Microcalorimetry and Nuclear Data (MiND 2023)

Report of Contributions

Contribution ID: **1** Type: **not specified**

Workshop Introduction and Goals - Geon-Bo Kim

Session Classification: June 27

Contribution ID: **2** Type: **not specified**

Introduction to Safeguards - Arden Dougan

Tuesday, 27 June 2023 09:00 (5 minutes)

Presenter: DOUGAN, Arden

Session Classification: June 27

Contribution ID: **3** Type: **not specified**

Microcal 101 - Stephen Boyd

Tuesday, 27 June 2023 09:10 (30 minutes)

Presenter: BOYD, Stephen

Session Classification: June 27

Contribution ID: 4 Type: **not specified**

Microcal for Safeguards Applications - Mark Croce

Tuesday, 27 June 2023 09:40 (30 minutes)

Overview of microcalorimeter technologies and applications to safeguards

Presenter: CROCE, Mark

Session Classification: June 27

Contribution ID: **5**   Type: **not specified**

Development and application of a large array of TES gamma/x-ray microcalorimeters for post-detonation nuclear forensics and improving relevant nuclear data - Brian Archambault

Session Classification: June 27

Contribution ID: **6**   Type: **not specified**

Microcalorimeter applications in laboratory X-ray spectroscopy - Natalie Hell

N. Hell, G.V. Brown, M.E. Eckart, R.L. Kelley, C.A. Kilbourne, F.S. Porter

For over two decades, X-ray microcalorimeters, provided by the NASA/GSFC calorimeter group, have been work-horse spectrometers at the Lawrence Livermore National Laboratory's Electron Beam Ion Trap (EBIT) facility. Their high spectral resolution across a broad energy band have enabled many atomic physics and laboratory astrophysics measurements. While many of these measurements focus on the energy range of 0.2-10 keV, the EBIT Calorimeter Spectrometer (ECS) also houses a high-energy array covering a bandpass of 1 to over 100 keV. I will introduce the calorimeters employed at the LLNL EBIT and show examples of measurements conducted with them.

Session Classification: June 27

Contribution ID: **7**   Type: **not specified**

Calibration in X-ray microcal arrays for X-ray astronomy - Scott Porter

Session Classification: June 27

Contribution ID: **8** Type: **not specified**

Magnetic Microcalorimeter Applications at LLNL - Geon-Bo Kim

Session Classification: June 27

Contribution ID: **9** Type: **not specified**

Discussion

Session Classification: June 27

Contribution ID: **10**   Type: **not specified**

Discussion - Nuclear data needs for safeguards (Andrey Bosko presentation, followed by discussion led by Dan Becker and Geon-Bo Kim)

Tuesday, 27 June 2023 13:30 (45 minutes)

Presenters: BECKER, Dan; KIM, Geonbo

Session Classification: June 27

Contribution ID: **11** Type: **not specified**

Gamma-Xray coincident database - Hurst

Tuesday, 27 June 2023 14:15 (15 minutes)

Presenter: HURST, Aaron

Session Classification: June 27

Contribution ID: **12** Type: **not specified**

Development and application of a large array of TES gamma/x-ray microcalorimeters for post-detonation nuclear forensics and improving relevant nuclear data - Brian Archambault

Tuesday, 27 June 2023 10:30 (20 minutes)

Presenter: ARCHAMBAULT, Brian (Pacific Northwest National Laboratory)

Session Classification: June 27

Contribution ID: **13**   Type: **not specified**

Microcalorimeter applications in laboratory X-ray spectroscopy - Natalie Hell

Tuesday, 27 June 2023 10:50 (20 minutes)

N. Hell, G.V. Brown, M.E. Eckart, R.L. Kelley, C.A. Kilbourne, F.S. Porter

For over two decades, X-ray microcalorimeters, provided by the NASA/GSFC calorimeter group, have been work-horse spectrometers at the Lawrence Livermore National Laboratory's Electron Beam Ion Trap (EBIT) facility. Their high spectral resolution across a broad energy band have enabled many atomic physics and laboratory astrophysics measurements. While many of these measurements focus on the energy range of 0.2-10 keV, the EBIT Calorimeter Spectrometer (ECS) also houses a high-energy array covering a bandpass of 1 to over 100 keV. I will introduce the calorimeters employed at the LLNL EBIT and show examples of measurements conducted with them.

