

CP2023

**International Workshop on
the Origin of Matter-Antimatter Asymmetry**



Rapport sur les contributions

ID de Contribution: 2

Type: **Non spécifié**

Effective Field Theory 1

mardi 14 février 2023 09:00 (1h 30m)

Auteur principal: FALKOWSKI, Adam (IJCLab)

Orateur: FALKOWSKI, Adam (IJCLab)

Classification de Session: Lectures

ID de Contribution: 3

Type: **Non spécifié**

Cosmology 1

mercredi 15 février 2023 09:00 (1h 30m)

Orateur: Dr HARZ, Julia (Technical University of Munich (TUM))

Classification de Session: Lectures

ID de Contribution: 4

Type: **Non spécifié**

Cosmology 2

jeudi 16 février 2023 09:00 (1h 30m)

Orateur: Dr HARZ, Julia (Technical University of Munich (TUM))

Classification de Session: Lectures

ID de Contribution: 5

Type: **Non spécifié**

Overview colliders

Orateur: MONTEIL, Stephane (Laboratoire de Physique de Clermont - UCA/IN2P3)

Classification de Session: Experiments

ID de Contribution: 6

Type: **Non spécifié**

LHCb

Orateur: DORDEI, Francesca (INFN, Cagliari (IT))

Classification de Session: Experiments

ID de Contribution: 7

Type: **Non spécifié**

BSM CP violation searches at Belle II

lundi 13 février 2023 10:50 (30 minutes)

Up to now, the Belle II experiment has collected about the same amount of data as BaBar and the plan is to collect 50 times more. New physics can affect the phase of the amplitudes and consequently the measured CP violation parameters. There are two main complementary approaches: overconstraining the SM parameters in the precision measurements of the high-statistics tree-level B decays or searching for the deviations in the rare B decays where BSM effects are expected to be more pronounced. Compared to the hadron-hadron experiments, Belle II benefits from clean event topology which is essential for B decays including neutral particles.

Orateur: ZLEBICKI, Radek (Charles University)

Classification de Session: Experiments

ID de Contribution: **8**

Type: **Non spécifié**

Overview

Orateur: BOLOGNESI, Sara (CEA Saclay)

Classification de Session: Experiments

ID de Contribution: 11

Type: **Non spécifié**

Review of CP violation in long-baseline neutrino experiments

mercredi 15 février 2023 10:50 (30 minutes)

Orateur: BOLOGNESI, Sara (CEA Saclay)

Classification de Session: Experiments

ID de Contribution: 12

Type: **Non spécifié**

NOvA

mercredi 15 février 2023 11:20 (30 minutes)

NOvA is a long-baseline neutrino oscillation experiment based at the Fermi National Accelerator Laboratory, USA. Utilizing two functionally-identical liquid scintillator tracking calorimeters placed 810 km apart, NOvA observes the appearance of electron (anti)neutrinos and the disappearance of muon (anti)neutrinos in the muon (anti)neutrino-dominated NuMI beam. By observing these (anti)neutrino oscillations, NOvA is probing several key questions in physics of neutrino oscillations including the neutrino mass ordering, leptonic CP violation phase δ_{CP} , the larger neutrino mass splitting Δm_{23}^2 , and the mixing angle θ_{23} . The most recent three-flavor neutrino oscillation results from NOvA will be presented.

Orateur: LASORAK, Pierre (Sussex University)

Classification de Session: Experiments

ID de Contribution: 13

Type: **Non spécifié**

Overview of the T2K Experiment

mercredi 15 février 2023 11:50 (30 minutes)

Orateur: GOODMAN, Evan (University of Glasgow)

Classification de Session: Experiments

ID de Contribution: 14

Type: **Non spécifié**

DUNE: Status, progress and plans

vendredi 17 février 2023 09:10 (30 minutes)

The Deep Underground Neutrino Experiment (DUNE) is a flagship-international project in particle physics and one of the most ambitious neutrino beam experiments ever conceived, hosted by the United States DOE national laboratory, Fermilab. DUNE will play an essential role in studies of neutrino mass ordering, CP violation, and precise measurements of neutrino mixing parameters, as well as in the search for proton decay and supernova neutrinos. This experiment will use four 17 kt modules of LarTPCs (Liquid Argon Time Projection Chamber) detectors. This technology uses planes of parallel wires connected to a potential difference in liquid argon to reconstruct particles with precision comparable to a fully electronic bubble chamber. DUNE will consist of a far detector and a near detector exposed to the world's most intense neutrino beam originating from the Long Base Neutrino Facility (LBNF). Two prototypes have been built at CERN, which will not only serve as a test bed for engineering design and construction techniques, but will also provide a set of key measurements for the far-future DUNE detector. In this talk I will overview the Project with emphasis on the status of the construction, physics performance, and the demonstration of the DUNE technology at CERN.

