



3rd French-Czech «Barrande» Nuclear Research Workshop

- Advancing Science through Bilateral Collaborations -

Organised by: Nuclear Physics Institute of the Czech Academy of Sciences, Grand Accélérateur National d'Ions Lourds, The French Alternative Energies and Atomic Energy Commission, French Embassy in Czech Republic, University of West Bohemia in Pilsen and Czech Technical University in Prague

November 28th-29th, 2022
Liblice, Czech Republic

Preliminary main program

Sunday, November 27th, 2022

Transport from Prague airport to Liblice (chartered bus)

Buffet dinner in Liblice

Monday, November 28th, 2022

09:00 – 12:30 Presentations by Czech and French researchers

12:50 – 14:00 Lunch

14:00 – 18:00 Presentations by Czech and French researchers

Discussion & Parallel IRP NuAG Steering committee meeting

19:00 Wine degustation and dinner

Tuesday, November 29th, 2022

09:00 – 12:30 Presentations by Czech and French researchers

12:30 – 14:00 Lunch

14:00 – 15:30 Presentations by Czech and French researchers

15:30 Discussion panels & Working groups

17:00 Closure

Wednesday, November 30th, 2022

Transport to Prague airport



Preliminary detailed program

Monday, November 28th, 2022

Introduction

Chairperson: Veronique Debord-Lazaro

09:00 **Opening words**

09:30 **Research facility and program in NPI CAS**
Ondřej Svoboda (NPI CAS)

09:50 **Programs and Projects at GANIL/SPIRAL2**
Patricia Roussel-Chomaz (GANIL)

10:10 *Coffee break*

Topic: Biological applications

Chairperson: Gilles De France

10:40 **R&D activities for alphatherapy at GANIL**
Gilles De France (GANIL)

11:10 **Interaction of low energy electrons with DNA and its components**
Jaroslav Kočíšek (JH-INST CAS)

11:30 **Isotopic separation for radionuclide production: the health example**
Charles-Olivier Bacri (IJCLab Orsay)

11:50 **Ionization reactions of atmospheric constituents - case study on pinene**
Pamir Nag (JH-INST CAS)

12:10 **Innovative Medical Radioisotopes production: a focus on Pa project**
Julie Champion (IMT Atlantique – Subatech)

12:30 *Lunch*

Topic: Nuclear energy and technologies

Chairperson: Vladimír Wagner

14:00 **The current state of nuclear energy**
Vladimír Wagner (NPI CAS)

14:30 **Uranium speciation by TRLFS in $\text{OU}_2^{2+}/\text{CO}_3^{2-}/\text{H}_2\text{O}$ system**
Alena Zavadilová (FNSPE CTU)



14:50 Development of neutron detectors for on-line and ex-core measurements in research reactors in the field of Nuclear Instrumentation

Valentin Valero (Université Aix-Marseille/CNRS, IM2NP)

15:10 Experimental environment reactors using graphite

Eva Vilímová (ZČU v Plzni)

15:30 *Coffee break*

16:00 Qualification and Testing of Advanced Nuclear Fuel Cladding Materials

Martin Ševeček (FNSPE CTU)

16:20 Review of the joint research work between AMU and CEA on the nuclear heating measurement in research reactors

Adrien Volte (Université Aix-Marseille/CNRS, IM2NP)

16:40 Nuclear heat applications

Radek Škoda (ZČU v Plzni)

Topic: Neutrino physics and related technologies

Chairperson: Ivan Štekl

17:00 Introduction to Neutrino Physics

Fabrice Piquemal (LP2i Bordeaux)

17:30 Cooperation with LSM

Experiment SuperNEMO

Miroslav Macko (IEAP CTU)

17:50 Cooperation with CPPM

Materials for Radon Adsorption

Oleksandra Veselska (IEAP CTU)

18:10 *Discussion & Parallel IRP NuAG Steering committee meeting*

19:00 *Wine degustation and dinner*

Tuesday, November 29th, 2022

Topic: Nuclear Astrophysics

Chairperson: François De Oliveira Santos

09:00 Nuclear Astrophysics at GANIL

François De Oliveira Santos (GANIL)





- 09:30 **Indirect methods in nuclear astrophysics**
Jaromír Mrázek (NPI CAS)
- 09:50 **Dark Boson as a link between ordinary matter and dark sectors of the Universe**
Beyhan Bastin (GANIL)
- 10:10 **Influence of isomers on s-process nucleosynthesis and the case of ^{180}Ta**
Petr Alexa (VSB – Technical University Ostrava)
- 10:30 **Experimental studies for the p-process nucleosynthesis : alpha optical potential and alpha-induced reactions**
Achment Chalil (IP21-Universite Claude-Bernard Lyon 1)
- 10:50 *Coffee break*

Topic: Instrumentation and facilities

Chairperson: Marek Lewitowicz

- 11:20 **Advanced detectors for experiments at GANIL**
Marek Lewitowicz (GANIL)
- 11:50 **Review of CEA R&D on instrumentation for irradiation experiments in the JHR material testing on reactor**
Christophe Destouches (CEA)
- 12:10 **High energy PIXE and analysis of cultural heritage objects**
Vincent Métivier (IMT Nantes)
- 12:30 *Lunch*
- 14:00 **Nuclear Physics opportunities at the ILL high flux reactor**
Caterina Michelagnoli (ILL Grenoble)
- 14:20 **First results of the Neutron For Science Facility**
Xavier Ledoux (GANIL)
- 14:40 **Fast Neutrons Generators at NPI CAS**
Martin Ansorge (NPI CAS)
- 15:30 *Discussion panels & Working groups*
- 16:30 *Wrap-up of Panels/ WG by Panels/ WG spokespersons*
- Closure*



Conference centre of the Czech Academy of Sciences – Liblice Castle

Address: Liblice 61, 277 32 Byšice;

Location: GPS 50°18'42.32"N, 14°35'11.409"E



Public transport: bus station "Liblice", train station "Byšice"

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