Presenter: HELL, Natalie

Session Classification: June 27

Contribution ID: **14**   Type: **not specified**

Energy Scale Calibration for X-ray Calorimeter Spectrometers - Scott Porter

Tuesday, 27 June 2023 11:10 (20 minutes)

Presenter: PORTER, Scott (NASA GSFC)

Session Classification: June 27

Contribution ID: **15** Type: **not specified**

Magnetic Microcalorimeter Applications at LLNL - Geon-Bo Kim

Tuesday, 27 June 2023 11:30 (20 minutes)

Presenter: KIM, Geonbo

Session Classification: June 27

Contribution ID: 16 Type: **not specified**

Discussion

Tuesday, 27 June 2023 11:50 (30 minutes)

Presenter: CROCE, Mark

Session Classification: June 27

Contribution ID: **17**   Type: **not specified**

Nuclear Data needs in Chronology - Thomas Kruijer

Tuesday, 27 June 2023 14:45 (20 minutes)

Presenter: KRUIJER, Thomas

Session Classification: June 27

Contribution ID: **18**   Type: **not specified**

Radionuclide decay data needs at NIST –Ryan Fitzgerald

Tuesday, 27 June 2023 15:05 (25 minutes)

Presenter: FITZGERALD, Ryan (NIST)

Session Classification: June 27

Contribution ID: **19** Type: **not specified**

Auger electron data need - Andrew Voyles

Tuesday, 27 June 2023 15:30 (20 minutes)

Presenter: VOYLES, Andrew (UC Berkeley / LBNL)

Session Classification: June 27

Contribution ID: **20** Type: **not specified**

Discussion - led by Adrew Voyles

Tuesday, 27 June 2023 15:50 (25 minutes)

Presenter: VOYLES, Andrew

Session Classification: June 27

Contribution ID: **21**   Type: **not specified**

Day 2 overview - Geon-Bo Kim

Presenter: KIM, Geonbo

Session Classification: June 28

Contribution ID: **22** Type: **not specified**

An overview of nuclear structure data evaluation, listing, dissemination, etc., including a case study of U-235 g.s. half-life - Shamsuzzoha Basunia

Wednesday, 28 June 2023 08:40 (30 minutes)

Presenter: BASUNIA, Shamsuzzoha

Session Classification: June 28

Contribution ID: **23** Type: **not specified**

ENDF/B Decay Data Sub-library - Alejandro Sonzogni

Wednesday, 28 June 2023 09:10 (20 minutes)

Presenter: SONZOGNI, Alejandro

Session Classification: June 28

Contribution ID: **24** Type: **not specified**

Overview of NNDC Databases and Modernization Efforts - Elizabeth Mccutchan

Wednesday, 28 June 2023 09:30 (20 minutes)

Presenter: MCCUTCHAN, Libby

Session Classification: June 28

Contribution ID: **25**　　　　　　　　　　　　　　　　Type: **not specified**

Decay data measurements using MMCs at CEA - Matias Rodrigues

Wednesday, 28 June 2023 10:30 (20 minutes)

Presenter:　RODRIGUES, Matias (CEA-)

Session Classification:　June 28

Contribution ID: **26** Type: **not specified**

Improving Gamma Data by TES - Dan Becker

Wednesday, 28 June 2023 10:50 (20 minutes)

Presenter: BECKER, Dan

Session Classification: June 28

Contribution ID: **27** Type: **not specified**

Improving Gamma Data by MMC - Stephen Boyd

Wednesday, 28 June 2023 11:10 (20 minutes)

Presenter: BOYD, Stephen

Session Classification: June 28

Contribution ID: **28** Type: **not specified**

169Yb Gamma Calibration Source Production - Andrew Voyles

Wednesday, 28 June 2023 11:50 (20 minutes)

Presenter: VOYLES, Andrew

Session Classification: June 28

Contribution ID: **29** Type: **not specified**

Improving half-life by Microcal - Geon-Bo Kim

Wednesday, 28 June 2023 12:10 (20 minutes)

Presenter: KIM, Geonbo

Session Classification: June 28

Contribution ID: **30**   Type: **not specified**

Discussion –Multi-institutional measurement campaign (needs and capabilities for other users - Led by Andrew Voyles

Wednesday, 28 June 2023 13:30 (1 hour)

Presenter: VOYLES, Andrew (UC Berkeley / LBNL)

Session Classification: June 28

Contribution ID: **31** Type: **not specified**

Discussion

Wednesday, 28 June 2023 09:50 (20 minutes)

Presenter: BERNSTEIN, Lee

Session Classification: June 28

Contribution ID: **32**   Type: **not specified**

Day 2 Overview - Geon-Bo Kim

Wednesday, 28 June 2023 08:30 (10 minutes)

Presenter: KIM, Geonbo

Contribution ID: **33** Type: **not specified**

Workshop Introduction and Goals - Geon-Bo Kim

Tuesday, 27 June 2023 09:05 (5 minutes)

Primary author: KIM, Geonbo

Presenter: KIM, Geonbo

Session Classification: June 27