

# 1<sup>st</sup> RAON Users Workshop

## Second Circular

**Date:** April 3 – 5, 2019

**Venue:** IBS Science Culture Center, Institute for Basic Science, Daejeon, Korea

Dear Colleagues,

This is the second circular to announce the first RAON Users Workshop organized and hosted by the ‘RAON User Liaison Center’ and the ‘RAON Users Association’. The workshop will serve as an international forum to discuss the science opportunities to be explored by using seven experimental systems of RAON.

RAON is a Rare isotope Accelerator complex for ON-line experiments expected to be completed by the end of 2021 in Korea through the RISP (Rare Isotope Science Project) of the Institute for Basic Science (IBS). By employing both Isotope Separation On-Line (ISOL) method driven by a 70 kW cyclotron and In-Flight Fragmentation (IFF) method powered by 200 MeV/u uranium beams, RAON will provide very unique collection of world-class rare isotope beams. Pioneering researches will be performed in many areas of basic and applied sciences including nuclear, atomic, condensed matter, and biomedical sciences. (Please see the website <https://risp.re.kr/> or a separate, attached file for a brief overview of RAON.)

In this Workshop, the current status of the RAON and the experimental systems will be presented, and new science opportunities will be discussed among the potential users. We hope to promote international collaboration and expand the user community of RAON.

The topics of the Workshop include the following experimental systems and the equipment related to these:

- a. KOBRA: KOrea Broad acceptance Recoil spectrometer and Apparatus
- b. LAMPS: Large Acceptance Multi-Purpose Spectrometer
- c. HPMMS: High Precision Mass Measurement System (Multi-Reflection Time-of-Flight)
- d. CLS: Collinear Laser Spectroscopy
- e.  $\mu$ SR: Muon Spin Rotation/Relaxation/Resonance
- f. NDPS: Nuclear Data Production System
- g. BIS: Beam Irradiation System (Bio-Medical Research)
- h. Nuclear Theory

There is no registration fee, but the registration is required to participate in the workshop. Registration can be done at the workshop web site: <https://indico.ibs.re.kr/event/285/>. If you have any questions, please contact organizers by email: [workshop@nuclearemail.org](mailto:workshop@nuclearemail.org)

**List of the invited speakers:**

1. “[KOBRA] New opportunities offered by modern active target detector systems”  
Gregory Rogachev (Texas A&M University)
2. “[KOBRA] TBD”  
Leonid Grigorenko (FLNR, JINR)
3. “[BIS] ISOLDE Facility, physics highlights and applications in life sciences”  
Maria Borge (Instituto de Estructura de la Materia)
4. “[BIS] FLASH therapy as a new radiotherapy approach for fighting cancer”  
Angeles Faus-Golfe (LAL, University of Paris-Sud and Paris-Saclay)
5. “[LAMPS] Probing the equation of state of neutron-rich matter”  
Bill Lynch (Michigan State University)
6. “[LAMPS] Constraints on the symmetry energy parameters from proton scattering experiments at RCNP”  
Atsushi Tamii (Osaka University)
7. “[MMS] A multi-reflection time-of-flight mass spectrometer for the future  $N = 126$  factory”  
Maxime Brodeur (University of Notre Dame)
8. “[MMS] Progress of mass measurements for short-lived nuclides in CSRe Lanzhou”  
Yuhu Zhang (Institute of Modern Physics)
9. “[CLS] Implementation and applications of resonance ionization laser ion sources at ISOL facilities”  
Bruce Marsh (ISOLDE, CERN)
10. “[CLS] Off-line and on-line applications of high resolution laser spectroscopy on exotic species – Collinear and alternative approaches”  
Klaus Wendt (Mainz)
11. “[Theory] Impact of RIB Science and Neutrino Physics on Merger, Supernova, and Big-Bang Nucleosynthesis”  
Toshitaka Kajino (University of Tokyo, NAOJ, Beihang University)
12. “[Theory] Pygmy resonances, neutron skins, and neutron stars”

Carlos Bertulani (Texas A&M University)

13. “[NDPS] Nuclear technology applications at the GELINA time-of-flight facility”

Peter Schillebeeckx (Joint Research Centre)

14. “[NDPS] Modern aspects of nuclear fission study and synthesis of superheavy elements”

Satoshi Chiba (Tokyo Institute of Technology)

15. “[muSR] Polarized muons as microscopic probes of materials, thin films and heterostructures”

Elvezio Morenzoni (PSI)

16. “[muSR] Muon science at J-PARC pulsed muon source”

Yasuhiro Miyake (J-PARC)

### **Organizing Committee**

M. K. Cheoun (Soongsil University)

K. Y. Choi (Chung-Ang University)

I. K. Hahn (Ewha Womans University)

S. W. Hong (Sungkyunkwan University), Co-Chair

E. J. Kim (Chonbuk National University)

J. B. Kim (Korea National University of Education)

Y. J. Kim (Institute for Basic Science)

Y. M. Kim (Institute for Basic Science)

M. J. Kwon (Inha University)

J. H. Lee (Institute for Basic Science)

C. B. Moon (Hoseo University), Co-Chair

W. Y. Park (Chungbuk National University)

### **Scientific Secretary**

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### **Supported by**

**Rare Isotope Science Project, RAON Users Association, RAON User Liaison Center**