Moscow | Sokolov Vladimir | SAO RAS, Nizhnii Arkhyz |
| Cherepashchuk Anatoly | SAI MSU, Moscow | Titov Nikita | INR, Moscow |
| Crothers Stephen | AIAS, Sunshine Plaza, Australia | Zakharov Alexander | ITEP, Moscow |
| Dolgov Alexander | Univ. of Ferrara, Italy; NSU, Novosibirsk, ITEP, Moscow | Zakharov Valentin | ITEP, Moscow |
| Dzhatdoev Timur | PNPI MSU, Moscow | Ryabchikov Dmitry | IHEP, Protvino, Russia |
| Evdokimov Olga | University of Illinois, Chicago, USA | Zenin Oleg | IHEP, Protvino, Russia |
| Ferro Cristina | NCU, Taipei, Taiwan; CERN, Geneva, Switzerland | Gershtein Semen | IHEP, Protvino, Russia |
| Kabana Sonja | SUBATECH, Nantes, France | Godizov Anton | IHEP, Protvino, Russia |
| Katanaev Michail | MI RAS, Moscow | Ivanov Sergey | IHEP, Protvino, Russia |
| Khabibullin Marat | INR, Troitsk | Kiselev Valery | IHEP, Protvino, Russia |
| Khotyantsev Alexey | INR, Moscow, Troitsk | Likhoded Anatoly | IHEP, Protvino, Russia |
| Knochel Alexander | ITTK RWTH, Aachen, Germany | Obraztsov Vladimir | IHEP, Protvino, Russia |
| Kotov Khristian | Ohio State Univ., Columbus, USA | Petrov Vladimir | IHEP, Protvino, Russia |
| Kudenko Yury | INR, Moscow | Pronko George | IHEP, Protvino, Russia |
| Kumar Mitra Abhas | BARC, Mumbai, India | Ryabov Yury | IHEP, Protvino, Russia |
| Lubashevskiy Alexey | MPIK, Heidelberg, Germany | Ryutin Roman | IHEP, Protvino, Russia |
| Nikolaidou Rosy | CEA/IRFU, Saclay, France | Sadovsky Sergei | IHEP, Protvino, Russia |
| Petrukhin Anatoly | MEPhI, Moscow | Sokolov Skiff | |
| Pszczel Damian | NCNR, Warsaw, Poland; Uppsala Univ. | Troshin Sergey | IHEP, Protvino, Russia |
| Pozdeeva Ekaterina | SINP MSU, Moscow | Tyurin Nikolai | IHEP, Protvino, Russia |
| Prokudin Alexei | JLAB, Newport News, USA | Zaitsev Alexander | IHEP, Protvino, Russia |
| Ratnikov Fedor | KIT, Karlsruhe, Germany | Zinoviev Yuri | IHEP, Protvino, Russia |



Supermarkets and shops

S/€

Exchange



Restaurants, cafés