Orateur: DELGADO GONZALEZ, Maritza (University & INFN Milano-Bicocca)

Classification de Session: Experiments

ID de Contribution: 15

Type: **Non spécifié**

Hyper-Kamiokande: the road to measure the CP-phase in the neutrino sector

vendredi 17 février 2023 09:40 (30 minutes)

The next generation neutrino oscillation experiment, Hyper-Kamiokande, will consist of a 260 kt underground water-Cherenkov far detector located 295 km from the upgraded J-PARC neutrino beam of 1.3 MW. The primary goal of the experiment is the detailed study of neutrino oscillations and the precise measurement of the CP-violating phase. The latter is one of the main goals of the project and requires both flux and cross-section systematic uncertainties to be significantly reduced. To that end, the project will also count on a series of detectors closer (near and intermediate) to the neutrino beam will be deployed at various off-axis locations. In this presentation, an overview of the status of the entire project and a summary of all the activities toward the precise measurement of the CP-violating phase will be shown.

Orateur: FERNÁNDEZ, Pablo (DIPC)

Classification de Session: Experiments

ID de Contribution: **23**

Type: **Non spécifié**

CP violation at colliders

lundi 13 février 2023 09:20 (30 minutes)

Orateur: MONTEIL, Stephane (Laboratoire de Physique de Clermont - UCA/IN2P3)

Classification de Session: Experiments

ID de Contribution: 24

Type: **Non spécifié**

BSM CP violation searches at LHCb

lundi 13 février 2023 09:50 (30 minutes)

Orateur: DORDEI, Francesca (INFN, Cagliari (IT))

Classification de Session: Experiments

ID de Contribution: **26**

Type: **Non spécifié**

Neutron EDM

lundi 13 février 2023 14:30 (30 minutes)

Orateur: DEGENKOLB, Skyler (Universität Heidelberg)

Classification de Session: Experiments

ID de Contribution: 27

Type: **Non spécifié**

EDM of atoms and nuclei

lundi 13 février 2023 14:00 (30 minutes)

Orateur: DEGENKOLB, Skyler (Universität Heidelberg)

Classification de Session: Experiments

ID de Contribution: **28**

Type: **Non spécifié**

Electric dipole moments of free charged particles

lundi 13 février 2023 11:50 (30 minutes)

Orateur: SCHMIDT-WELLENBURG, Philipp (Paul Scherrer Institute)

Classification de Session: Experiments

ID de Contribution: 29

Type: **Non spécifié**

Search for the muon electric dipole moment using the frozen-spin technique

lundi 13 février 2023 15:00 (20 minutes)

At the Paul Scherrer Institute we are developing a high precision instrument to measure the electric dipole moment (EDM) of the muon. The presence of a permanent EDM in an elementary particle would imply a violation of time invariance and the combined symmetry of Charge-Parity (CP). While the Standard Model of particle physics allows for a large CP-violating phase, it also predicts EDMs that are too small to be measured in the near future. However, many extensions to the Standard Model permit large CP-violating phases that could lead to large EDMs and, at the same time, potentially explain the observed baryon asymmetry of the Universe. Recent developments, such as the tensions in the magnetic anomaly of the muon and the electron, as well as hints of lepton-flavor universality violation in B-meson decays, have made the search for a muon EDM a topic of particular interest. The experiment at PSI will employ the frozen-spin method to suppress the anomalous precession of the muon spin, allowing for a sensitivity that cannot be achieved with conventional $g-2$ muon storage rings. With this technique, the expected statistical sensitivity for the EDM after one year of data taking is $6 \times 10^{-23} \text{ e} \cdot \text{cm}$ with the $p = 125 \text{ MeV}/c$ muon beam available at PSI. This work presents the muon EDM experiment at PSI, with a focus on the quantitative analysis of systematic effects that could mimic the EDM signal.

