

Probing Nuclear Physics with Neutron Star Mergers

Report of Contributions

Contribution ID: 1

Type: **not specified**

Neutron tunneling in neutron stars, magnetars and neutron star mergers

Thursday, 15 July 2021 15:55 (25 minutes)

Presenter: BERTULANI, Carlos (Texas A&M University-Commerce)

Session Classification: Equation of State Details

Contribution ID: 2

Type: **not specified**

Signatures of Strangeness in Neutron Star Merger Remnants

Wednesday, 14 July 2021 15:30 (25 minutes)

Presenter: CHATTERJEE, Debarati (Inter-University Centre for Astronomy and Astrophysics)

Session Classification: Equation of State Effects on NSMs

Contribution ID: 3

Type: **not specified**

Flavor conversions of neutrinos in neutron star merger remnants

Monday, 12 July 2021 16:35 (25 minutes)

Presenter: WU , Meng-Ru (Institute of Physics, Academia Sinica)

Session Classification: Simulating Neutron Star Mergers

Contribution ID: 4

Type: **not specified**

Deconfinement and quark matter inside hybrid stars: results from an extended linear sigma model

Thursday, 15 July 2021 16:20 (25 minutes)

Presenter: TAKATSY , Janos (Wigner Research Centre for Physics)

Session Classification: Equation of State Details

Contribution ID: 5

Type: **not specified**

Experimental constraints of neutron capture reactions far from stability

Friday, 16 July 2021 17:35 (25 minutes)

Presenter: SPYROU, Artemis (Michigan State University)

Session Classification: Nucleosynthesis from NSMs

Contribution ID: 6

Type: **not specified**

Jade: a radioactive decay network for the treatment of isomers in the r process

Friday, 16 July 2021 16:45 (25 minutes)

Presenter: SPROUSE , Trevor (Los Alamos National Laboratory)

Session Classification: Nucleosynthesis from NSMs

Contribution ID: 7

Type: **not specified**

Tension between hyperonization of dense matter and GW190814

Wednesday, 14 July 2021 16:45 (25 minutes)

Presenter: SEDRAKIAN , Armen (Frankfurt Institute for Advanced Studies)

Session Classification: Equation of State Effects on NSMs

Contribution ID: 8

Type: **not specified**

Neutron star merger simulations with the Lagrangian Numerical Relativity code SPHINCS_BSSN

Monday, 12 July 2021 15:20 (25 minutes)

Presenter: ROSSWOG, Stephan (Stockholm University)

Session Classification: Simulating Neutron Star Mergers

Contribution ID: 9

Type: **not specified**

Signatures of deconfined quark phases in binary neutron star mergers

Thursday, 15 July 2021 15:30 (25 minutes)

Presenter: PRAKASH , Aviral (The Pennsylvania State University)

Session Classification: Equation of State Details

Contribution ID: 10

Type: **not specified**

Effects of dense matter properties on the tidal deformability and gravitational waveforms of binary neutron stars

Wednesday, 14 July 2021 16:20 (25 minutes)

Presenter: PEROT , Loïc (Université Libre de Bruxelles)

Session Classification: Equation of State Effects on NSMs

Contribution ID: **11**

Type: **not specified**

Assessing the impact of bulk viscosity on neutron star merger

Thursday, 15 July 2021 16:45 (25 minutes)

Presenter: MOST , Elias (Princeton University)

Session Classification: Equation of State Details

Contribution ID: 12

Type: **not specified**

Impact of Full Neutrino Transport on Post-Merger Disks

Monday, 12 July 2021 16:10 (25 minutes)

Presenter: MILLER , Jonah (Los Alamos National Laboratory)

Session Classification: Simulating Neutron Star Mergers

Contribution ID: 13

Type: **not specified**

Equation of State effects in neutron star mergers

Wednesday, 14 July 2021 15:55 (25 minutes)

Presenter: MATHEWS , Grant (University of Notre Same)

Session Classification: Equation of State Effects on NSMs

Contribution ID: 14

Type: **not specified**

Fission and r-process nucleosynthesis of translead nuclei

Friday, 16 July 2021 17:10 (25 minutes)

Presenter: GABRIEL , Martinez-Pinedo (GSI and TU Darmstadt)

Session Classification: Nucleosynthesis from NSMs

Contribution ID: 15

Type: **not specified**

Neutron star mergers of quark matter based nuclear equations of state.

