100 Years of Nuclear Isomers

Monday, May 2, 2022

Time			Duration
Opening / Welcome and Status			
08:00	Registration Open	Lea Wunderlich	
09:15	Welcome	Philip Walker	15'
Session Nuclear Structure I			
09:30	E3 Decaying Isomers and Octupole Collectivity in the Vicinity of ^{208}Pb	Zsolt Podolyak	25'+5'
10:00	In-Beam Gamma-Ray Spectroscopy and Lifetime Measurements with HiCARI	Kathrin Wimmer	25'+5'
10:30	On the Trail of Low-Lying Isomeric States by Penning-Trap Mass Spectrometry	Klaus Blaum	25'+5'
11:00	Coffee Break		30'
Session Nuclear Structure II			
11:30	From Shape Coexistence to Shape Isomers in Atomic Nuclei	Wolfram Korten	25'+5'
12:00	Structure and Energy of Isomeric States of Some Well-Deformed Even-Even Rare-Earth and Actinide Nuclei, a Microscopic Approach	Philippe Quentin	12'+3'
12:15	Decay Spectroscopy With Isomeric Beams Using the GRIFFIN Spectrometer at TRIUMF	Corina Andreoiu	12'+3'
12:30	Isomeric States at the Extremes of Proton Stability	Lidia S. Ferreira	12'+3'
12:45	Lunch		60'
14:00	Poster Session (Online)		60'
Session The Intriguing ^{229}Th Isomer			
15:00	Nuclear Metastability: From K-Isomers to the Optically Accessible ^{229m}Th	Nikolay Minkov	25'+5'
15:30	Status and Perspectives for a Nuclear Clock Based on the ^{229m}Th Isomer	Peter Thirolf	25'+5'
16:00	Continued Efforts Towards Direct Laser Spectroscopy of ^{229m}Th	Lars von der Wense	25'+5'
16:30	Coffee Break		30'
Session Evening Online Session			
17:00	Isomers in Superheavy Nuclei	Rod Clark	25'+5'
17:30	Isomer Studies by the Army Research Laboratory	Jeff Carroll	25'+5'
18:00	Transfer Reactions with Isomeric Beams for Nuclear Astrophysics	Sergio Almaraz-Calderon	12'+3'
18:15	Isomer Studies for r-Process Nucleosynthesis	Daniel Hoff	12'+3'
18:30	Studying Proton Capture on Astrophysical Isomers with SECAR	Kelly Chipps	12'+3'
18:45	Determining Cross sections for Neutron Capture Reactions Involving Isomeric States	Jutta Escher	12'+3'
19:00	Poster Session (on site)		90'