Orateur: DUTSOV, Chavdar**Classification de Session:** Experiments

ID de Contribution: 30

Type: **Non spécifié**

The commissioning of the MORA experiment

lundi 13 février 2023 15:20 (30 minutes)

Searching for CP-violation in nuclear beta decay: Commissioning of the MORA apparatus at IGISOL The “Matter’s Origin from RadioActivity” (MORA) project focuses on ion manipulation in traps and laser orientation methods for the searches for New Physics (NP) in nuclear beta decays, looking for possible hints to explain the matter-antimatter asymmetry observed in the Universe. Located in Finland within the JYFL Accelerator Laboratory, the IGISOL facility delivers the right ion beam for the initial phase of the MORA experiment: The Mg²³⁺ it provides is an ideal candidate to extract the so-called D correlation parameter which is sensitive to Time reversal violation and, according to the CPT theorem, to CP violation. The D parameter could be sensitive to the existence of lepto-quarks which are hypothetical gauge bosons occurring in the theories of the baryogenesis. By using an innovative in-trap laser polarization technique, we will be able to reach a sensitivity below 10^{-4} on D. This sensitivity should allow us to probe not only NP but also the Final State Interaction process. The first tests with Mg²³⁺ have been conducted in the IGISOL facility, after offline commissioning carried out using a Na²³⁺ spark source. An efficient trapping process has been achieved up to 11s. Despite a large contamination of the radioactive beam with the stable Na²³, around 30h of data have been registered using a trapping cycle of 3s and alternating 1h run with cloud laser polarizations (σ^+ , σ^-) and without. The analysis is currently on-going. In this poster, the different steps of the offline and online commissioning will be presented.

Orateur: DELAHAYE, Pierre (GANIL)**Classification de Session:** Experiments

ID de Contribution: 31

Type: **Non spécifié**

Theoretical Overview of Double Beta Decay

lundi 13 février 2023 16:30 (30 minutes)

I will discuss theoretical aspects of and recent developments in double beta decay. Focussing on the neutrinoless mode, I will review its role in our understanding of neutrinos and models of lepton number violation as the origin of light neutrino masses. I will attempt to elucidate connections with models of baryogenesis, specifically leptogenesis and I will describe the impact of an observation of neutrinoless double beta decay on the viability of baryogenesis mechanisms. Finally, I will also highlight the potential of the two-neutrino double beta decay mode to probe new physics.

Orateur: DEPPISCH, Frank (University College London)

Classification de Session: Experiments

ID de Contribution: 32

Type: **Non spécifié**

Neutrino-less double beta decay overview

lundi 13 février 2023 17:00 (30 minutes)

Orateur: KERMAIDIC, Yoann (IJCLab)

Classification de Session: Experiments

ID de Contribution: 33

Type: **Non spécifié**

BINGO, towards the meV level of the neutrino mass scale

lundi 13 février 2023 17:30 (20 minutes)

Neutrinoless double-beta decay is a hypothetical nuclear process which, in case of its observation, would provide important information about the nature of neutrino and will demonstrate the lepton number violation. Scintillation bolometers are one of the most promising technology for $0\nu 2b$ decay search: low-temperature particle detector in joint with a cryogenic light detector. BINGO (Bi-Isotope $0\nu 2b$ next-generation observatory) is a project which proposes several innovative technologies for future tone-scale bolometric experiments aimed at a dramatical background reduction in the region of interest thereby increasing the sensitivity to $0\nu 2b$. Experimental results obtained both above and underground will be presented.

Orateur: BEREST, Vladyslav (DPhP/IRFU/CEA)

Classification de Session: Experiments

ID de Contribution: 34

Type: **Non spécifié**

Towards the NNBAR Experiment at the European Spallation Source

lundi 13 février 2023 17:50 (30 minutes)

The European Spallation Source (ESS) in Lund, currently under construction, is designed to be the most powerful neutron source in the world. Taking advantage of the unique potential of the ESS, the NNBAR collaboration has proposed an experimental program to search for baryon number violation (BNV) due to neutron (n) –antineutron (\bar{n}) conversions. This process could explain the observed asymmetric abundances of matter and antimatter in our known universe after baryogenesis. The general aim for the planned experimental campaign at the ESS is to reach an increase in sensitivity of three orders of magnitude over the current limit, obtained at a previous attempt. The BNV process may occur as free neutrons propagate via ballistic motion to a detector, where the anti-neutrons will annihilate and be detected via their multi-pion decay signature. An overview on the present state of the work on the NNBAR experiment is given with special focus on the neutron optics and the detector system.

