

Key Reactions in Nuclear Astrophysics

Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome and Introduction by the organizers

Tuesday, June 22, 2021 2:30 PM (10 minutes)

Presenters: Mrs TUMINO, Aurora (Facoltà di Architettura e Ingegneria, Università degli Studi di Enna “Kore” & INFN-LNS); Mr BERTULANI, Carlos (Department of Physics Texas A&M University--Commerce); JORDI , José (Technical University of Catalonia); TRACHE, Livius (“Horia Hulubei” National Institute for Physics and Nuclear); Mr DIEHL, Roland (Max Planck Institut für extraterrestrische Physik)

Contribution ID: 2

Type: **not specified**

Evolution and nucleosynthesis of massive stars

Tuesday, June 22, 2021 2:50 PM (30 minutes)

Presenter: CHIEFFI, Alessandro (Istituto Nazionale di Astrofisica – IAPS, Rome, Italy)

Session Classification: Astrophysical Environments

Contribution ID: 3

Type: **not specified**

He burning reactions in low mass stars

Tuesday, June 22, 2021 3:20 PM (30 minutes)

Presenter: DEGL'INNOCENTI, Scilla (Dipartimento di Fisica, Università di Pisa, Italy)

Session Classification: Astrophysical Environments

Contribution ID: 4

Type: **not specified**

Experimental results on $^{12}\text{C}+^{12}\text{C}$ fusion reaction with Stella

Tuesday, June 22, 2021 3:55 PM (30 minutes)

Presenter: COURTIN, Sandrine (Institut Pluridisciplinaire Hubert Curien, Strasbourg, France)

Session Classification: Heavy-Ion Fusion Reactions

Contribution ID: 5

Type: **not specified**

Discussion

Tuesday, June 22, 2021 6:25 PM (10 minutes)

Session Classification: Heavy-Ion Fusion Reactions (2) & 12C(a,g)

Contribution ID: 6

Type: **not specified**

Study of ion-ion fusion mechanisms at sub-barrier energies for nuclear astrophysics

Tuesday, June 22, 2021 4:50 PM (30 minutes)

Presenter: SPIRIDON, Alexandra (“Horia Hulubei” National Institute for Physics and Nuclear)

Session Classification: Heavy-Ion Fusion Reactions

Contribution ID: 7

Type: **not specified**

Indirect studies of key reactions in the nucleosynthesis of massive stars

Tuesday, June 22, 2021 5:25 PM (30 minutes)

Presenter: RAPISARDA , Giuseppe Gabriele (Dipartimento di Fisica e Astronomia «Ettore Majorana», Università degli Studi di Catania & INFN-INS, Catania, Italy)

Session Classification: Heavy-Ion Fusion Reactions (2) & 12C(a,g)

Contribution ID: 9

Type: **not specified**

Discussion

Tuesday, June 22, 2021 4:25 PM (10 minutes)

Session Classification: Heavy-Ion Fusion Reactions

Contribution ID: **10**

Type: **not specified**

Origin of r-process elements in the Universe

Wednesday, June 23, 2021 2:30 PM (30 minutes)

Presenter: KAJINO , Taka (National Astronomical Observatory of Japan, Tokyo, Japan & Beihang University, Beijing, China)

Session Classification: The r Process

Contribution ID: 11

Type: **not specified**

Nuclear Physics Issues in r-Process Nucleosynthesis

Wednesday, June 23, 2021 3:00 PM (30 minutes)

Presenter: MATHEWS , Grant (Center for Astrophysics, Notre Dame University, Indiana)

Session Classification: The r Process

Contribution ID: 12

Type: **not specified**

Multi-messenger signals from explosive events

Wednesday, June 23, 2021 3:40 PM (30 minutes)

Presenter: FROHLICH , Carla (Department of Physics, North Carolina State University, North Carolina)

Session Classification: Astrophysical Sources

Contribution ID: 13

Type: **not specified**

Discussion

Wednesday, June 23, 2021 4:10 PM (10 minutes)

Session Classification: Astrophysical Sources

Contribution ID: 14

Type: **not specified**

Nuclear physics uncertainties in r-process observables

Wednesday, June 23, 2021 4:35 PM (30 minutes)

Presenter: SURMAN, Rebecca (Dept. of Physics, University of Notre Dame, Indiana)

Session Classification: Astrophysical Sources

Contribution ID: 15

Type: **not specified**

Nucleosynthesis of heavy nuclei in core-collapse supernova neutrino-driven winds

Wednesday, June 23, 2021 5:15 PM (30 minutes)

Presenter: PEREIRA , Jorge (National Superconducting Cyclotron Laboratory, Michigan State University, Michigan)

Session Classification: Aspects of Astrophysical Sources

Contribution ID: **16**

Type: **not specified**

Discussion

Wednesday, June 23, 2021 6:05 PM (10 minutes)

Session Classification: Aspects of Astrophysical Sources

Contribution ID: 17

Type: **not specified**

Precision measurement of the $^{12}\text{C}(\alpha, \gamma)$ reaction with gamma-beam and an O-TPC

Tuesday, June 22, 2021 5:55 PM (30 minutes)

Presenters: Prof. GAI, Moshe (University of Connecticut); SMITH, Robin (Sheffield Hallam University & University of Connecticut, USA)

Session Classification: Heavy-Ion Fusion Reactions (2) & $^{12}\text{C}(\alpha, \gamma)$

Contribution ID: **18**

Type: **not specified**

Sensitivity of the Observed Kilonova Signal to Nuclear Physics

Wednesday, June 23, 2021 5:45 PM (20 minutes)

Presenter: LUND , Kelsey (North Carolina State University)

Session Classification: Aspects of Astrophysical Sources