

Session Program

Sep 4 - 9, 2022



Nuclear Physics in Astrophysics - X

Poster session

CERN, 500/1-001 - Main Auditorium

Tue, September 6

6:00 PM

Poster session

Poster Session | **Location:** CERN, 61/1-201 - Pas perdue - Not a meeting room -

Quantum vortex in neutron star's crust at finite temperatures

Speaker

Dr Daniel Peçak

Location

CERN, 61/1-201 - Pas perdue - Not a meeting room -

Direct reactions for nuclear astrophysics

Speaker

Philipp Erbacher

Location

CERN, 61/1-201 - Pas perdue - Not a meeting room -

Study of decay properties for La to Nd nuclei ($A \sim 160$) relevant for the formation of the r-process rare-earth peak

Speaker

Max Pallas I Solis

Location

CERN, 61/1-201 - Pas perdue - Not a meeting room -

Investigation of the ${}^7\text{Li}(p,n){}^7\text{Be}$ neutron fields at high energies

Speaker

Benjamin Brueckner

Location

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Fission fragment distributions of neutron-rich nuclei based on Langevin calculations in the r-process region

Speaker

Itoshi Nishimura

Location

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The ASTRAL database for neutron-capture nucleosynthesis studies

Speaker

Dr Diego Vescovi

Location

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Commissioning of the SECAR recoil separator

Speaker

Ruchi Garg

Location

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Maxwell-Boltzmann-like neutron spectrum production at $kT=28$ keV for Maxwellian averaged cross section measurement.

Speakers

Dr Elizabeth Musacchio Gonzalez, Dr Pierfrancesco Mastinu

Location

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Comprehensive study of silicon photomultiplier based readout of the large plasticscintillator based neutron detector NeuLAND

Speaker

Mr Thomas Hensel

Location

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New experimental study of the $^3\text{He}(\alpha, \gamma)^7\text{Be}$ reaction around ^7Be known levels

Speaker

Dr Tamás Szücs

Location

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Populating α -unbound states in ^{16}O via $^{19}\text{F}(p, \alpha)^{16}\text{O}$

Speaker

Vicente Garcia Tavora

Location

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Coulomb dissociation of ^{16}O into ^4He and ^{12}C

Speaker

Mr Lukas Bott

Location

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Binding energies, proton-neutron pairing and α -like quartetting for proton-rich nuclei close to $N=Z$ line

Speaker

Nicolae Sandulescu

Location

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Underground measurement at LUNA found no evidence for a low-energy resonance in the $^6\text{Li}(p, \gamma)^7\text{Be}$ reaction

Speaker

Denise Piatti

Location

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Trojan Horse Method for n-induced reaction investigations at astrophysical energies: the $^{14}\text{N}(n, p)^{14}\text{C}$ cross section measurement

Speaker

Dr Maria Letizia Sergi

Location

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Studies of low-energy K- - nucleus/nuclei interactions with light nuclei by AMADEUS**Speaker**

Magdalena Skurzok

Location

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ANC experiments for nuclear astrophysics: the ${}^{26}\text{Si}(p, \gamma){}^{27}\text{P}$ case**Speaker**

Giuseppe D'Agata

Location

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New results on the level structure of ${}^{26}\text{Si}$ and consequences for the ${}^{25}\text{Al}(p, \gamma){}^{26}\text{Si}$ reaction in Classical Novae environments**Speaker**

Dr Laetitia Canete

Location

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GEANT4 simulations for a design study of a HPGe detectors array for in-plasma β -decays investigation of nuclear astrophysical interest**Speaker**

Eugenia Naselli

Location

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Direct measurement of the ${}^{19}\text{F}(p, \alpha){}^{16}\text{O}$ reaction**Speaker**

Teodora Andreea Madgearu

Location

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Nuclear reaction measurements using CARME at CRYRING FAIR**Speaker**

Jordan Marsh

Location

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The impact of n_TOF data on s-process nucleosynthesis**Speaker**

Cristian Massimi

Location

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Thermonuclear electron-capture supernovae -- New production sites completing the solar inventory of isotopes?**Speaker**

Alexander Holas

Location

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Indirect measurement of the $\sigma_{n,\gamma}^{127}\text{Sb}$ cross section from experimental level density and σ_{γ} -strength function**Speaker**

Francesco Pogliano

Location

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Investigation of $\sigma^{170,172}\text{Yb}(\alpha, n)\sigma^{173,175}\text{Hf}$ cross sections in a stacked target experiment**Speaker**

Martin Müller

Location

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Development of a jet gas target system for the Felsenkeller underground accelerator**Speaker**

Anup Yadav

Location

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Study of $^{19}\text{F}(p, \alpha)$ Reaction in Nuclear Astrophysics**Speaker**

Lalit Kumar Sahoo

Location

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MULTINUCLEON-TRANSFER REACTIONS AT THE IGISOL FACILITY: INSTRUMENTATION AND PROSPECTS FOR R-PROCESS EXPERIMENTS**Speaker**

Dr Alexandra Zadornaya

Location

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Background gamma measurement for low energy astrophysical reaction at FRENA**Speaker**

