

**[RIBF-ULIC-miniWS-023]
SUNFLOWER - In-beam
gamma and MINOS**

Report of Contributions

Contribution ID: 0

Type: **not specified**

Overview of in-beam gamma-ray spectroscopy at the RIBF

Wednesday, 20 February 2013 09:35 (30 minutes)

An overview of in-beam gamma-ray spectroscopy at the RIBF will be given.

Primary author: DOORNENBAL, Pieter (RIKEN)

Presenter: DOORNENBAL, Pieter (RIKEN)

Session Classification: Introduction

Contribution ID: 1

Type: **not specified**

Neutron intruder structures in heavy Ti isotopes

Wednesday, 20 February 2013 15:00 (20 minutes)

Isotopes below Nickel about $N=40$ are known to exhibit enhanced collectivity, instead of signatures of an $N=40$ sub-shell closure which is evident in ^{68}Ni . The enhancement of collectivity has been seen in Fe and Cr isotopes in the region through the lowering of $2+1$ energies as well as rise in $B(E2)$ excitation strengths, mainly due to an early population of the neutron $g_{9/2}$ orbital. We intend to test the persistence of this onset of collectivity to lower- Z isotopes, namely Ti, just above the Ca $Z=20$ magic shell closure. Shell model calculations from different groups predict a significant lowering of the neutron $d_{5/2}$ orbit and a presence of a new “island of inversion” in the region, or rather significant populations of the $g_{9/2}$ orbital. In either case this would lead to a softening of the $N=50$ shell closure, and thus an enhanced collectivity in heavy Ti isotopes.

To study the single particle structure of heavy Ti isotopes up to $A=62$, energies of the lowest excited states in even-even nuclei are important, as well as their $B(E2)$ excitation strength, and effective single-particle energies of the relevant orbitals may be deduced from the odd- A Ti isotopes. While in the lighter Ti's up to about $A=60$ Coulomb excitation to the first excited states should be possible with RIBF intensities and using DALI2. Excited states in the heavier isotopes, especially those higher than the first excited state, can only be reached via knockout reactions. The availability of MINOS in conjunction with DALI2 would offer a steep rise in cross-section for this type of experiments.

Primary author: WERNER, Volker (Yale University)

Presenter: WERNER, Volker (Yale University)

Session Classification: Status of Performed Experiments II and New Experiments I

Contribution ID: 2

Type: **not specified**

Exploring the Island of Inversion

Wednesday, 20 February 2013 13:40 (20 minutes)

Summary

A summary of measurements in the “Island of Inversion” region at the RIBF will be given. This presentation will include results on the heaviest F, Ne, and Mg isotopes studies thus far by in-beam gamma-ray spectroscopy following knockout reaction and inelastic scattering

Primary author: DOORNENBAL, Pieter (RIKEN)

Presenter: DOORNENBAL, Pieter (RIKEN)

Session Classification: Status of Performed Experiments II and New Experiments I

Contribution ID: 3

Type: **not specified**

MINOS: description and capabilities

Wednesday, 20 February 2013 10:05 (30 minutes)

Summary

MINOS (acronym for Magic Numbers Off Stability) is a device dedicated to perform in-flight gamma spectroscopy of extremely exotic nuclei in knockout reactions. It consists of a thick liquid hydrogen target (15-20 cm) surrounded by a TPC acting as a tracker. The vertex position is reconstructed from the direction of the emitted protons detected in the TPC and the beam. In this way one can profit of the increase of luminosity (up to one order of magnitude) due to the thick target without losing resolution in the Doppler correction, as would occur if the vertex position in the target was not measured.

MINOS will be ready since the beginning of 2014 to perform experiments at RIKEN coupled with the DALI2 gamma array and the SAMURAI or ZeroDegree spectrometer.

