Program of the 19th Russbach School on Nuclear Astrophysics

unday, r 3, 2024	Time 08:33	Monday, Mar 4, 2024	Tuesday, Mar 5, 2024	Wednesday, Mar 6, 2024 of Ski Resort Bus from Hotel Gastho	Thursday, Mar 7, 2024	Friday, Mar 8, 2024	N	Satu Mar 9
	08:36		Departure o	f Ski Resort Bus from Hotel Gästeha	us Walpurga		08:36 08:39	Dopa
	08:39 08:49	Departure of Ski Resort Bus from Hotel Landhaus Ausswinkl						
	00.40	Session 1: Experiments	Session 3: Modelling	Session 5: Theory	Session 7: Observation	Session 9: Experiments	08:49	
		Chair: Konrad Schmidt	Chair: Maria Lugaro	Chair: Ani Aprahamian	Chair: Sara Cutini	Chair: Hendrik Schatz		
	09:00 09:10	Setting up posters (10) Konrad Schmidt (5) Welcome	Diego Vescovi (40+5) Stellar modelling: an introduction	Jutta Escher (40+5) Nuclear reaction theory for	Tadafumi Matsuno (40+5) Stellar spectroscopy: an	Michael Wiescher (40+5) Neutron sources in stars	09:00 09:10	
	09:15	Mayor of Russbach (5)	Stoner modelling, an introduction	astrophysics and other applications		Troducti codroco in oldro	09:15	
		Olivier Sorlin (25) Organizational matters (10) History of Russbach School (15)					09:20	
	09:45	Marialuisa Aliotta (40+5)	Matteo Bugli (40+5)		Devika Kamath (40+5)	Faïrouz Hammache (40+5)	09:45	
		Nuclear astrophysics: an introduction - part 1	Core-collapse supernovae: explosion dynamics, multi- messenger emission, explosive		Elusive nature of post asymptotic giant branch chemical distributions	(α,n) and (α,γ) key reaction studies using alpha-transfer reactions		
	10:15		nucleosynthesis	Sema Küçüksucu (12+3)			10:15	
	10.10			γ strength functions for (n,γ)			10110	
				reactions based on relativistic				
				density-dependent point coupling interaction				
	10:30	Coffee break (30)	Coffee break (30)	Coffee break (30)	Coffee break (30)	Coffee break (30)	10:30	
	11:00	Giovanni Luca Guardo (40+5)	Axel Sanz (12+3)	Mikhail Beznogov (12+3)		Alexandra Spiridon (25+5)	11:00	
		Advanced techniques and indirect methods	High resolution simulations of the interaction between	Cooling of rapidly rotating neutron stars in 2D	Thermonuclear supernovae: an observer's perspective	Study of ion-ion fusion reactions at sub-barrier energies for nuclear		
		5111040	nova/supernova ejecta and the			astrophysics		
	44.4-		nearby accretion disk	Occasil a North (12, 2)			4	
	11:15		Richard Hoppe (12+3) Constraints on nucleosynthesis	Oscar Le Noan (12+3) Photo strength functions for			11:15	
			from chemical abundances of	astrophysical applications				
	14:20		metal-poor stars.	Brondon Bood (25 . 5)		Dan Filingaeu (42 - 2)	11.20	
	11:30		Silvia Tosi (12+3) Inspecting the mass-loss and dust	Brendan Reed (25+5) Fast emulation of neutron star		Dan Filipescu (12+3) A new neutron detection array for	11:30	
			production of evolved stars	properties		cross section measurements at		
	11.45	Nikola Vukman (25+5)	Federico Rizzuti (25+5)		Michael Schulraigh (25 . 5)	IFIN-HH	11:45	
		The 19 F(p, α) reaction studied via	Nucleosynthesis in 3D stellar		Michael Schulreich (25+5) The supernova link between the	Mallory Loria (12+3) Exploring calcium discrepancies in	11:45	
		trojan horse method	evolution models		local bubble and deep sea	nova models		
	12:00			Conference photo	radioisotopes	Svenia Wildon (42 - 2)	12:00	
	12:00			(might change due to weather		Svenja Wilden (12+3) Results of total cross-section	12:00	
				conditions)		measurements of the ⁸⁷ Rb(p,ɣ) ⁸⁸ Sr		
						reaction		
	12:15	Lunch break (255) Optional: Fossil's exhibition	Lunch break (255) Optional: Snowshoe hike	Lunch break (255) Optional: Snowshoe hike	Lunch break (345)	Lunch break (255) Optional: Snowshoe hike	12:15	
		(14:00 in front of Ausswinkl)	(relaxed)		Optional: Trip to Hallstatt by public			
		Session 2: Experiments	Session 4: Cosmochemistry	Session 6: s- and r-process	busses:	Session 10: Experiments		
	16:20	Chair: Olivier Sorlin Marialuisa Aliotta (40+5)	Chair: Matteo Bugli Christoph Burkhardt (40+5)	Chair: Jutta Escher Samuel A. Giuliani (40+5)	13:18 Bus 470 to Gosau 13:59 Bus 542 to Gaosaumühle	Chair: Michael Wiescher Aleksandra Cvetinović (40+5)	16:30	
