

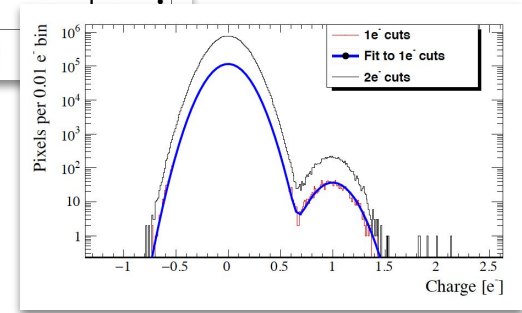
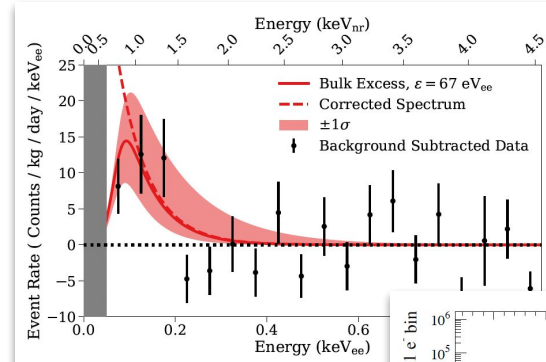
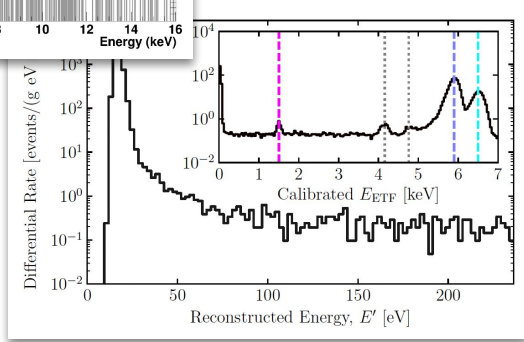
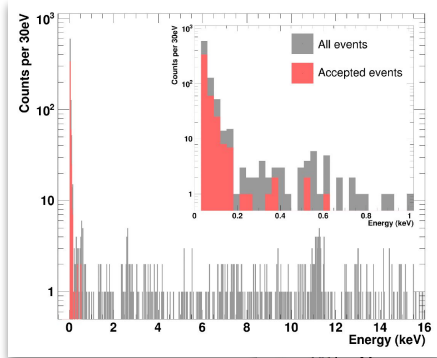


XVIII  
International Conference on  
Topics in Astroparticle and  
Underground Physics 2023

# EXCESS23@TAUP workshop

A satellite of the TAUP 2023 conference  
Welcome and opening,  
Vienna, August 26, 2023

# Low energy excesses



... in cryogenic detectors

... in CCDs

# The EXCESS workshop series

## EXCESS Workshop

15–16 Jun 2021

Online

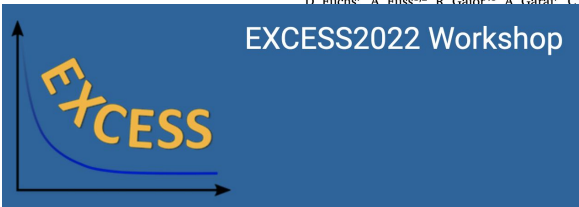
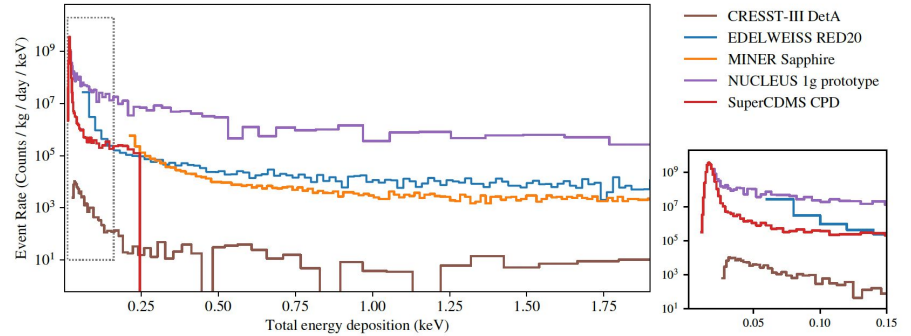
Europe/Vienna timezone

SciPost Physics

### EXCESS workshop: Descriptions of rising low-energy spectra

Editors: A. Fuss<sup>1,2,a</sup>, M. Kaznacheeva<sup>3,b</sup>, F. Reindl<sup>1,2,c</sup>, F. Wagner<sup>1,d</sup>