Primary author: CORSI, Anna (CEA Saclay)

Presenter: CORSI, Anna (CEA Saclay)

Session Classification: Introduction

Contribution ID: 4

Type: **not specified**

Overview of the SAMURAI Dayone experiments

Wednesday, 20 February 2013 11:20 (30 minutes)

The first experimental campaign using the new spectrometer SAMURAI was carried out in May, 2012. I will introduce SAMURAI and report the campaign in the workshop. Future SAMURAI experiment together with MINOS will also be discussed.

Primary author: KONDO, Yosuke (Tokyo Institute of Technology)

Presenter: KONDO, Yosuke (Tokyo Institute of Technology)

Session Classification: SAMURAI Experiments and Status of Performed Experiments I

Contribution ID: 5

Type: **not specified**

Investigating the structures of neutron-rich Ca isotopes: Outcome of the first Zn-70 campaign at the RIBF

Wednesday, 20 February 2013 14:40 (20 minutes)

The structures of neutron-rich nuclei around Ca-54 were investigated using in-beam gamma-ray spectroscopy via nucleon knockout reactions with Sc-55 and Ti-56 radioactive beams at the RIBF. This was the first experimental campaign at the facility to use a Zn-70 primary beam at 345 MeV/u. In this presentation a summary of the results and experiment details will be given, and future prospects for studies in this mass region with a Zn-70 beam will be discussed.

Primary author: STEPPENBECK, David (University of Tokyo)

Presenter: STEPPENBECK, David (University of Tokyo)

Session Classification: Status of Performed Experiments II and New Experiments I

Contribution ID: 6

Type: **not specified**

The pygmy resonance in medium-mass nuclei

Thursday, 21 February 2013 13:50 (20 minutes)

Medium-heavy neutron rich isotopes are characterized by a layer of excess neutrons on the nuclear surface. The question whether the excess neutrons in the skin can be excited to perform collective oscillations against the $N=Z$ core has attracted considerable interest in recent years. Results and proposed experiments at RIKEN and GSI will be discussed. Additionally possible experimental approaches to study this subject with DALI2 at RIKEN will be shown.

Primary author: WIELAND, Oliver (INFN sezione di Milano)

Presenter: WIELAND, Oliver (INFN sezione di Milano)

Session Classification: Approved and Upgrade Experiments

Contribution ID: 7

Type: **not specified**

The PRESPEC-AGATA in-beam spectroscopy campaign at GSI

Wednesday, 20 February 2013 16:00 (30 minutes)

The goal of the PRESPEC-AGATA project is to investigate the structure of exotic nuclei by performing in-beam gamma-spectroscopy experiments employing the SIS-FRS accelerator complex at GSI. The experimental set-up currently includes 19 AGATA high-resolution tracking gamma detectors providing about 10% full energy efficiency at 1 MeV. A set of advanced heavy ion detectors is used for identification and tracking of exotic nuclei selected and transported through the fragment separator FRS. An active target and the heavy ion calorimeter and ToF detector LYCCA-1 complete the arrangement. The set-up constitutes the first full implementation of the HISPEC experiment for NUSTAR at the future FAIR facility.

After successful commissioning, a first series of relativistic Coulomb excitation and secondary fragmentation experiments were performed in Autumn 2012. They dealt with the determination of $B(E2)$ values in neutron-rich unstable Pb, Hg and Pt isotopes, fine structure of the pygmy resonance in ^{64}Fe , Coulomb excitation of yrast-trap states in ^{52}Fe and life times in neutron-rich Zr and Mo nuclei. First results show an unrivaled sensitivity of the set-up, surpassing the predecessor experiment RISING by at least one order of magnitude, offering unique access to the structure of exotic nuclei.

Summary

An overview of the PRESPEC-AGATA project will be given, including the characteristics and qualities of the set-up derived from simulations and confirmed by the commissioning runs.

The experiments performed so far will be introduced and the current state of the analysis will be discussed.

Finally the plans for further experiments and the prospect for HISPEC will be shown.