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Tuesday, May 3, 2022

Time			Duration
Session Isomers in Nuclear Structure and Astrophysics (Morning Online Session)			
08:30	Isomers, the Key to the Origin of Heavy Elements and Neutrino Mass Hierarchy	Taka Kajino	25'+5'
09:00	Shell Evolution Below ^{132}Sn and its Impact on Gamow-Teller beta Decay from the (27/2^{+}) Isomer in ^{127}Ag	Hiroshi Watanabe	25'+5'
09:30	Rotations of High-K Quasiparticle States	Furong Xu	25'+5'
10:00	Shape-Isomer-Like Excitations in 64, 66Ni Isotopes	Silvia Leoni	12'+3'
10:15	Coffee Break		30'
Session Atomic-Shell Nucleus Interface, ^{229}Th, Symmetries, etc.			
10:45	Dark Matter Searches with 229Th Isomer	Marianna Safronova	25'+5'
11:15	New Experimental Approaches to Nuclear Isomers for Nuclear Astrophysics	Iris Dillmann	25'+5'
11:45	Ultraviolet Spectroscopy of the Actinium-229 Beta Decay: On the Way to the First Observation of ^{229m}Th's Radiative Decay?	Sandro Kraemer	12'+3'
12:00	Prospective Isomeric Studies with High-Brilliance Gamma Beams	Dimiter Balabanski	12'+3'
12:15	Proton Emission from ^{54m}Ni and Mirror Symmetry (Breaking) with ^{54m}Fe	Dirk Rudolph	12'+3'
12:30	Correlated Prompt-Delayed Gamma Spectroscopy for Nuclear Structure Studies: Isomers in the Neutron-Rich Kr Isotopes Approaching N=60	Andrey Blazhev	12'+3'
12:45	Lunch		60'
Session Precision Mass Spectrometry, Nuclear Structure			
13:45	Seniority and Isomerism in Nuclei	Bhoomika Maheshwari	25'+5'
14:15	Isomers Explored with Novel Ion-Trapping Techniques at JYFLTRAP	Anu Kankainen	25'+5'
14:45	Direct Mass-Measurements of the ^{99}In Isomeric State Provide New Experimental Input to Nuclear Theory	Lukas Nies	12'+3'
15:00	Coffee Break		30'
Session Evening Online Session			
15:30	Developments of Nuclear Structure Models for Isomers	Yang Sun	25'+5'
16:00	Highly-Converted and Low-Energy Isomer Searches and FRIB	Sean Liddick	25'+5'
16:30	Astromers: Astrophysically Metastable Isomers	G. Wendell Misch	25'+5'
17:00	Another Isomer in ^{102}Rh?	Eric Norman	12'+3'
17:15	Manifestation of the Berry Phase in the Atomic Nucleus ^{213}Pb	Jose Javier Valiente Dobon	12'+3'
17:30	A changing nuclear structure beyond N=126 from isomers in ^{211,213}Tl and ^{210}Hg	Andrea Gottardo	12'+3'
17:45	Break		15'
Evening Lecture			
18:00	Otto Hahn – His Life and His Impact on Science and Mankind	Horst Schmidt-Boecking	60'
19:30	Dinner		120'

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Wednesday, May 4, 2022

Time			Duration
Session Isomers in Nuclear Structure and Astrophysics (Morning Online Session)			
08:30	From Exotic Symmetries to Exotic Isomers in Both Stable and Exotic Nuclei	Jerzy Dudek	25'+5'
09:00	^{83}Kr Isomers Induced by High Intensity Femtosecond Lasers	Changbo Fu	12'+3'
09:15	Auger and X-ray K-Shell Fluorescence Measurements for Sc-44 Isomeric Decays	Carl Wheldon	12'+3'
09:30	K Isomers in ^{248}Cf and the Z=100 Deformed Shell Gap	Riccardo Orlandi	12'+3'
09:45	Self-Consistent Mean Field Studies of Multi-Quasiparticle Excitations with the Gogny Force	Luis Miguel Robledo	12'+3'
10:00	Coffee Break		30'
Session Isomers in Heavy and Superheavy Nuclei			
10:30	Investigation of Isomers in Heavy Nuclei	Michael Block	25'+5'
11:00	Nuclear Isomers – A Probe of Nuclear Structure and Deformation for the Heaviest Nuclei	Dieter Ackermann	25'+5'
11:30	High-K isomeric States in the A~250 Region: New Isomers in ^{249,251}Md and Stability Inversion in ^{250}No	Christophe Theisen	12'+3'
11:45	Fission Hindrance of High-K Isomers in Transfermium Nuclei	Benoit Gall	12'+3'
12:00	Lunch		60'
Session Isomer Applications, Nuclear Structure			
13:00	Isomers for Medicine	Ulli Koester	25'+5'
13:30	On the Use of Nuclear Isomers in Solid State Physics	Heinz-Eberhard Mahnke	25'+5'
14:00	First Access to Isomeric Transitions in N > 126 Nuclei at RIKEN	Anabel Morales	25'+5'
14:30	Beta-Decaying Isomers in Deformed Neutron-Rich Nuclei: Nuclear Structure and Role of K Forbiddenness	Filip Kondev	25'+5'
15:00	Conclusion		10'