Wednesday, 14 July 2021 17:10 (25 minutes)

Presenter: KEDIA , Atul (University of Notre Dame)

Session Classification: Equation of State Effects on NSMs

Contribution ID: 16

Type: **not specified**

Roles of Nuclear Fission in Collapsar, Merger and SN r-process

Friday, 16 July 2021 16:20 (25 minutes)

Presenter: KAJINO , Toshitaka (Beihang University / Nat'l Astron Obs of Japan / University of Tokyo)

Session Classification: Nucleosynthesis from NSMs

Contribution ID: 17

Type: **not specified**

Nuclear equation of state constrained by nuclear physics, observations, QCD calculations of high-density nuclear matter, and heavy-ion collisions

Tuesday, 13 July 2021 15:55 (25 minutes)

Presenter: HUTH , Sabrina (TU Darmstadt)

Session Classification: Nuclear Experiments for Neutron Star Mergers

Contribution ID: **18**

Type: **not specified**

PREX/CREX experiments and the equation of state or Supernovae ignited by nuclear fission explosions

Tuesday, 13 July 2021 16:45 (25 minutes)

Presenter: HOROWITZ, Charles (Indiana University)

Session Classification: Nuclear Experiments for Neutron Star Mergers

Contribution ID: **19**

Type: **not specified**

Neutron skins and EOS

Tuesday, 13 July 2021 16:20 (25 minutes)

Presenter: DICKHOFF, Willem (Department of Physics, Washington University in St. Louis)

Session Classification: Nuclear Experiments for Neutron Star Mergers

Contribution ID: 20

Type: **not specified**

Prompt Collapse in Binary Neutron Star Mergers

Monday, 12 July 2021 17:00 (25 minutes)

Presenter: DAS , Abhishek (Pennsylvania State University)

Session Classification: Simulating Neutron Star Mergers

Contribution ID: 21

Type: **not specified**

Low-energy kaon-nucleon experimental studies at DAFNE collider: a piece to the puzzle Strangeness in Neutron Stars?

Tuesday, 13 July 2021 17:10 (25 minutes)

Presenter: CURCEANU, Catalina (LNF - INFN Frascati)

Session Classification: Nuclear Experiments for Neutron Star Mergers

Contribution ID: 22

Type: **not specified**

Informing neutron capture with surrogate reaction experiments

Tuesday, 13 July 2021 15:30 (25 minutes)

Presenter: CIZEWSKI, Jolie (Rutgers University)

Session Classification: Nuclear Experiments for Neutron Star Mergers

Contribution ID: 23

Type: **not specified**

Multidimensional Aspects of Kilonova Variability

Monday, 12 July 2021 17:25 (25 minutes)

Presenter: KOROBKIN, Oleg (Los Alamos National Lab)

Session Classification: Simulating Neutron Star Mergers

Contribution ID: 24

Type: **not specified**

Introduction by Organizers

Monday, 12 July 2021 15:00 (15 minutes)

Presenter: FRYER, Christopher (Los Alamos National Laboratory - George Washington University)

Session Classification: Simulating Neutron Star Mergers

Contribution ID: 25

Type: **not specified**

R-process: connecting simulations to observations

Monday, 12 July 2021 15:45 (25 minutes)

Presenter: ARCONES, Almudena (TU Darmstadt and GSI)

Session Classification: Simulating Neutron Star Mergers

Contribution ID: 26

Type: **not specified**

Discussion from previous days talks

Tuesday, 13 July 2021 15:00 (30 minutes)

Session Classification: Nuclear Experiments for Neutron Star Mergers

Contribution ID: 27

Type: **not specified**

Astromers in the r Process

Tuesday, 13 July 2021 17:35 (25 minutes)

Presenter: MISCH , Wendell (Los Alamos National Lab)

Session Classification: Nuclear Experiments for Neutron Star Mergers

Contribution ID: 28

Type: **not specified**

Discussion from previous days talks

Wednesday, 14 July 2021 15:00 (30 minutes)

Session Classification: Equation of State Effects on NSMs

Contribution ID: 29

Type: **not specified**

Discussion from previous days talks

Thursday, 15 July 2021 15:00 (30 minutes)

Session Classification: Equation of State Details

Contribution ID: 30

Type: **not specified**

Symmetry Energy Constraints From Theory and Experiment

Thursday, 15 July 2021 17:10 (25 minutes)

Presenter: JAMES , Lattimer (Stony Brook University)

Session Classification: Equation of State Details

Contribution ID: **31**

Type: **not specified**

Discussion from previous days talks

Friday, 16 July 2021 15:00 (30 minutes)

Session Classification: Nucleosynthesis from NSMs

Contribution ID: 32

Type: **not specified**

Interpreting nucleosynthesis observables given the unknown properties of neutron-rich nuclei

Friday, 16 July 2021 15:30 (25 minutes)

Presenter: VASSH, Nicole (University of Notre Dame)

Session Classification: Nucleosynthesis from NSMs

Contribution ID: 33

Type: **not specified**

r-Process Elements in Very Metal-Poor Stars as Clues to their Nucleosynthesis Sites

Friday, 16 July 2021 15:55 (25 minutes)

Presenter: THIELEMANN, Friedrich (University of Basel and GSI Darmstadt)

Session Classification: Nucleosynthesis from NSMs

Contribution ID: 34

Type: **not specified**

Nucleosynthesis in post-merger ejecta and implication for kilonova observation

Wednesday, 14 July 2021 17:35 (25 minutes)

Presenter: WANAJO, Shinya (Max Planck Institute for Gravitational Physics)

Session Classification: Equation of State Effects on NSMs