

Session Program

1–5 Jul 2019



Nuclear and astrophysics aspects for the rapid neutron capture process in the era of multimessenger observations

Session

ECT* - Trento, Meeting room
Strada delle Tabarelle, 286 38123 - Villazzano (TN) Italy

Monday 1 July

09:25

Session

Session | Location: ECT* - Trento, Meeting room, Strada delle Tabarelle, 286 38123 - Villazzano (TN) Italy

09:25–10:00 **Neutron capture elements in the Early Universe**

Speaker

Gabriele Cescutti

10:00–10:35 **Galactic Chemical Evolution of r-Process Elements**

Speaker

Benoit Côté

10:45

11:10

Session

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11:10–11:45

Improving the nuclear energy density functionals: constraints from the ground state and collective excitations

Speaker

Nils Paar

11:45–12:20

How to deal with neutrinos in simulations of neutron-star mergers and core-collapse supernovae?

Speaker

Oliver Just

12:30

14:30

Session

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14:30–15:05 **Supernovae, neutron stars, and chemical evolution**

Speaker

Carla Froehlich

15:05–15:40 **Neutron star mergers: neutrinos and r-process nucleosynthesis**

Speaker

Gail McLaughlin

16:00

16:30

Session

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16:30–17:05 **Discussion**

17:45

Tuesday 2 July

09:00

Session

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09:00–09:35

r-process contributions from massive star explosions triggered by the hadron-quark phase transition

Speaker

Tobias Fischer

09:35–10:10

Microscopic description of fission for the r-process in neutron-star mergers ejecta

Speaker

Dr jean-françois Lemaître

10:30

11:00

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11:00–11:35

Nuclear reaction theory for the era of multi-messenger observations: capture cross sections from indirect measurements

Speaker

Jutta Escher

11:35–12:10

The creation of the first r-process peak in neutron star mergers, impact of nuclear masses and beta decay rates.

Speaker

Stylianos Nikas

12:30

14:30

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14:30–15:05

Nuclear astrophysics in the era of multi-messenger observations at INFN-LNS

Speaker

Marco La Cognata

15:05–15:40

Constraining neutron-capture reactions for the r process

Speaker

Artemis Spyrou

16:00

16:30

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16:30–17:05

Nuclear fission for the r-process in the era of multi-messenger observations

Speaker

Matthew Mumpower

17:05–17:30

New Approach for Determination of Stellar Nucleosynthesis Abundances

17:50

Speaker
Dr Boris Pritychenko

Wednesday 3 July

09:00

Session

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09:00–09:35 **SHELL MODEL FAR FROM STABILITY: ISLANDS OF INVERSION MERGERS**

Speaker

Frederic NOWACKI

09:35–10:10 **Towards a better understanding of dense matter with gravitational waves**

Speaker

Jérôme Margueron

10:30

11:00

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11:00–11:35 **Beta-delayed neutron studies with the BRIKEN setup**

Speaker

Iris Dillmann

11:35–12:10 **r-process studies at RIBF**

Speaker

Shunji Nishimura

12:30

14:30

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14:30–15:05 **Multimessenger area: Opportunities for future experiments at ISAC-II, TRIUMF**

Speaker

Dennis Muecher

15:05–15:40 **Bayesian extrapolation of nuclear observables towards the neutron drip line**

Speaker

Leo Neufcourt

16:00

16:30

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16:30–17:05 **Mass measurements in the vicinity of the N=40 subshell closure**

Speaker

Laetitia Canete

17:50

Thursday 4 July

09:00

Session

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09:00–09:35 **r-Process Sites, their Ejecta Composition, and their Imprint in Galactic Chemical Evolution**

Speaker

Friedrich-K. Thielemann

09:35–10:10 **Mass ejection from neutron star mergers**

Speaker

Andreas Bauswein

10:30

11:00

Session

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11:00–11:35

The unknown site of actinide nucleosynthesis – clues from extraterrestrial Pu-244 in deep-sea archives

Speakers

Anton Wallner, Michaela Froehlich, Norikazu Kinoshita, Michael Hotchkis, Stefan Pavetich, Stephan Tims

11:35–12:10 **Nucleosynthetic signatures of astrophysical r-process sites**

Speaker

Marius Eichler

12:30

14:30

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14:30–15:05 **Looking for what is not s process**

Speaker

Marco Pignatari

15:05–15:40 **The solar r-process residual distribution**

Speaker

Dr Sergio Cristallo

16:00

16:30

Session

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16:30–17:05 **The nuclear physics of r-process abundance patterns**

Speaker

Rebecca Surman

17:05–17:30 **Stellar Models for R-process Nuclear Astrophysics**

Speaker

Amber Lauer

17:50

Friday 5 July

09:00
10:30
11:00
12:00

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09:00–09:25	Pygmy Modes and Astrophysical Reaction Rates
Speaker Horst Lenske	
09:25–09:50	Electron capture on nuclei at finite temperature based on relativistic density functional
Speaker Ante Ravlic	
09:50–10:15	Studying the structure of the A=98 decay products
Speaker Mustafa Rajabali	
Session	
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11:00–11:25	R-process experiments with fast ion beams at the NSCL and FRIB
Speaker Alfredo Estrade	
11:25–12:00	Concluding remarks