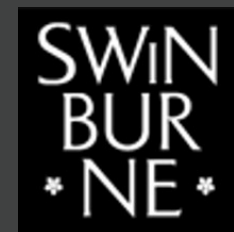


# Zuzana Slavkovská

Postdoctoral Fellow  
Australian National University  
Department of Nuclear Physics



# Research Background

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**Studied 2009 - 2014**

**Goethe University Frankfurt, Germany**

- Experimental Nuclear Astrophysics

**PhD 2015 - 2018 at GSI Helmholtz Centre  
for Heavy Ion Research, Germany**

- Astrophysics with Storage Rings



Frankfurt

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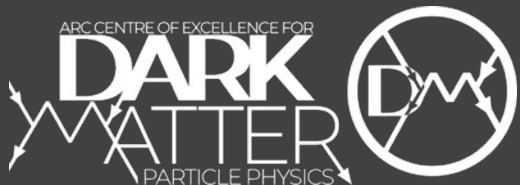
- Astrophysics with Storage Rings



Canberra [2]

**Postdoc at ANU since Feb 2019**

- Accelerator Mass Spectrometry



# My Contribution to ARC CoE for Dark Matter Particle Physics

## Metrology



Steve Tims



Michaela Froehlich



Zuzana Slavkovská

# My Contribution to ARC CoE for Dark Matter Particle Physics

## Metrology

### SABRE: Impurity Estimation

- low background detector
- how much radioactivity present?
- $^{210}\text{Pb}$ ,  $^{232}\text{Th}$ ,  $^{238}\text{U}$ ,  $^{40}\text{K}$
- ICP-MS, Collaboration with Research School of Earth Sciences at ANU



Steve Tims



Michaela Froehlich



Zuzana Slavkovská

| Type of NaI powder | $^{39}\text{K}$ content | Amount     |
|--------------------|-------------------------|------------|
| Growth grade       | 340 mg / g              | A lot      |
| Astro grade        | 140 ng / g              | Less       |
| Next year          | ?                       | Even less? |

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## Direct Detection, Supervision of Students in 2021



# Dr. Zuzana Slavkovská

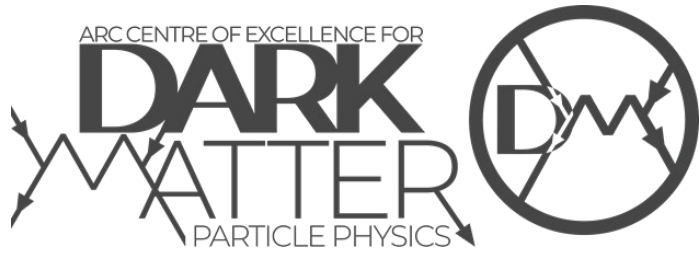
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# References

[1] <https://depositphotos.com/40115607/stock-photo-frankfurt-germany.html>

[2] <https://www.mynrma.com.au/holidays/holiday-finder/locals-guide/canberra>



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The University Of Sheffield.