P. Adari<sup>4</sup>, A. Aguilar-Arevalo<sup>5</sup>, D. Amidei<sup>6</sup>, G. Angloher<sup>7</sup>, E. Armengaud<sup>8</sup>, C. Augier<sup>9</sup>, S. Banik<sup>1,2</sup>, D. Baxter<sup>11</sup>, C. Beaufort<sup>12</sup>, G. Beaulieu<sup>9</sup>, V. Belov<sup>13</sup>, Y. Ben Gal<sup>14</sup>, G. A. Benoit<sup>16</sup>, A. Bento<sup>7,17</sup>, L. Bergé<sup>18</sup>, A. Bertolini<sup>7</sup>, R. Bhattacharyya<sup>19</sup>, J. Billard<sup>9</sup>, A. Botti<sup>20</sup>, R. Breier<sup>21</sup>, G. Bres<sup>16</sup>, J.-L. Bret<sup>16</sup>, A. Broniatowski<sup>18</sup>, A. Brossard<sup>22</sup>, R. Bunker<sup>23</sup>, M. Cababie<sup>11,20</sup>, M. Calvo<sup>16</sup>, P. Camus<sup>16</sup>, G. Cancelo<sup>11</sup>, L. Canonica<sup>7</sup>, L. Cardani<sup>24</sup>, J.-F. Caron<sup>10</sup>, N. Casali<sup>24</sup>, G. delCastello<sup>24,25</sup>, A. Cazes<sup>9</sup>, R. Cerri<sup>26</sup>, B.A. Cervantes Vergara<sup>5</sup>, D. Chaize<sup>9</sup>, M. Chapellier<sup>18,22</sup>, L. Chaplinsky<sup>28,29</sup>, F. C. M. Chaudhuri<sup>30</sup>, A.E. Chavarria<sup>31</sup>, G. Chemin<sup>12</sup>, R. Chen<sup>32</sup>, H. Chen<sup>33</sup>, F. Chieci<sup>34</sup>, I. Colantoni<sup>24,35</sup>, J. Colas<sup>9</sup>, J. Cooley<sup>36</sup>, J.-M. Coquillat<sup>22</sup>, E.C. Corcoran<sup>37</sup>, S. C. M. Crisler<sup>11</sup>, A. Cruciani<sup>24</sup>, P. Cushman<sup>38</sup>, A. D'Addabbo<sup>15</sup>, J.C. D'Olivo<sup>5</sup>, A. Dastgheib<sup>39</sup>, M. De Jesús<sup>9</sup>, Y. Deng<sup>39</sup>, J.B. Dent<sup>40</sup>, E.L. Depaoli<sup>41</sup>, K. Dering<sup>22</sup>, S. Dharani<sup>42,43</sup>, S. Di Lorenzo<sup>15</sup>, A. Drlica-Wagner<sup>11,43,44</sup>, L. Dumoulin<sup>18</sup>, D. Durnford<sup>45</sup>, B. Dutta<sup>19</sup>, L. Einafi<sup>1,2</sup>, A. Erb<sup>3,46</sup>, A. Erhart<sup>7</sup>, R. Essig<sup>4</sup>, J. Estrada<sup>11</sup>, E. Etzion<sup>14</sup>, O. Exshaw<sup>16</sup>, F. Favela-Perez<sup>5</sup>, F. v. Feilitzsch<sup>3</sup>, G. Fernandez Moroni<sup>11</sup>, N. Ferreiro Iachellini<sup>7</sup>, S. Ferriol<sup>9</sup>, S. Fichtner<sup>47</sup>, E. Figueroa-Feliciano<sup>32</sup>, J.-B. Filippini<sup>9</sup>, D. Filosofov<sup>13</sup>, J. A. Formaggio<sup>46</sup>, M. Friedl<sup>1</sup>, S. D. Fuchs<sup>7</sup>, A. Fuss<sup>1,2</sup>, B. Gaior<sup>38</sup>, A. Garai<sup>7</sup>, C. Garrah<sup>39</sup>, J. Gascon<sup>9</sup>, G. Gerbier<sup>22</sup>, M. C. Gonzalez-Garcia<sup>48</sup>, M. Goussard<sup>49</sup>, A. Giuliani<sup>18</sup>, P. Gorel<sup>51,52,53</sup>, P. Goussard<sup>49</sup>, P. Gros<sup>22</sup>, Y. Guardincerri<sup>11,†</sup>, C. Guerin<sup>54</sup>, P. Harrington<sup>46</sup>, D. Hauff<sup>7</sup>, S. T. Heidecke<sup>55</sup>, W. Hoppe<sup>23</sup>, T.W. Hossbach<sup>23</sup>, J.-C. Ianj<sup>56</sup>, J. Jochum<sup>58</sup>, J. P. Johnston<sup>46</sup>, A. Ju<sup>59</sup>, S. Kazarcevi<sup>13</sup>, M. Kaznacheeva<sup>3</sup>, E. K