	10.30	Nuclear astrophysics: an	Isotopic anomalies in meteorites:	r-process nucleosynthesis: an	14:14 Bus 543 to Hallstatt	Electron screening: answer to an	10.30	
		introduction - part 2	an introduction	introduction	16:17 Bus 543 to Gaosaumühle	old problem from new perspective		
	17:15	Zarif Rahman (12+3) Constraining electron capture rates	Maria Lugaro (15)	Mila Racca (12+3) The r-process alliance: mapping	16:33 Bus 542 to Gosau 17:06 Bus 470 to Russbach	Matej Lipoglavsek (12+3) Electrons in deuteron fusion	17:15	
		with (d, ² He) in inverse kinematics	meteorites as a tracer of the birth of		Session 8: Observation	Electrons in deuteron rusion		
		(2,)	the solar system	abundances	Chair: Ferdinando Patat			
	17:30	Coffee break (30)	Coffee break (30)	Coffee break (30)	Coffee break (30)	Coffee break (30)	17:30	
	18:00	Michael Wiescher (40+5)	Maria Lugaro (25+5)	Ani Aprahamian (40+5)	Sara Cutini (40+5)	Hendrik Schatz (40+5)	18:00	
		Historical developments and moments in nuclear astrophysics	Continuation	Fission, superheavy elements, and the r-process	Entering in the new era of multimessenger astrophysics: what	Nuclear astrophysics at FRIB		
		3F., J. 3.			we have learned up to now?			
	18:30		Wei Jia Ong (40+5) p process and presolar grains				18:30	
	18:45	Jorge Lerendegui Marco (40+5)	p process and presolar grains	Sándor Kovács (12+3)	Tadafumi Matsuno (25+5)	Mackenzie Smith (12+3)	18:45	
		Neutron cross section		A practical approach to nuclear	From stellar spectroscopy to	An update on the commissioning of		
		measurements of astrophysical interest at n_TOF		astrophysics: activation method studies on ⁸⁶ Kr(α,n) and its	galactic chemical evolution	SECAR		
		intologi at II_TOI		studies on °Kr(α,n) and its connection to weak r-process				
	19:00			Shilun Jin (12+3)		Eleanor Ronning (12+3)	19:00	
				Neutron capture reaction of r- process in common envelop jet		Total absorption spectroscopy of		
land				supernova		an astromer in ⁷⁰ Cu		
ation otel	19:15			Blanka Világos (12+3)		Konrad Schmidt (30)	19:15	
haus			Tracing solar system evolution with isotopic anomalies in meteorites	Barium stars for constraining aysymptotic giant branch	Atomic recipes for astronomical transients	Closing remarks		
winkl			isotopio anomalies in meteorites	nucleosynthesis	transionts			
	19:30	Daniela Mercogliano (12+3)		Transition / Walking from Parish			19:30	
ption otel		Direct and indirect measurements		Center to Hotel Landhaus Ausswinkl				
naus		of 22 Ne $(\alpha, \gamma)^{26}$ Mg Transition / Walking from Parish C	Center to Hotel Landhaus Ausswinkl	Conference dinner at Hotel	Transition / Walking from Parish Co	enter to Hotel Landhaus Ausswinkl	19:45	
	20:00	Dinner at Hotel Landhaus	Dinner at Hotel Landhaus	Landhaus Ausswinkl	Dinner at Hotel Landhaus	Dinner at Hotel Landhaus	20:00	
otel haus		Ausswinkl	Ausswinkl		Ausswinkl	Ausswinkl		
DOLLO					20:00 Hendrik Schatz (45+15) Public talk (in German)	Awarding of poster and talk prizes Farewell party at Hotel Landhaus		
winkl								

Poster #	Name	Title	
1	Aayush Arya	Hyperfine structure of neutron-capture elements measured via a novel electronic state chromatography	
2	Riccardo Maria Gesue	The direct measurement of the 12C+12C cross section at LUNA	
3	Ryota Hatami	Synthesis of Sc, Ti, and V in core-collapse supernovae toward constraining the explosion mechanism	
4	James Huffman	FRIB decay station initiator upgrades with Super3Hen	
5	Jan Kuske	Parametric r-process study for different astrophysical environments	
6	Luís Leitão	Calculation of atomic parameters for r-process nucleosynthesis in kilonovae	
7	Benedikt Machliner	Activation experiment for cross-section measurements of proton-induced reactions around A=110	
8	Karina Martirosova	Progress Towards a Single Atom Microscope (SAM) for Nuclear Physics	
9	Martin Müller	Activation experiments using decay chains	
10	Benjámin Soós	The anatomy of short lived radioactive nuclei in the early solar system	
11	Ruslan Spassyuk	On the new mechanism of planetary long-period debris formation around stars	
12	Anup Yadav	Development of new combined jet and extended gas target system for the Felsenkeller underground accelerator laboratory	