Primary author: GERL, Juergen (GSI)

Co-author: AGATA, PRESPEC (Europe)

Presenter: GERL, Juergen (GSI)

Session Classification: Other Projects

Contribution ID: 8

Type: **not specified**

Status and recent results of the EURICA project

Wednesday, 20 February 2013 16:30 (30 minutes)

Primary author: NISHIMURA, Shunji (Researcher)

Presenter: NISHIMURA, Shunji (Researcher)

Session Classification: Other Projects

Contribution ID: 9

Type: **not specified**

Status Report of Experiment NP0702-RIBF28

Wednesday, 20 February 2013 14:20 (20 minutes)

Excited states in the nuclei $^{38,40,42}\text{Si}$ have been studied using in-beam gamma-ray spectroscopy following multi-nucleon removal reactions to investigate the systematics of excitation energies along the $Z = 14$ isotopic chain.

Experiment have been performed at RIBF with high intensity ^{48}Ca beam employed to produce the secondary beams of ^{40}S and ^{44}S . The DALI2 gamma-ray spectrometer have been employed to measure the de-excitation gamma-rays from excited nuclear states via $\text{C}(^{40}\text{S},^{38}\text{Si}+\gamma)$, $\text{C}(^{44}\text{S},^{40}\text{Si}+\gamma)$ and $\text{C}(^{44}\text{S},^{42}\text{Si}+\gamma)$ reactions. Here, we will report on the status of analysis: the observed excited states, tentative spin-parity assignment and future plan.

Primary author: MATSUSHITA, Masafumi (Center for Nuclear Study, University of Tokyo)

Presenter: MATSUSHITA, Masafumi (Center for Nuclear Study, University of Tokyo)

Session Classification: Status of Performed Experiments II and New Experiments I

Contribution ID: 10

Type: **not specified**

Clover Array at RCNP and RIBF

Wednesday, 20 February 2013 17:00 (30 minutes)

A project to construct a Compton-suppressed Ge Clover array by combining the Clover Ge detectors in Japan and the U.S. is proposed to study in detail excited states in exotic nuclei produced at the RIBF facility in RIKEN. This array will be suited for studies utilizing energy-degraded RI beams and also stopped RI beams.

Before starting experiments using the Clover array at RIBF, commissioning runs and physics runs are planned at RCNP, Osaka University to check entire system and also output physics results. At RCNP, there is a world unique high-resolution spectrometer, Grand Raiden and also low-energy RI beam line, EN course. Combination of the array with these facilities will also provide unique physics opportunities.

Overview and prospects of the Clover Array project will be presented.

Primary author: IDEGUCHI, Eiji (RCNP, Osaka University)

Presenter: IDEGUCHI, Eiji (RCNP, Osaka University)

Session Classification: Other Projects

Contribution ID: 11

Type: **not specified**

Study of Collectivities in Neutron-rich N~40 Cr isotopes

Thursday, 21 February 2013 13:30 (20 minutes)

A life-time measurement of excited states in neutron-rich deformed nuclei in the mass $A \approx 60$ region is planned (NP0906-RIBF07). The recoil distance method (RDM) using the intermediate energy RI beams will be used to measure the lifetimes of $2+$ and $4+$ states in $60-64\text{Cr}$ and their neighbors. The Big RIPS fragment separator at RIBF will be used to produce the neutron-rich isotope beams in N~40 region by impinging $345\text{A MeV } 70\text{Zn}$ beams on a 9Be target. Gamma rays from the excited states at the secondary target will be measured by CNS GRAPE and DALI-2, and the scattered ions will be identified with the Zero Degree spectrometer. The main purpose of the experiment is to study collectivities of the neutron-rich Cr isotopes in a new island of inversion by extracting $B(E2)$ values precisely through lifetime measurements.