15-17 February 2022

Online

Europe/Berlin timezone



16 July 2022

Technical University Vienna

Europe/Zurich timezone

# EXCESS23@TAUP time table

## CCDs

**talks: 15+10**

08:00	<b>Registration</b> <i>University of Vienna</i>	08:30 - 09:00
09:00	<b>Welcome and Introduction</b> <i>University of Vienna</i>	<i>Felix Wagner</i> 09:00 - 09:15
	<b>SENSEI: Origin and characterization of single-electron events</b> <i>University of Vienna</i>	<i>Mariano Cababie</i> 09:15 - 09:40
	<b>CONNIE first results with Skipper-CCDs</b> <i>University of Vienna</i>	<i>Dr Alexis Aguilar-Arevalo</i> 09:40 - 10:05
10:00	<b>DAMIC-M: Background and Dark Current Studies with Low Background Chamber</b> <i>University of Vienna</i>	<i>Radomir Smida</i> 10:05 - 10:30
	<b>Questions &amp; Discussion</b> <i>University of Vienna</i>	10:30 - 10:45

## CCDs

11:00	<b>Confirmation of the spectral excess in DAMIC at SNOLAB with skipper CCDs</b> <i>University of Vienna</i>	<i>Dr Michelangelo Traina</i> 11:00 - 11:25
	<b>Questions &amp; Discussion</b> <i>University of Vienna</i>	11:25 - 11:30

## Cryogenic detectors

12:00	<b>Improved Modeling of Charge Trapping and Impact ionization in SuperCDMS HVeV detectors</b> <i>University of Vienna</i>	<i>Alexander Zaytsev</i> 11:30 - 11:55
	<b>Heat-Only background discrimination in EDELWEISS and RICOCHET cryogenic germanium detectors</b> <i>Prof. Jules GASCON</i>	
	<b>Low energy excess in a diamond-MMC (MAGNETO) and a STJ (BeEST) detectors</b> <i>University of Vienna</i>	<i>Geon-Bo Kim</i> 12:20 - 12:45
	<b>Questions &amp; Discussion</b> <i>University of Vienna</i>	12:45 - 12:50

13:00

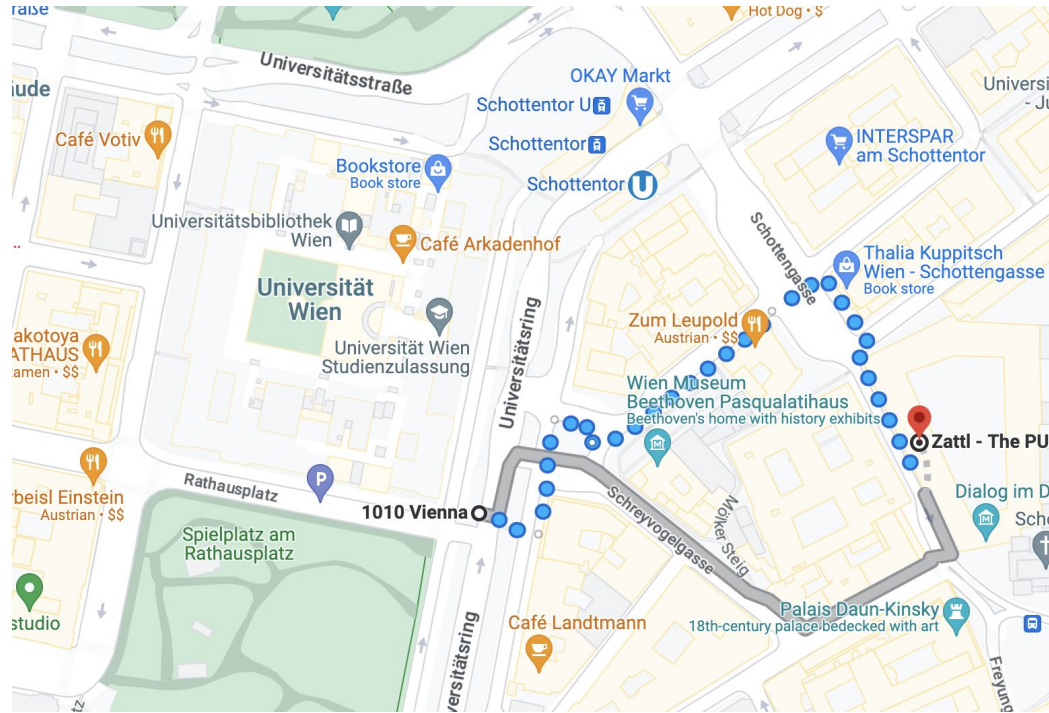
## Cryogenic detectors

## Panel discussion

14:00	<b>Observations of the LEE in a Two Channel SPICE Athermal Phonon Detector</b> <i>University of Vienna</i>	<i>Roger Romani</i> 13:50 - 14:15
	<b>The low energy excess in CRESST-III</b> <i>University of Vienna</i>	<i>Dominik Fuchs</i> 14:15 - 14:40
	<b>CRESST/NUCLEUS: Results of doubleTES detectors</b> <i>University of Vienna</i>	<i>Francesca Pucci</i> 14:40 - 15:05
15:00	<b>The low energy spectrum of BULLKID</b> <i>University of Vienna</i>	<i>Marco Vignati</i> 15:05 - 15:30
	<b>Questions &amp; Discussion</b> <i>University of Vienna</i>	15:30 - 15:35
16:00	<b>Panel Discussion</b> <i>University of Vienna</i> <i>Christian Enss et al.</i> 16:00 - 17:30	
17:00	<b>Closing remarks</b> <i>University of Vienna</i> 17:30 - 17:35	