Orateur: WAGNER, Richard (Institut Laue-Langevin)

Classification de Session: Experiments

ID de Contribution: 35

Type: **Non spécifié**

The shift-invariant orders of an ALP

mardi 14 février 2023 11:00 (20 minutes)

Usually, effective field theories (EFTs) for axion-like particles (ALPs) are built assuming a shift symmetry for the ALP due to the global $U(1)$ Peccei-Quinn (PQ) symmetry that is at the heart of the axion mechanism. However, it is generally believed that global symmetries, in particular axion shift symmetries, can only be approximate. Therefore, it is important to include shift-breaking interactions in the EFT description and find a clear way to implement the different power countings of the shift-conserving and shift-breaking sectors. Focusing on the flavorful effective Yukawa couplings to Standard Model fermions, I will present Jarlskog-like flavor invariants which act as order parameters for shift symmetry breaking of the axion. In this description, shift-breaking couplings are characterized in an explicit and flavor-invariant way and it is straightforward to give different power countings to the shift-conserving and shift-breaking sectors. I will discuss properties of the invariants like their CP parities, enabling us to make non-trivial connections between conservation of CP in the theory and an almost conserved shift-symmetry for the ALP. Finally, I will discuss examples of matching UV theories to the invariants and how they can be used to identify shift-breaking contributions in observables.

Orateur: KLEY, Jonathan (DESY)

Classification de Session: Theory

ID de Contribution: 36

Type: **Non spécifié**

CP violating invariants in SMEFT

mardi 14 février 2023 11:20 (20 minutes)

The Standard Model Effective Field Theory (SMEFT) is a framework that incorporates in a fairly model-independent way possible deviations from the Standard Model (SM). The additional terms it contains, in the form of higher-dimensional operator, may include new sources of CP violation that could spoil the delicate CKM mechanism characterizing the SM. We argue that the best way to capture such additional sources is via quantities that are invariant under unitary flavor rotations. This realization leads to the unanticipated result that a good fraction of the new sources first appear in observables at an order higher than expected. For those that do show up at the expected order, we study the conditions that would make their size comparable to the SM CP violation.

Orateur: GENDY ABD EL SAYED, Emanuele (DESY)

Classification de Session: Theory

ID de Contribution: 38

Type: **Non spécifié**

A late baryogenesis in an ekpyrotic-like universe with a hidden CP violation

mardi 14 février 2023 17:00 (30 minutes)

Two-brane universes are among the cosmological models of interest such as ekpyrotic models. It is then a major concern to constrain these scenarios. In the last two decades, it has been theoretically demonstrated that matter exchange between branes can occur and can be a way to test these scenarios. Thus, neutron disappearance (reappearance) toward (from) a hidden brane has been recently tested with short-baseline reactor experiments (MURMUR, STEREO) used as competitive passing-through-walls neutron experiments to search for hidden neutrons. Here, we introduce an ekpyrotic-like model in which the matter (respectively antimatter) of our brane is coupled with the matter (respectively antimatter) of the hidden brane. However both couplings are supposed to break the CP invariance through the bulk thus leading the baryogenesis to occur lately after the electroweak epoch. The theoretical and experimental outcomes, and issues of such an approach are discussed.

Orateur: SARRAZIN, Michaël (Institut UTINAM, CNRS/INSU, UBFC)

Classification de Session: Theory

ID de Contribution: 39

Type: **Non spécifié**

Overview leptogenesis

jeudi 16 février 2023 10:50 (30 minutes)

Orateur: LAVIGNAC, Stéphane (IPhT Saclay)

Classification de Session: Theory

ID de Contribution: 40

Type: **Non spécifié**

Leptogenesis via a first-order phase-transition

jeudi 16 février 2023 11:20 (20 minutes)

Sterile Neutrinos are an attractive explanation for the masses of Standard Model neutrinos. They may also explain the asymmetry between matter and antimatter in our Universe. We will discuss a scenario in which these sterile Neutrinos acquire a time-dependent (Majorana) mass during a first-order phase-transition. This out-of-equilibrium process may lead to matter-antimatter asymmetry in the lepton sector, which is converted into baryon asymmetry via sphalerons.