Primary author: IDEGUCHI, Eiji (RCNP, Osaka University)

Presenter: IDEGUCHI, Eiji (RCNP, Osaka University)

Session Classification: Approved and Upgrade Experiments

Contribution ID: 12

Type: **not specified**

Further upgrade of methodology of in-Ribeam spectroscopy

Thursday, 21 February 2013 12:00 (20 minutes)

In-beam gamma-ray spectroscopy with RI beams has been cultivated and intensively used in the last two decades to make a major contribution to the progress of the spectroscopy on nuclei far from stability. The main reaction processes so far used with in-flight RI beams are the intermediate-energy Coulex, proton inelastic scattering, and one-nucleon removal reactions. These processes have been so useful to locate collective states as well as to determine the transition strengths. Yet the accessible range of the method is rather limited to low-lying low-spin excited states, and firm spin-parity assignments are often missing. Thus employment of new reaction channels and relevant methods to make unambiguous spin-parity assignments are demanded. In this talk I would like to propose a couple of methodological possibilities to cope with such demands. In particular I emphasize importance of the measurement of gamma-ray angular distributions possibly to afford a useful method for spin-parity assignment.

Primary author: ISHIHARA, Masayasu (RIKEN Nishina Center)

Presenter: ISHIHARA, Masayasu (RIKEN Nishina Center)

Session Classification: New Experiments II

Contribution ID: 13

Type: **not specified**

Status report of experiment NP0811RIBF70R and NP1112-RIBF94

Thursday, 21 February 2013 10:20 (20 minutes)

The coulomb excitation of ^{104}Sn was measured in July 2012 at RIBF. At the same time, nuclear inelastic scattering from ^{12}C and hydrogen has been undertaken, as well as neutron-removal cross section measurements.

These new data sets provide valuable information on open question of collectivity in light Tin isotopes. The cross section measurement should (i) give a better understanding on the role of indirect processes in the nucleon removal process, (ii) have a better control of cross section estimates, in particular to evaluate the feasibility of the first spectroscopy of ^{100}Sn from in-beam gamma technique coupled to two-neutron removal.

In the presentation, preliminary results for both coulomb excitation and knockout measurements will be shown and discussed.

Primary author: OBERTELLI, Alexandre (CEA Saclay)

Presenter: OBERTELLI, Alexandre (CEA Saclay)

Session Classification: Status of Performed Experiments III

Contribution ID: 14

Type: **not specified**

Spectroscopy of ^{78}Ni with DALI2 and MINOS

Thursday, 21 February 2013 11:20 (20 minutes)

Expected to be doubly magic, ^{78}Ni is a key nucleus to further understand the nuclear shell structure.

Its spectroscopy will allow to probe the $Z=28$ and $N=50$ shell closures for neutron-rich nuclei. Several experiments on neighbouring nuclei have been performed to this end.

The study of $N=50$ isotones reveals that copper ($Z=29$), zinc ($Z=30$), germanium ($Z=32$) and selenium ($Z=34$) isotopic chains all exhibit a persistence of the $N=50$ shell closure. On the other hand, the comparison of experimental data to shell model calculations with a ^{48}Ca core suggests a reduction of the $Z=28$ shell gap, interpreted as possibly due to the tensor term of the in-medium nucleon-nucleon interaction.

Being a very neutron-rich nucleus, ^{78}Ni is a challenge to be produced at sufficient intensity for its spectroscopy in reasonable time, thus rendering the use of the MINOS device with the high efficiency gamma ray DALI2 a clear advantage. In this talk, the feasibility of the spectroscopy of ^{78}Ni with the MINOS-DALI2 setup will be addressed.

Primary author: SANTAMARIA, Clementine (CEA Saclay, SPhN)

Co-authors: OBERTELLI, Alexandre (CEA Saclay, SPhN); CORSI, Anna (CEA Saclay, SPhN)

Presenter: SANTAMARIA, Clementine (CEA Saclay, SPhN)

Session Classification: New Experiments II

Contribution ID: 15

Type: **not specified**

Spectroscopy of ^{52}Ar and ^{56}Ca with DALI2 and MINOS

Wednesday, 20 February 2013 15:20 (20 minutes)

In the context of nuclear structure evolution with isospin towards the drip-line and local magic numbers phenomena, gamma-spectroscopy of nuclei located in the neutron-rich region around ^{54}Ca is intensively investigated. Indeed, shell-model calculations using the GXPF1 interaction have indicated a new sub-shell closure at $N=34$. However, this is not confirmed experimentally by the $2+$ excitation energy of ^{58}Cr and ^{56}Ti , and other shell-model interactions and mean-field calculations do not predict this sub-shell closure. The important role of 3-body force in explaining shell-closures is suggested by recent ab-initio calculations. Recently, the gamma-spectroscopy of ^{54}Ca was measured at RIKEN to obtain evidence for the $N=34$ new sub-shell closure. The preliminary results do not indicate high $2+$ excitation energy.

