

**MNT2024 - Exploring the
heavy exotic neutron-rich
nuclides via multinucleon
transfer reactions**

Report of Contributions

Contribution ID: 25

Type: **not specified**

Opening address

Tuesday, 2 July 2024 10:00 (5 minutes)

Presenter: WATANABE, Yutaka (KEK)

Session Classification: Opening session

Contribution ID: 26

Type: **not specified**

Welcome address

Tuesday, 2 July 2024 10:05 (5 minutes)

Presenter: SAITO, Naohito (KEK)

Session Classification: Opening session

Contribution ID: 27

Type: **not specified**

Welcome address

Tuesday, 2 July 2024 10:10 (5 minutes)

Presenter: SAKURAI, Hiroyoshi (RIKEN Nishina Center for Accelerator-Based Science)

Session Classification: Opening session

Contribution ID: 29

Type: **not specified**

KISS for nuclear spectroscopy of MNT products

Tuesday, 2 July 2024 10:15 (30 minutes)

Presenter: HIRAYAMA, Yoshikazu (IPNS, KEK)

Session Classification: Session

Contribution ID: 30

Type: **not specified**

MNT experiments with stable and secondary beams at the FRS and Super-FRS Ion Catcher

Tuesday, 2 July 2024 10:45 (30 minutes)

Presenter: DICKEL, Timo (GSI Helmholtzzentrum für Schwerionenforschung)

Session Classification: Session

Contribution ID: 31

Type: **not specified**

Production and studies of neutron-rich nuclei at IGISOL

Tuesday, 2 July 2024 11:15 (30 minutes)

Presenter: KANKAINEN, Anu (University of Jyväskylä)

Session Classification: Session

Contribution ID: 32

Type: **not specified**

Status of MNT studies at JINR and perspectives

Tuesday, 2 July 2024 13:15 (30 minutes)

Presenter: KARPOV, Alexander (JINR)

Session Classification: Session

Contribution ID: 33

Type: **not specified**

Synthesis of heavy nuclei in multinucleon transfer reaction $^{136}\text{Xe} + ^{238}\text{U}$ close to 0 degree

Tuesday, 2 July 2024 14:15 (30 minutes)

Presenter: SULIGANO, Barbara (CEA)

Session Classification: Session

Contribution ID: **34**

Type: **not specified**

MNT studies with Velocity Filters

Tuesday, 2 July 2024 15:10 (30 minutes)

Presenter: HM, DEVARAJA (FLNR, JINR)

Session Classification: Session

Contribution ID: 35

Type: **not specified**

The experimental study of properties of MNT fragments formed in the reactions with ^{238}U

Tuesday, 2 July 2024 15:40 (25 minutes)

Presenter: KNYAZHEVA, Galina (Joint Institute for Nuclear Research)

Session Classification: Session

Contribution ID: 36

Type: **not specified**

Multi-Nucleon-Transfer and the production of Heavy Elements

Tuesday, 2 July 2024 16:05 (20 minutes)

Presenter: HAGEL, Kris (Cyclotron Institute, Texas A & M University)

Session Classification: Session

Contribution ID: 37

Type: **not specified**

Studies of MNT reactions at the Coulomb barrier with Jyväskylä in-flight-separator

Tuesday, 2 July 2024 16:50 (30 minutes)

Presenter: SAREN, Jan (University of Jyväskylä)

Session Classification: Session

Contribution ID: **38**

Type: **not specified**

MNT studies with TOF methods at GSI, JYFL and Dubna

Tuesday, 2 July 2024 17:20 (30 minutes)

Presenter: VARDACI, Emanuele (INFN, Naples)

Session Classification: Session

Contribution ID: 39

Type: **not specified**

Current status and prospects of MNT study with helium gas-cell + MRTOF system towards N = 126 and 152

Tuesday, 2 July 2024 17:50 (25 minutes)

Presenter: Dr KIMURA, Sota (KEK)

Session Classification: Session

Contribution ID: 40

Type: **not specified**

Theoretical investigation of mutinucleon transfer reactions within the dynamic model based on Langevin equations

Wednesday, 3 July 2024 09:10 (30 minutes)

Presenter: Mr SAIKO, Vyacheslav (FLNR JINR / INP)

Session Classification: Session

Contribution ID: 41

Type: **not specified**

What is NEXT? A setup to study Neutron-rich, heavy, EXotic nuclei produced in multinucleon Transfer reactions

Wednesday, 3 July 2024 09:40 (30 minutes)

Presenter: EVEN, Julia (University of Groningen)

Session Classification: Session

Contribution ID: 42

Type: **not specified**

Microscopic approaches for multinucleon transfer reactions beyond TDHF: recent progress

Wednesday, 3 July 2024 10:35 (30 minutes)

Presenter: Dr SEKIZAWA, Kazuyuki (Tokyo Institute of Technology)

Session Classification: Session

Contribution ID: 43

Type: **not specified**

Development and commissioning of the MNT gas cell for IGISOL

Wednesday, 3 July 2024 11:05 (30 minutes)