**Christian Enss**, Heidelberg University  
**Daniel Egana-Ugrinovic**, Perimeter Institute  
**Jürgen Stockburger**, Ulm University  
**Radomir Smida**, University of Chicago  
**Vanessa Zema**, Max Planck Institute for Physics

# Dinner



**“Zatti”  
Freyung 6  
1010 Wien**

**start 6:30 pm  
kitchen open until 9 pm**



# Sunday

## Vienna sightseeing



**Be aware that in Austria supermarkets are closed on Sunday!**

We assembled a list of potentially exciting places to do sightseeing in Vienna on Sunday, the gap day between the workshop and the TAUP conference:

**1. Schönbrunn Palace and Gardens:** Dive into the imperial history of Austria with a visit to the Schönbrunn Palace. Explore the opulent rooms of the palace and stroll through its vast gardens. The palace's history, architecture, and beautiful landscapes make it a must-visit.

<https://goo.gl/maps/yPYP9UYg9N5h7bQ5A>

**2. St. Stephen's Cathedral (Stephansdom):** Located in the heart of Vienna, this iconic Gothic cathedral boasts stunning architecture and panoramic views of the city from its tower. Attend a Sunday mass or simply admire its intricate stone work and stained glass.

<https://goo.gl/maps/o52GibSqMyLkwhpf8>

**3. Belvedere Palace:** Home to an impressive collection of Austrian art, including Gustav Klimt's "The Kiss", the Belvedere Palace is a blend of Baroque architecture and contemporary art. The palace grounds also offer serene gardens perfect for a leisurely walk.

<https://goo.gl/maps/UaggQdqh2A75KhQYA>

**4. Vienna Prater:** Experience the fun side of Vienna at the Prater amusement park. The iconic Giant Ferris Wheel offers breathtaking views of the city. With a mix of modern rides and nostalgic attractions, there's something for everyone.

<https://goo.gl/maps/45P2Eo3eRXugTzFJA>

**5. Vienna Film Festival:** Held at the Rathausplatz, the Vienna Film Festival showcases a diverse range of films from international to local productions. With a giant open-air screen and culinary delights from around the world, it's a perfect way to enjoy a cinematic experience under the stars.

<https://filmfestival-rathausplatz.at/en/>



# Proceedings

<https://taup2023.hephy.at/paper/>

We will have peer-reviewed proceedings for TAUP2023 conference published open access in Proceedings of Science.

**Proceedings submission deadline: 15 November 2023**

**Proceedings for plenary talks are foreseen to have a page limit of:**

- + For plenary talks 6 pages
- + For parallel session talks 4 pages ← **EXCESS**
- + For posters 4 pages

In zip file participants can find instructions and a template for their contributions. Each participant who wants to submit a proceeding will receive after the conference a registration link with details about submission procedure.

**INSTRUCTIONS** →

# Useful information

**Wifi:** Individual keys were handed out at registration. Alternative: eduroam.

**Lunch:** Suggestions for lunch places are at pinboard at registration.

symbolic image





See you soon,  
the organizers

—

Translation of the weather prediction from the Austrian national news agency (slightly dramatic):

Today, Thursday

The sun burns from the sky all day long, there are hardly any shady clouds. The wind is also only weak. The temperature rises and it is humid.

Tomorrow, Friday

It will be even hotter, up to 36 degrees, and humid. Often the sun will shine, but in between larger spring clouds may appear and a thunderstorm. A moderate southerly wind will blow away from the showers.

The day after tomorrow, Saturday

Not quite as hot, but oppressively humid. There will be some sunshine, but in between there will also be large cloud storms and a thunderstorm. Temporary lively to strong winds from northwest to northeast. The temperature will reach 32 degrees.



**Group picture  
15:35, Arkadenhof**

# Organizers



**Margarita  
Kaznacheeva**



**Felix  
Wagner**



**Florian  
Reindl**



**Daniel  
Baxter**



**Belina  
von Krosigk**



**Rouven  
Essig**



**Marie-Cécile  
Piro**



**Yonit  
Hochberg**



**Valentina  
Novati**



**Victoria  
Wagner**