Orateurs: FAURE, Rémi (Institut de Physique Théorique (CEA Saclay, Paris)); FAURE, Rémi (IPhT)

Classification de Session: Theory

ID de Contribution: 41

Type: **Non spécifié**

Implications of A_4 modular symmetry on neutrino mass, mixing and leptogenesis with linear seesaw

jeudi 16 février 2023 11:40 (30 minutes)

Motivated by the crucial role played by the discrete flavour symmetry groups in explaining the observed neutrino oscillation data, we consider the application A_4 modular symmetry in the linear seesaw framework. The basic idea behind using the modular symmetry is to minimize the necessity of the inclusion of extra flavon fields having specific vacuum expectation value (VEV) alignments. The breaking of flavor symmetry takes place when the complex modulus τ acquires VEV. The main issue of the perplexing vacuum alignment is avoided, the only requirement is a certain kind of mechanism which can fix the modulus τ . Linear seesaw in this framework is realized with six heavy $SU(2)_L$ singlet fermion superfields and a weighton in a supersymmetric framework. The non-trivial transformation of Yukawa couplings under the A_4 modular symmetry helps to explore the neutrino phenomenology with a specific flavor structure of the mass matrix. We discuss the phenomena of neutrino mixing and show that the obtained mixing angles and CP violating phase in this framework are compatible with the observed 3σ range of the current oscillation data. In addition, we also investigate the non-zero CP asymmetry from the decay of lightest heavy fermion superfield to explain the preferred phenomena of baryogenesis through leptogenesis including flavor effects.

Orateur: MOHANTA, Rukmani (University of Hyderabad)

Classification de Session: Theory

ID de Contribution: 42

Type: **Non spécifié**

Measuring δ_{CP} and constraining lepton flavour models at ESSnuSB

vendredi 17 février 2023 10:10 (30 minutes)

ESSnuSB is an upcoming accelerator based experiment in Sweden to study neutrino oscillation. The main aim of this experiment is to measure the leptonic CP phase δ_{CP} by probing the second oscillation maximum. This experiment is also capable to test the viability of different lepton flavour models based on their prediction of the CP phase. In this presentation, I will discuss the sensitivity of ESSnuSB to measure the CP phase and also its capability to constrain the parameter space of a set of lepton flavour models.

Orateurs: GHOSH, Monojit; Dr GHOSH, Monojit (Ruder Boskovic Institute)

Classification de Session: Experiments

ID de Contribution: 43

Type: **Non spécifié**

CP Violation Sensitivity in Future Long-Baseline Experiments

vendredi 17 février 2023 11:00 (30 minutes)

Our pursuit of novel physics may be advanced significantly by neutrinos. Neutrino oscillations have so far provided the only particle physics evidence for new physics beyond the standard model (BSM), making it an ideal area to investigate new physics scenarios. Recently, there have been a lot of interests in situations such as Non-Standard Neutrino Interactions (NSI) with matter and the existence of a fourth sterile neutrino. Leptonic CP violation is quite crucial in addition to the CP violation coming from the quark sector. Many ongoing and future long-baseline (LBL) experiments are going to determine the leptonic CP phase. Latest results show slight tension between T2K and NO ν A in the measurement of standard model (SM) CP phase. We get tantalizing hint that BSM phase could severely impact the clean determination of SM CP phase. In fact from our analysis, we were able to resolve this discrepancy in T2K and NO ν A with NSI. Next, we studied the CP phase for two of the futuristic LBL experiments: T2HK and DUNE in presence of dual NSIs arising from $e - \mu$ and $e - \tau$ sectors. In addition to that we also discuss the mass hierarchy in presence of both the NSI constraints.

Orateur: GIRI, Anjan (IIT Hyderabad)

Classification de Session: Experiments

ID de Contribution: 44

Type: **Non spécifié**

Farewell

vendredi 17 février 2023 12:10 (15 minutes)

Orateur: ROCCIA, Stéphanie

Classification de Session: Lectures

ID de Contribution: 45

Type: **Non spécifié**

Connecting conclusions

vendredi 17 février 2023 11:30 (40 minutes)

Orateur: SHAPOSHNIKOV, Mikhail (EPFL)

Classification de Session: Lectures

ID de Contribution: 46

Type: **Non spécifié**

CP violation and neutrinos

mardi 14 février 2023 17:30 (20 minutes)