Presenter: ZADVORNAYA, Alexandra (The University of Edinburgh)

Session Classification: Session

Contribution ID: 44

Type: **not specified**

Future plan of KISS for spectroscopy of neutron-rich actinoids

Wednesday, 3 July 2024 15:05 (25 minutes)

Presenter: WATANABE, Yutaka (KEK)

Session Classification: Session

Contribution ID: 45

Type: **not specified**

Simulation of MNT experiments with INCREASE (GSI) and IGISOL (JYFL)

Wednesday, 3 July 2024 15:30 (30 minutes)

Presenter: CONSTANTIN, Paul (ELI-NP/IFIN-HH Romania)

Session Classification: Session

Contribution ID: 46

Type: **not specified**

Shell effect in multinucleon transfer reactions

Wednesday, 3 July 2024 16:00 (20 minutes)

Presenter: CHEN, penghui (yangzhou university)

Session Classification: Session

Contribution ID: 47

Type: **not specified**

Cluster transfer and cluster emission in massive transfer reactions

Wednesday, 3 July 2024 16:20 (20 minutes)

Presenter: FENG, Zhaoqing (South China University of Technology)

Session Classification: Session

Contribution ID: 48

Type: **not specified**

The N = 126 Factory

Wednesday, 3 July 2024 17:05 (30 minutes)

Presenter: BRODEUR, Maxime (University of Notre Dame)

Session Classification: Session

Contribution ID: 49

Type: **not specified**

Opportunities with the N = 126 Factory at Argonne National Laboratory

Wednesday, 3 July 2024 17:35 (20 minutes)

Presenter: VALVERDE, Adrian (Argonne National Laboratory)

Session Classification: Session

Contribution ID: 50

Type: **not specified**

Status of the Commissioning of the N = 126 factory at ANL

Wednesday, 3 July 2024 17:55 (20 minutes)

Presenter: SAVARD, Guy (Argonne National Laboratory / University of Chicago)

Session Classification: Session

Contribution ID: 51

Type: **not specified**

Prospects of MNT studies at $N = 126$ for r-process nucleosynthesis with the ISOLDE Superconducting Recoil Separator

Wednesday, 3 July 2024 18:15 (20 minutes)

Presenter: KURTUKIAN NIETO, Teresa (IEM-CSIC Spain)

Session Classification: Session

Contribution ID: 52

Type: **not specified**

ISOLDE studies of the neutron-rich nuclides east of ^{208}Pb

Thursday, 4 July 2024 09:10 (30 minutes)

Presenter: ANDREYEV, Andrei (University of York)

Session Classification: Session

Contribution ID: 53

Type: **not specified**

Shell model study of allowed and forbidden beta decay in the Pb region

Thursday, 4 July 2024 09:40 (30 minutes)

Presenter: SRIVASTAVA, Praveen (Department of Physics, Indian Institute of Technology-Roorkee, 247667, India)

Session Classification: Session

Contribution ID: 54

Type: **not specified**

The progress of in-gas-cell laser ionization spectroscopy of neutron-rich tungsten isotopes

Thursday, 4 July 2024 10:35 (25 minutes)

Presenter: MUKAI, Momo (Nagoya University)

Session Classification: Session

Contribution ID: 55

Type: **not specified**

Configuration-Interaction Shell Model (CISM) Understanding of Medium and Heavy Mass Nuclei

Thursday, 4 July 2024 11:00 (20 minutes)

Presenter: YUAN, Cenxi (Sun Yat-sen University)

Session Classification: Session

Contribution ID: 56

Type: **not specified**

Exploration on the effective nuclear force for the $N > 126$ nuclei

Thursday, 4 July 2024 11:20 (20 minutes)

Presenter: LIU, Menglan (Sun Yat-sen University)

Session Classification: Session

Contribution ID: 57

Type: **not specified**

High-resolution resonance ionization spectroscopy at the S3-Low Energy Branch of the GANIL-SPIRAL2 facility

Thursday, 4 July 2024 13:10 (30 minutes)

Presenter: FERRER-GARCIA, Rafael

Session Classification: Session

Contribution ID: 58

Type: **not specified**

Laser ionization of thorium via Rydeberg states in hypersonic gas jets

Thursday, 4 July 2024 13:40 (20 minutes)

Presenter: CLAESSENS, Arno (KU Leuven)

Session Classification: Session

Contribution ID: 59

Type: **not specified**

Simulation-aided offline optimization of the JetRIS apparatus

Thursday, 4 July 2024 14:00 (20 minutes)

Presenter: IVANDIKOV, Fedor (IKS, KU Leuven)

Session Classification: Session

Contribution ID: **60**

Type: **not specified**

Studies of K Isomers using Multi-nucleon Transfer REactions and Gammasphere

Thursday, 4 July 2024 14:20 (20 minutes)

Presenter: KONDEV, Filip (Argonne National Laboratory)

Session Classification: Session

Contribution ID: **61**

Type: **not specified**

Actinide experimental efforts for uncovering the origin of the heaviest elements

Thursday, 4 July 2024 15:05 (30 minutes)