To further investigate this region, we propose to measure the gamma-spectroscopy of ^{52}Ar and ^{56}Ca . Since these nuclei are very neutron-rich, they are produced at few particles per second only, making their spectroscopy measurement challenging. The measurements in a reasonable time could be possible by using MINOS coupled to the high-efficiency gamma-spectrometer DALI2. In this talk we will discuss the feasibility of measuring ^{52}Ar and ^{56}Ca spectroscopy with the DALI2-MINOS setup.

Primary author: BOISSINOT, Simon (CEA Saclay)

Presenter: BOISSINOT, Simon (CEA Saclay)

Session Classification: Status of Performed Experiments II and New Experiments I

Contribution ID: 16

Type: **not specified**

Study of shell evolution towards to ^{78}Ni by in-beam gamma-ray spectroscopy

Thursday, 21 February 2013 11:40 (20 minutes)

We will propose an experiment for coming MINOS campaign at RIBF to investigate proton shell evolution towards to ^{78}Ni by means of in-beam gamma-ray spectroscopy. The goal of the experiment is to characterize a proton $f_{7/2}$ hole states in the Cu isotopes populated by one-proton knockout reaction: $(p,2p)$. This will allow us to understand a migration of shell structure induced by the tensor part of the nucleon-nucleon interaction. In the workshop, a physics motivation and feasibility for MINOS@RIBF campaign will be discussed.

Primary author: NIIKURA, Megumi (Department of Physics, University of Tokyo)

Presenter: NIIKURA, Megumi (Department of Physics, University of Tokyo)

Session Classification: New Experiments II

Contribution ID: 17

Type: **not specified**

Search for mixed-symmetry states in ^{136}Te and ^{138}Xe

Thursday, 21 February 2013 14:10 (20 minutes)

We propose to study the excitation and decay of a second excited $2+$ state in the nucleus ^{136}Te at an excitation energy around 1.5-1.6 MeV which is predicted by theoretical calculations to be of mixed-symmetry character. This study will allow to explore for the first time the potential of the Coulomb excitation technique at intermediate energies for the study of mixed-symmetry states (MSS) in radioactive nuclei. We plan to use the known electromagnetic transition strength between the ground and the first excited $2+$ state in ^{132}Te , $B(E2;01+\rightarrow 21+)=0.216(22)$ e $^2b^2$, for the normalization of the experimental yields to be obtained in ^{136}Te . In this way, our experiment will provide at the same time a verification of the $B(E2)$ anomaly observed in previous studies in ^{132}Te and ^{136}Te , two protons and either two neutron-holes or two neutrons outside doubly magic ^{132}Sn . It is planned to extend these studies to the heavier $N=84$ isotone ^{138}Xe . The nuclei of interest will be produced in the projectile fission of a ^{238}U beam on a lead target and Coulomb excited at intermediate energies on a lead target positioned at the F8 focus of the BigRIPS fragment separator. De-excitation γ -rays will be detected by the DALI2 spectrometer in coincidence with the reaction products identified in the Zero Degree Spectrometer. The results of these measurements will shed new light on the irregularities observed in the development of quadrupole collectivity in nuclei around ^{132}Sn and will allow to discriminate between the different theoretical approaches employed in the description of this region of the chart of nuclei far-off stability.