Orateur: KRIEWALD, Jonathan (LPC Clermont)

Classification de Session: Theory

ID de Contribution: 47

Type: **Non spécifié**

Effective Field Theory 2

mercredi 15 février 2023 17:30 (1h 30m)

Orateur: FALKOWSKI, Adam (IJCLab)

Classification de Session: Lectures

ID de Contribution: 48

Type: **Non spécifié**

Interpreting Electric Dipole Moments

lundi 13 février 2023 11:20 (30 minutes)

Orateur: DE VRIES, Jordy (Nikhef)

Classification de Session: Experiments

ID de Contribution: 49

Type: **Non spécifié**

Conférence photo

mardi 14 février 2023 11:45 (20 minutes)

Orateur: GUIGUE, Mathieu (LPNHE Sorbonne Université)

ID de Contribution: 50

Type: **Non spécifié**

Mapping of the magnetic field in the n2EDM experiment

Poster

Orateur: SVIRINA, Kseniia (LPSC, Université Grenoble Alpes)

Classification de Session: Poster session

ID de Contribution: 51

Type: **Non spécifié**

USSA characterization

mardi 14 février 2023 18:00 (8 minutes)

Poster

Orateur: LEJUEZ, Anthony

Classification de Session: Poster session

ID de Contribution: 52

Type: **Non spécifié**

Towards a better measurement of the CP violation phase with Hyper-Kamiokande

mardi 14 février 2023 18:08 (8 minutes)

Poster

Orateur: DALMAZZONE, Claire

Classification de Session: Poster session

ID de Contribution: 53

Type: **Non spécifié**

Leptonic CPV phases: impact for LFV Higgs & Z-boson decays and CP asymmetries

mardi 14 février 2023 18:16 (8 minutes)

Poster

Orateur: PINSARD, Emanuelle

Classification de Session: Poster session

ID de Contribution: 54

Type: **Non spécifié**

CP violation and γ angle measurement in decay $B \rightarrow D^0(\rightarrow K_S \pi \pi^0) K^-$ (Generalized GGSZ method)

mardi 14 février 2023 18:24 (8 minutes)

Poster

Orateur: DANIEL, Jessy**Classification de Session:** Poster session

ID de Contribution: 55

Type: **Non spécifié**

CsM Based Monitoring of a Current Source

mardi 14 février 2023 18:32 (8 minutes)

Poster

Orateur: VANKEIRSBILCK, Judith

Classification de Session: Poster session

ID de Contribution: 56

Type: **Non spécifié**

Mapping of the magnetic field in the n2EDM experiment

mardi 14 février 2023 18:40 (8 minutes)

Poster

Auteur principal: SVIRINA, Kseniia (LPSC, Université Grenoble Alpes)**Orateurs:** SVIRINA, Kseniia (LPSC, Université Grenoble Alpes); BOUILLAUD, Thomas**Classification de Session:** Poster session

ID de Contribution: 57

Type: **Non spécifié**

The ENUBET experiment

mardi 14 février 2023 18:48 (8 minutes)

Poster

Orateur: HALIĆ, Leon

Classification de Session: Poster session

ID de Contribution: 58

Type: **Non spécifié**

Searching for CP-Violation in Nuclear Beta Decay: MORA first data analysis

mardi 14 février 2023 18:56 (8 minutes)

Poster

Orateur: MOTILLA MARTINEZ, Luis Miguel

Classification de Session: Poster session

ID de Contribution: 59

Type: **Non spécifié**

The commissioning of the MORA experiment

mardi 14 février 2023 19:04 (8 minutes)

Poster

Orateur: DAUMAS-TSCHOPP, Sacha

Classification de Session: Poster session

ID de Contribution: **60**

Type: **Non spécifié**

TBD

Poster

Orateur: SAENZ, William

Classification de Session: Poster session

ID de Contribution: 61

Type: **Non spécifié**

Flavoured Leptogenesis in a Minimal Type-I+II Seesaw Mechanism

mardi 14 février 2023 19:12 (8 minutes)

Poster

Orateur: CHONGDAR, Sreerupa

Classification de Session: Poster session

ID de Contribution: 62

Type: **Non spécifié**

Testing neutron to hidden neutron oscillations with Ultra-Cold Neutrons Beams

mardi 14 février 2023 19:20 (8 minutes)

Poster

Orateur: SAENZ, William

Classification de Session: Poster session