

November 3, 2024

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## Grazing Incidence Working Group: Status Update

Anja F. Hörmann

Bundesanstalt für Materialforschung und Prüfung (BAM)

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[www.bam.de](http://www.bam.de)

## Preface - history of the working group

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- ▶ formation in 2015 - canSAS-VIII, Japan
- ▶ google groups mailing list with some activity
- ▶ intention of liaising with what is now ORSO in 2019 - canSAS-XI, Germany
- ▶ new initiative started in 2024, connection to canSAS ~1 month ago

## Anatomy of a GISAS experiment

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1. Set-up
  - ▶ hardware
  - ▶ software
2. Alignment and Calibration
  - ▶ sample alignment
  - ▶ instrument calibration
  - ▶ beam profile
3. Carrying out the measurements
  - ▶ reflectometry measurements
  - ▶ selection of incident angles
  - ▶ requirements on samples
  - ▶ metadata
4. What to do with the data?
  - ▶ data corrections
  - ▶ general analysis methods?

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## GISAS instrument survey

The goal of the survey is to ensure that the standard procedure developed can be used on as many instruments as possible. To do this, we need information on how hardware and software limit the flexibility of scientists in adapting another procedure. The standard procedure should be made as good as possible by gathering expertise. The target groups are the instrument scientists of the GISAXS and GISANS beamlines and the laboratory instruments.

Abschnitt 1

Your Instrument

## Gathering Community Input: The GISAS instrument survey

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### Survey Objectives

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### Call for Participation



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2. To make the standard procedure as good as possible by gathering expertise.

### Call for Participation

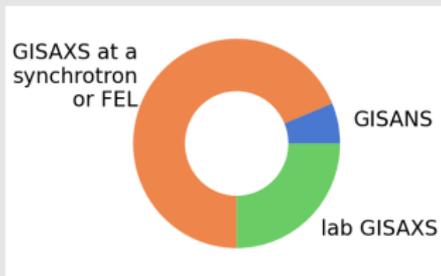


- ▶ public since July 18th 2024 ([sa\\_scat@iucr.org](mailto:sa_scat@iucr.org) post)
- ▶ used also to gather interested people (for working group and receiving updates)
- ▶ dataset will be published
- ▶ `gist` for alignment and calibration programs/scripts

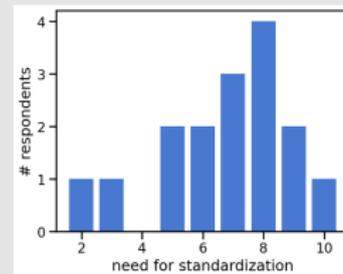
## Survey results

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### Instrument type

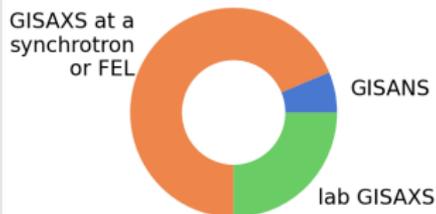


### Need for standardization

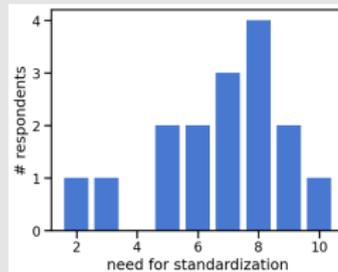


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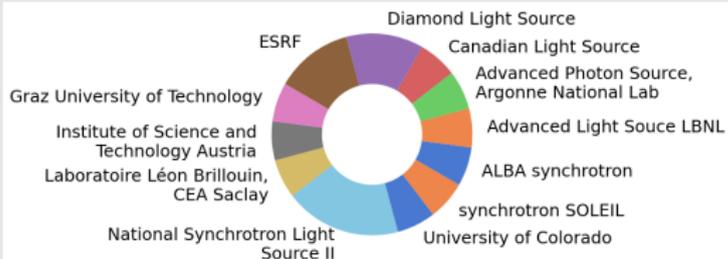
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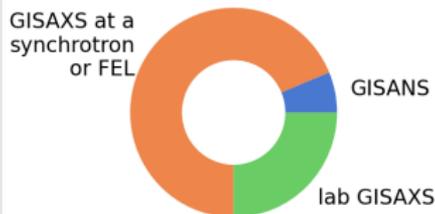


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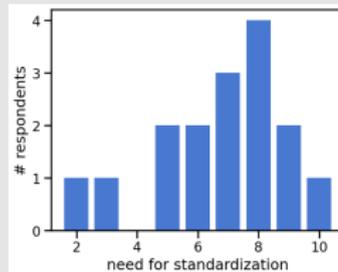


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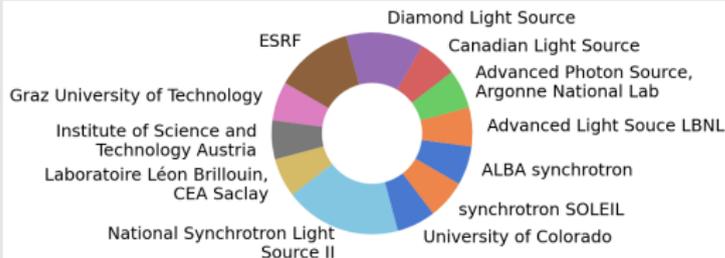
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### Facility



### More results?

→ my talk **Fri 10:10, session INS-4, room 1F 105**

# Grazing Ray Initiative

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## Members:

- ▶ Adam Leontowich (CLS)
- ▶ Alex Hexemer (LBNL)
- ▶ Anja F. Hörmann (BAM)
- ▶ Brian R. Pauw (BAM)
- ▶ Daniel Balasz (ISTA)
- ▶ Eduardo Solano (ALBA)
- ▶ Eliot Gann (BNL)
- ▶ Glen J. Smales (TU Graz)
- ▶ Joe Strzalka (ANL)
- ▶ Phil Mousley (DLS)
- ▶ Ruipeng Li (BNL)
- ▶ Teddy Tortorici (U Colorado)
- ▶ Tim Snow (DLS)
- ▶ Wiebke Koepf (LBNL)



## Grazing Ray Initiative

Home of the grazing incidence working group of canSAS. Profile picture on Wikimedia Commons

README.md

### About us

We are scientists working towards standardisation in grazing incidence small-angle scattering. We are part of [canSAS](#) and form the [Grazing Incidence Working Group](#) the

### Pinned

Cx



[alignment](#) Public



Sample alignment procedures for grazing incidence small-angle scattering



[calibration](#) Public

Instrument calibration for grazing incidence small-angle scattering



[data\\_corrections](#) Public



Data corrections for grazing incidence small-angle scattering

- ▶ working at <https://github.com/grazingrays>
- ▶ contact [anja.hoermann@bam.de](mailto:anja.hoermann@bam.de) to join

## Conclusions/Outlook

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#### Grazing Ray Initiative



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