Presenter: MUMPOWER, Matthew (Los Alamos National Laboratory)

Session Classification: Session

Contribution ID: 62

Type: **not specified**

Origin of the r-process elements in cosmic evolution and nuclear physics

Thursday, 4 July 2024 15:35 (25 minutes)

Presenter: Prof. KAJINO, Toshitaka (Beihang Univerdity / University of Tokyo / NAOJ)

Session Classification: Session

Contribution ID: 63

Type: **not specified**

Discovery of new ms-isomers in ^{213}Tl and ^{215}Tl at RIBF-RIKEN

Thursday, 4 July 2024 16:00 (20 minutes)

Presenter: MORALES, Anabel (IFIC)

Session Classification: Session

Contribution ID: 64

Type: **not specified**

Study of neutron-rich Fm and transfermium nuclei with ^{254}Es target and MNT

Thursday, 4 July 2024 16:45 (30 minutes)

Presenter: ASAI, Masato (Japan Atomic Energy Agency)

Session Classification: Session

Contribution ID: 65

Type: **not specified**

Systematic study of fission process in heavy and superheavy mass regions related to multinucleon transfer reactions

Thursday, 4 July 2024 17:15 (20 minutes)

Presenter: ARITOMO, Yoshihiro (Kindai University)

Session Classification: Session

Contribution ID: 66

Type: **not specified**

208Pb fragmentation at BigRIPS vs MNT reactions to produce N ~ 126 nuclei

Friday, 5 July 2024 09:10 (30 minutes)

Presenter: PODOLYAK, Zsolt (University of Surrey)

Session Classification: Session

Contribution ID: 67

Type: **not specified**

Production and discovery of high-Z neutron-rich isotopes at NSCL and FRIB

Friday, 5 July 2024 09:40 (30 minutes)

Presenter: Dr TARASOV, Oleg (FRIB / MSU)

Session Classification: Session

Contribution ID: **68**

Type: **not specified**

Photoinduced many proton knockout - a new method to access neutron rich nuclei?

Friday, 5 July 2024 10:35 (30 minutes)

Presenter: WATTS, Dan (University of York)

Session Classification: Session

Contribution ID: 69

Type: **not specified**

New paths for the study of heavy nuclei

Friday, 5 July 2024 13:05 (20 minutes)

Presenter: BEQUET, Jonathan (CEA/DRF/Irfu/DPhN)

Session Classification: Session

Contribution ID: 70

Type: **not specified**

Exploring exotic nuclei via multinucleon transfer reactions using light neutron-rich beams

Friday, 5 July 2024 13:25 (20 minutes)

Presenter: SANETULLAEV, Alisher (New Uzbekistan University, Tashkent, Uzbekistan)

Session Classification: Session

Contribution ID: 71

Type: **not specified**

Coupled reaction channel description of single-nucleon transfer $^{40}\text{Ca} + ^{96}\text{Zr}$

Friday, 5 July 2024 13:45 (20 minutes)

Presenter: GONIKA, Gonika (Inter-University Accelerator Centre, New Delhi)

Session Classification: Session

Contribution ID: 72

Type: **not specified**

Study of transfer reactions in ^{28}Si + $^{140,142}\text{Ce}$

Friday, 5 July 2024 14:05 (20 minutes)

Presenter: KUMAR, Chandra (Inter-University Accelerator Centre (IUAC) New Delhi)

Session Classification: Session

Contribution ID: 73

Type: **not specified**

NEWGAIN project

Friday, 5 July 2024 14:50 (25 minutes)

Presenter: STEFAN, Gheorghe Iulian (IPN Orsay)

Session Classification: Session

Contribution ID: 74

Type: **not specified**

Highly selective and high-flux MR-ToF mass separation

Friday, 5 July 2024 15:15 (20 minutes)

Presenter: MAIER, Franziska (FRIB/MSU)

Session Classification: Session

Contribution ID: 75

Type: **not specified**

The mrtof mass measurement project at BigRIPS

Friday, 5 July 2024 15:35 (30 minutes)

Presenter: ROSENBUSCH, Marco (RIKEN Nishina Center of Accelerator-Based Science)

Session Classification: Session

Contribution ID: 76

Type: **not specified**

Operation and Perspectives of the ZeroDegree Helium Gas Catcher at RIKEN

Friday, 5 July 2024 16:05 (25 minutes)

Presenter: Mr YAP, Jinn Ming (The University of Hong Kong)

Session Classification: Session

Contribution ID: 77

Type: **not specified**

Closing

Friday, 5 July 2024 16:30 (5 minutes)

Session Classification: Closing

Contribution ID: 78

Type: **not specified**

Separation of evaporation residues produced in MNT reactions using JAEA-Recoil Mass Separator

Tuesday, 2 July 2024 13:45 (30 minutes)

Presenter: NISHIO, Katsuhisa (JAEA)

Session Classification: Session

Contribution ID: 79

Type: **not specified**

Status of the MNT program and its future plan at IMP

Friday, 5 July 2024 11:05 (30 minutes)

Presenter: LIU, zhong (IMP,CAS)

Session Classification: Session