Sukhendu Saha

Location

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 $^{12}\text{C}+^{12}\text{C}$ reactions for Nuclear Astrophysics**Speaker**

Dr Lizeth Morales-Gallegos

Location

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Results of total and partial cross-section measurements of the $\sigma^{87}\text{Rb}(p, \gamma)^{88}\text{Sr}$ reaction**Speaker**

Ms Svenja Wilden

Location

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Investigation of the γ -ray angular distribution of the $3\text{He}(\alpha,\gamma)^7\text{Be}$ reaction at the Felsenkeller shallow-underground laboratory**Speaker**

Simon Rümmler

Location

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Special Muons**Speaker**

Srijan Prasad Rauniyar

Location

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Tension between implications from PREX-2 data and gravitational tidal response on dense matter equation of state**Speaker**

Mr Vivek Baruah Thapa

Location

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A new Multi-Channel and Monte Carlo R-Matrix analysis for the estimate of \dot{M} O destruction rate in stars**Speaker**

David Rapagnani

Location

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X17 search project with the EAR2 neutron beam**Speaker**

Gianpiero Renato Gervino

Location

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Evaluation of the $^{35}\text{K}(p,\gamma)^{36}\text{Ca}$ reaction rate using the $^{37}\text{Ca}(p,d)^{36}\text{Ca}$ transfer reaction**Speaker**

Louis-Alexandre Lalanne

Location

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Barium stars as tracers of s-process nucleosynthesis in AGB stars**Speaker**

Borbála Cseh

Location

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The γ -process nucleosynthesis in core-collapse supernovae**Speaker**

Lorenzo Roberti

Location

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Precision Deuterium in Big Bang Nucleosynthesis: the Critical Role of Nuclear Reactions**Speaker**

Tsun-Han Yeh

Location

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Activations for lower s-process temperatures**Speaker**

Tanja Heftrich

Location

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Surrounding: latest developments**Speaker**

Frederic Lassiaille

Location

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Discrete Relativity : a Prediction in Nuclear Physics**Speaker**

Frederic Lassiaille

Location

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Exploring Neutron stars EoS with coherent $\pi^0 \pi^0$ photoproduction at A2@MAMI**Speaker**

Mihai Mocanu

Location

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Experimental study of alpha-induced nuclear reactions on Tellurium isotopes for the astrophysical gamma-process**Speaker**

Zsolt Mátyus

Location

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Stability analysis of population III supermassive stars: a new mass range for general relativistic supernovae.**Speaker**

Chris Nagele

Location

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Neutron star crust microscopic simulations with realistic models**Speaker**

David Barba González

Location

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Dynamical Evolution of Globular Clusters with White Dwarfs, Neutron Stars and Black Holes using GPU Supercomputer**Speaker**

Bhusan Kayastha

Location

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Shedding light on $^{17}\text{O}(n,\alpha)^{14}\text{C}$ reaction at astrophysical energies with Trojan Horse Method and Asymptotic Normalization Coefficient**Speaker**

Giovanni Luca Guardo

Location

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Targeting the solar-abundance problem with a direct measurement of the $^{14}\text{N}(p,\gamma)^{15}\text{O}$ reaction using DRAGON**Speaker**

Dr Sriteja Upadhyayula

Location

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Particle detectors for the observation of rare nuclear decay modes in storage rings**Speaker**

Christopher Griffin

Location

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Turbulence and nuclear reactions in 3D hydrodynamics simulations of massive stars**Speaker**

Federico Rizzuti

Location

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Neutron capture cross-sections of ^{53}Mn **Speaker**

Dr Rugard Dressler

Location

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Low-energy Cross Section Measurements of $^{12}\text{C}(\text{p},\gamma)^{13}\text{C}$ and $^{13}\text{C}(\text{p},\gamma)^{14}\text{C}$ Deep Underground at LUNA**Speaker**

Axel Boeltzig

Location

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Onset of pressure gradient on collective flow through balance and transition geometry

Speaker

Dr Sangeeta Arora

Location

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The impacts of dynamical nuclear fission for neutron-rich actinoids on r-process nucleosynthesis

Speaker

Nobuya Nishimura

Location

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Observational and Astrophysical study of Black Holes

Speaker

Dr Varinderjit Kaur

Location

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The $^{12}\text{C}+^{16}\text{O}$ fusion reaction in carbon burning: study at energies of astrophysical interest using the Trojan Horse Method

Speaker

Alessandro Alberto Oliva

Location

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Neutron-induced charged particle reaction studies in nuclear astrophysics with a Micromegas based gaseous detector

Speaker

Dr Chandrabhan Yadav

Location

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The evaluation of fission mode and fragment yields of neutron-rich nuclei evaluated by the dynamical model

Speaker

Shoya Tanaka

Location

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Core collapse supernova explosions driven by the QCD phase transition

Speaker

Noshad Khosravi Largani

Location

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Measuring $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ with ERNA: improvements and perspectives

Speaker

Claudio Santonastaso

9:00 PM

Location

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