

11th Russbach School on Nuclear Astrophysics



Program

SUNDAY, March 9

14:00 -- 19:00 Registration at Hotel-Landhaus Ausswinkl

19:00 -- 19:45 Welcome cocktail

19:45 Dinner

MONDAY, March 10

Chairperson

S. Bishop

08:30 -- 08:50

The organizers Welcome

08:50 -- 09:35

M. Aliotta "Introduction to Nuc. Astrophysics I"

09:40 -- 10:25

M. Aliotta "Introduction to Nuc. Astrophysics II"

10:25 -- 10:50

Coffee Break

10:50 -- 11:50

M. Busso "Cosmochemistry and presolar grains"

11:50 -- 12:10

W. Akram "Decoupled synthesis of light and heavy elements: evidence from Zirconium-Hafnium isotopic analyses of meteorites"

12:10 -- 16:00

Lunch / discussions / outdoor activities

Chairperson

M. Busso

16:00 -- 16:45

M. El Eid "Signature of heavy element production in the early galaxy"

16:45 -- 17:15

Coffee Break

17:15 -- 18:15

M. Spite "Heavy elements abundance pattern in extremely metal-poor stars"

18:15 -- 19:00

L. Mashonkina "Strongly r-process enhanced stars: constraining the pure r-process Ba/Eu abundance ratio from observations"

19:15

Dinner

TUESDAY, March 11

Chairperson

J. Stone

08:30 -- 09:30

P. Möller “The Macroscopic-Microscopic Nuclear Structure Model Foundations and Results”

09:30 -- 10:15

W. B. Walters “Radioactive decay, nuclear structure and the creation of the elements”

10:15 -- 10:40

Coffee Break

10:40 -- 11:25

O. Sorlin “Shell evolution and nuclear forces: some remarkable features”

11:25 -- 12:10

K. Sieja “Recent developments within the large scale shell model framework and their interest for astrophysics”

12:10 -- 16:00

Lunch / free time

Chairperson

W. B. Walters

16:00 -- 16:45

F. Hammache “The ${}^7\text{Li}$ cosmological problem: is there a nuclear physics solution?”

16:45 -- 17:05

T. D. Le “Strong limit on the spatial and temporal variations of the fine-structure constant”

17:05 -- 17:25

Y. Hirai “Chemo-Dynamical Evolution of Dwarf Spheroidal Galaxies”

17:25 -- 17:45

Coffee Break

17:45 -- 18:30

H. Ravn “Methods for making isotope selective beams in ISOL facilities”

18:30 -- 19:15

U. Köster “The Nuclear Astrophysics curse on Nuclear Medicine”

19:30

Dinner

WEDNESDAY, March 12

Chairperson

L. Mashonkina

08:30 -- 09:30

T. Motobayashi “Nuclear astrophysics studies at the RIKEN RIBF”

09:30 -- 10:15

S. Nishimura “Decay spectroscopy relevant to the r-process nucleosynthesis”

10:15 -- 10:35

Coffee break

10:35 -- 10:55

A. Spiridon “Reaction Rates for Explosive Nuclear Synthesis”

10:55 -- 11:40

N. Stone “New experimental initiatives in the study of beta-delayed neutron emission”

11:40 -- 12:00

A.-I. Gheorghe “Study of Ga populated from the β decay of Zn

12:00 -- 16:00

Lunch / free time

Chairperson

M. El Eid

16:00 -- 16:20

J. Mayer “Activation Experiments for Nuclear Astrophysics”

16:20 -- 16:50

P. Ludwig “ ^{60}Fe in terrestrial and lunar samples by AMS”

16:50 -- 17:15

Coffee break

17:15 -- 18:00

R. Egli “From supernova to terrestrial dirt: a journey between astrophysics, biology, and geophysics”

18:10

Hike / transport to Franzl Alm

19:15

Kasnockn-Dinner

20:15

Music & Dancing

THURSDAY, March 13

Chairperson

G. Pizzone

09:00 -- 09:30

R. Diehl "Gamma-ray astronomy"

09:30 -- 09:50

A. Gostojić "A new generation of γ -ray telescope"

09:50 -- 10:10

L. Morales-G. " $^{12}\text{C}+^{12}\text{C}$ reactions at astrophysical energies: Tests of targets behaviour under beam bombardment"

10:10 -- 10:45

Coffee Break/ school-photo

10:45 -- 11:30

L. Lamia "The Trojan Horse Method and its main features for experimental nuclear astrophysics"

11:30 -- 11:50

M. Giarusso "The Pre Main Sequence binaries, a benchmark for FRANEC"

11:50 -- 12:10

C. Bruno "A direct underground study of the $^{17}\text{O}(p,\alpha)^{14}\text{N}$ reaction at energies of astrophysical interest"

12:10 -- 16:00

Lunch / free time

Chairperson

F. Hammache

16:00 -- 16:20

F. Cavanna "A direct measurement of the $^{22}\text{Ne}(p,\gamma)^{23}\text{Na}$ reaction at LUNA and at HZDR"

16:20 -- 16:40

F. Boulay "Study of the ^{19}Ne spectroscopic properties of astrophysical interest via a new improved inelastic scattering method"

16:40 -- 17:10

M. Lipoglavsek "On the existence of high-Z electron screening in metals"

17:10 -- 17:30

Coffee break

17:30 -- 17:50

A. Cvetinović "Electron screening effect in (p,n) and (p, γ) reactions"

17:50 -- 18:35

A. Spyrou "p-process overview and status of experimental efforts"

18:35 -- 18:55 **M. Baldenhofer** "Reaction studies for the astrophysical p-process using in-beam γ -ray spectroscopy"

18:55 -- 19:25 **L. Trache** "Nuclear astrophysics at ELI-NP"

FRIDAY, March 14

Chairperson **T. Motobayashi**

08:30 -- 09:15 **J. Stone** "High Density Matter in Neutron Stars and Supernovae"

09:15 -- 10:00 **M. Hempel** "The nuclear equation of state in core-collapse supernovae"

10:00 -- 10:20 *Coffee break*

10:20 -- 11:05 **T. Fischer** "Neutrino properties : consequences for the r-process"

11:05 -- 11:50 **A. Aprahamian** "Nuclear Physics constraints for the r-process"

11:50 -- 16:00 *Lunch / free time*

Chairperson **L. Trache**

16:00 -- 16:45 **O. Korobkin** "r-process nucleosynthesis in neutron star mergers and associated macronovae events"

16:45 -- 17:30 **M. Pignatari** "The intermediate neutron-capture process in stars, and its abundance signatures in presolar grains"

17:30 -- 17:55 *Coffee break*

17:55 -- 18:15 **A. Aprahamian** "Some words about the Bethe Prize"

18:15 -- 19:00 **A. Banu** "Hans Bethe and Twentieth-Century Physics"

19:00 -- 19:45 **Summary/surprises & final discussion**

19:45 **Dinner & Farewell Party**