Primary author: JUNGCLAUS, Andrea (Instituto de Estructura de la Materia - CSIC)

Presenter: JUNGCLAUS, Andrea (Instituto de Estructura de la Materia - CSIC)

Session Classification: Approved and Upgrade Experiments

Contribution ID: 18

Type: **not specified**

Proton induced reactions for exploring structure of neutron rich nuclei

Thursday, 21 February 2013 14:30 (20 minutes)

For the previous PAC meetings we submitted proposals to study the structure of neutron rich nuclei via proton inelastic scattering and nucleon removal reactions. Availability of a new hydrogen target and the MINOS setup may trigger the resubmission of the proposals.

At one of the first PAC meetings we proposed the study of odd nuclei below the N=50 shell closure.

Based on our results obtained on the enhanced cross section of excitation of states in ^{27}F we p

A similar proposal has also been submitted for exploration of the region beyond ^{132}Sn , where sc

Primary author: DOMBRADI, Zsolt (MTA ATOMKI)

Co-authors: SOHLER, Dora (MTA ATOMKI); ELEKES, Zoltan (MTA ATOMKI); ET, al (SUNFLOWER collaboration)

Presenter: DOMBRADI, Zsolt (MTA ATOMKI)

Session Classification: Approved and Upgrade Experiments

Contribution ID: 19

Type: **not specified**

Structures of neutron drip line nuclei studied by inclusive breakup reactions at ZDS

Thursday, 21 February 2013 10:00 (20 minutes)

The breakup reactions of neutron rich nuclei near $N=20$ and $N=28$ have been measured with C and Pb targets at about 240 MeV/nucleon at the ZDS spectrometer at RIBF. The breakup with a light target is induced primarily by the nuclear interaction, which is sensitive to the single-particle state of the removed neutron. The gamma ray detected by the DALI2 detector in coincidence with the outgoing charged fragment distinguishes whether the initial state is in excited states. The breakup with Pb target is induced mainly by the Coulomb interaction (Coulomb breakup), where the soft E1 excitation for halo nuclei can be identified. We have found that the combination of these breakup reactions can clarify the configuration (spectroscopic factor and separation energy) of the loosely bound nuclei. We discuss also the halo states in ^{29}Ne , ^{31}Ne , and ^{37}Mg , revealed in the experiment.

Primary author: NAKAMURA, Takashi (Tokyo Institute of Technology)

Co-author: KOBAYASHI, Nobuyuki (Tokyo Institute of Technology)

Presenter: NAKAMURA, Takashi (Tokyo Institute of Technology)

Session Classification: Status of Performed Experiments III

Contribution ID: 20

Type: **not specified**

High resolution missing mass spectroscopy using gamma-ray tagging at SHARAQ

Thursday, 21 February 2013 09:30 (30 minutes)

Primary author: SHIMOURA, Susumu (CNS, University of Tokyo)

Presenter: SHIMOURA, Susumu (CNS, University of Tokyo)

Session Classification: Status of Performed Experiments III

Contribution ID: 21

Type: **not specified**

Isoscalar and isovector dipole excitations in tin isotopes

Thursday, 21 February 2013 14:50 (20 minutes)

An experimental campaign has been initiated in order to investigate the dipole response of tin isotopes, in particular, the low-energy part of the spectrum including the Pygmy Dipole Resonance. Stable and unstable isotopes will be investigated utilizing different probes. The program includes experiments at the photon tagger NEPTUN, the HiGS facility, R3B-LAND, and at RIBF. At the RIBF at RIKEN, an experiment on alpha scattering off neutron-rich tin isotopes in inverse kinematics is being planned to study the isoscalar part of the dipole response. The status of the experimental program will be discussed.

Primary author: AUMANN, Thomas (Technische Universitaet Darmstadt)

Presenter: AUMANN, Thomas (Technische Universitaet Darmstadt)

Session Classification: Approved and Upgrade Experiments

Contribution ID: 22

Type: **not specified**

Structure study of the neutron-rich nuclei beyond ^{132}Sn via in-beam γ -ray spectroscopy at RIBF

Wednesday, 20 February 2013 12:10 (20 minutes)

The structure of the nuclei around doubly magic nucleus ^{132}Sn ($Z=50$, $N=82$) is of great importance from the nuclear structure point of view as well as the nuclear astrophysics point of view. The newly commissioned rare isotope facilities in the RIBF provide great opportunities to explore this region. We have investigated the structure of the nuclei beyond ^{132}Sn via an in-beam γ -ray spectroscopy technique by using high energy RI beams produced by in-flight fission of a ^{238}U primary beam at the BigRIPS fragment separator. We will report the new results from our experiment.

