

Participants:

- “ IPNO : Maher Cheikh Mhamed / Yorick Blumenfeld
- “ LNL : Mattia Manzolaro / Daniele Scarpa
- “ CERN : Thierry Stora / Jochen Ballof / Sebastian Rothe (from 10:00 to 14:30)
- “ GANIL : Pierre Delahaye / Pascal Jardin / Hanna Franberg -Delahaye
- “ IFJ-PAN : Jerzy Wojciech Mietelski / Ryszard Misiak

10:00 am: Start

Maher CHEIKH MHAMED: BeamLab Project

- Meeting goals :
 - Review the advancements achieved by the different institutes
 - Discuss milestones and the preparation of the intermediate report (18 months)
 - Discuss synergies and collaboration between labs
- BeamLab tasks, leads, budget distribution per participating institute, person months per participating institute, deliverables
- CERN postdoc already provided since June 2016 : João Pedro RAMOS
- CERN contribution for task 1 should be clarified
- GANIL Contribution for task 2 should be clarified
- Task leaders :
 - “ Task 1: P. Delahaye (GANIL)
 - “ Task 2: A. Andrihgetto (LNL-INFN)
 - “ Task 3: T. Stora (CERN)
 - “ Task 4: M. Cheikh-Mhamed (IPNO)
- Laboratory coordinators:
 - “ CERN : T. Stora
 - “ GANIL : P. Delahaye
 - “ LNL-INFN : A. Andrihgetto
 - “ IFJ-PAN : J-W. Mietelski
 - “ IPNO : M. Cheikh-Mhamed
- Intermediate report month 18 should be discussed in this meeting

Yorick Blumenfeld: Informations from JRA EURISOL

- Information about the intermediate report “month 18”
 - “ Reporting period ends Aug 31 2017
 - “ Report submitted to EC 60 days after end of period (30 Oct 2017)

- “ Deadline for us to submit report will be during September 2017, exact date not defined.
- “ For BeamLab plan on approx 10 pages including figures and photos.
- A second intermediate report will be requested on month 36
- Reminder of BeamLab deliverables
- A website for the JRA-EURISOL will be available by June 2017

Maher CHEIKH MHAMED: BeamLab activities at IPN

- IPNO will participate in task 1, 2, 3 and 4
- Proposed activities:
 - o Thermionic emission studies, beam extraction and efficiency measurements for IRENA ion source
 - o Simulations and thermal optimization with ANSYS code of the transfer line device for beam productions at ALTO
 - o Optimization of process parameters for the On-line production of rare earth elements by fluorination
 - o Photo-fission target optimization for the ALTO facility
- Required equipment : Emittance meter
- Thermal test bench is under development
- IPNO needs to compensate 9 person.month for the BeamLab activities
- 18 months of post-doc (not yet chosen)

Mattia Manzolaro: BeamLab activities at LNL

- Quick SPES project presentation and advancements
- New concept of the SPES production target and R&D target activities (UCx target density 4.25 g/cm^3 , fission rate $\sim 10^{13} \text{ f/s}$)
- R&D ion sources activities (surface ionization and plasma ion sources)
- 1 post-doc position for 2 years will be hired since March 2018 (50% BEAMLAB, 50% for RESIST)
- LNL will participate in task 1, 2, 3 and 4

Jochen Ballof: BeamLab activities at CERN

- Beam purification by extraction as molecular sidebands : online measurements for SnS, SeCO and GeS
- Beam extraction by In-situ volatilization : Boron beams production by fluorination (online tests measurements) , refractory metal beams production as carbonyl compounds (first ionization tests achieved \rightarrow efficiency needs to be improved)
- Beam purification by the optimization of the neutron converter (ANSYS simulations on-going)
- LNL will participate in task 1, 2, 3 and 4

T. STORA: The contribution of CERN for the task 1 will be through the optimization of the VADIS ion source for the Boron beam productions

Pierre Delahaye: BeamLab activities at GANIL

- Quick SPIRAL1 upgrade presentation : Stable beam will be available on 2017 & Beam on target by 2018
- NANOGAN and FEBIAD ion sources optimization are planned in the framework of tasks 1 and 3 (molecular ion beam production, gaining control of the ion source conditions and performances)
- Task 4 activities : fragmentation and fusion evaporation targets developments
- LNL will participate in task 1, 2, 3 and 4

P. JARDIN: The contribution of GANIL for the task 2 will be through emissivity measurements for different materials requested by the BeamLab community.

Jerzy Wojciech Mietelski & Ryszard Misiak: BeamLab activities at IFJ-PAN

Jerzy Wojciech Mietelski:

- Main fields of experience at Department of Nuclear Physical Chemistry

Ryszard Misiak:

- Presentation of the on-going work at IFJ-PAN: Reaction kinetics of oxidation Ta in atmospheric pressure and vacuum
- Raman spectra measurements results
- Proton activation analysis
- Future work : quantitative calibration in order to determination a minimum detection of oxygen in sample by proton activation analysis, finding a composition and structure of tantalum oxide formed on its surface in a vacuum conditions – Raman spectroscopy and RBS.
- IFJ-PAN will participate in task 2.

T. STORA & Maher: This Work could be very useful for the optimization of the ion source operation conditions

Discussion: Other materials could be proposed to IFJ-PAN for investigations. For instance: tungsten material

13:00 pm: lunch break

Discussion & Actions:

- Intermediate report:
 - ✓ BeamLab Coordinator (Maher) will share a template document with the BeamLab community in order to have the same standard of the document content for each task.

- ✓ Each task coordinator must gather the informations, write the document of his task and send it to the BeamLab coordinator for compilation at least June 15, 2017.
- ✓ A limit of 4 pages is fixed for each task document
- ✓ A videoconferencing meeting will be scheduled at the end of May 2017.
- FEBIAD efficiency measurements: BeamLab collaboration should fix one protocol for the efficiency measurements
- Molecular Beams: Collaboration may be possible for Fluorination Process
- LNL will share emissivity data and electrical resistivity data with the BeamLab collaboration.
- IFJ-PAN : is waiting for any other materials proposition

Finish 15:00 pm

All presentations will be available on the new website of the JRA-EURISOL