Primary author: WANG, He (RIKEN Nishina Center)

Presenter: WANG, He (RIKEN Nishina Center)

Session Classification: SAMURAI Experiments and Status of Performed Experiments I

Contribution ID: 23

Type: **not specified**

Upgrading of structure study of the exotic nuclei beyond ^{132}Sn

Thursday, 21 February 2013 15:10 (20 minutes)

We propose to upgrade NP-0702-RIBF-31 experiment. The proposal is aiming for a systematic study of the nuclear structure beyond ^{132}Sn using high energy RI beams produced by in-flight fission of ^{238}U at BigRIPS. ^{238}U primary beam with higher intensity is available at RIBF. It provides great opportunities to explorer more in this region.

Primary author: WANG, He (RIKEN Nishina Center)

Co-author: AOI, Nori (RCNP)

Presenter: WANG, He (RIKEN Nishina Center)

Session Classification: Approved and Upgrade Experiments

Contribution ID: 24

Type: **not specified**

Introduction to SAMURAI

Wednesday, 20 February 2013 10:35 (25 minutes)

Summary

Introduction to SAMURAI

Primary author: YONEDA, Ken-Ichiro (RIKEN)

Presenter: YONEDA, Ken-Ichiro (RIKEN)

Session Classification: Introduction

Contribution ID: 25

Type: **not specified**

Status report of experiment NP0702-RIBF30

Thursday, 21 February 2013 10:40 (20 minutes)

Summary

Status report of experiment NP0702-RIBF30

Primary author: YONEDA, Ken-Ichiro (RIKEN)

Presenter: YONEDA, Ken-ichiro (RIKEN Nishina Center)

Session Classification: Status of Performed Experiments III

Contribution ID: 27

Type: **not specified**

In-beam gamma-ray spectroscopy of ^{40}Mg

Wednesday, 20 February 2013 14:00 (20 minutes)

The two-proton knockout reaction from ^{42}Si was used to produce ^{40}Mg at the RI Beam Factory, RIKEN Nishina Center. The status and results of this experiment will be presented in connection with the goal to measure gamma-ray decays from excited states and using the direct reaction cross-section to derive information on the structure of ^{42}Si and ^{40}Mg . Possible steps towards future experiments aimed at the spectroscopy of ^{40}Mg will be discussed.

Primary author: FALLON, Paul (Lawrence Berkeley Laboratory)

Presenter: FALLON, Paul (Lawrence Berkeley Laboratory)

Session Classification: Status of Performed Experiments II and New Experiments I

Contribution ID: 28

Type: **not specified**

Discussion and Closing

Thursday, 21 February 2013 15:50 (1 hour)

Primary author: OBERTELLI, alexandre (CEA Saclay)

Co-author: DOORNENBAL, Pieter (RIKEN)

Contribution ID: 29

Type: **not specified**

Probing neutron correlations in two-neutron halos

Wednesday, 20 February 2013 11:50 (20 minutes)

Primary author: UESAKA, Tomohiro (CNS, University of Tokyo)

Presenter: UESAKA, Tomohiro (CNS, University of Tokyo)

Session Classification: SAMURAI Experiments and Status of Performed Experiments I

Contribution ID: **30**

Type: **not specified**

Welcome

Wednesday, 20 February 2013 09:30 (5 minutes)

Primary author: OBERTELLI, Alexandre (CEA Saclay)

Co-author: DOORNENBAL, Pieter (RIKEN)

Presenter: OBERTELLI, Alexandre (CEA Saclay)

Session Classification: Introduction