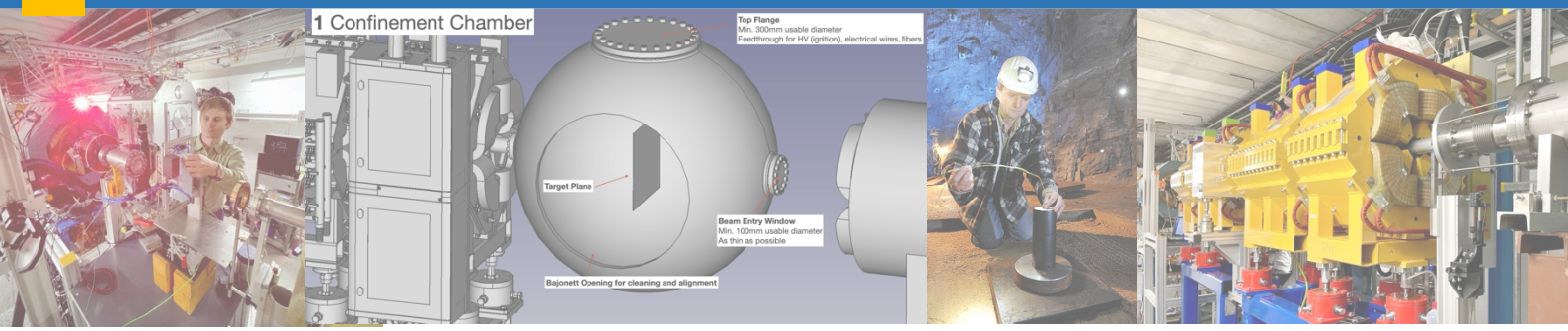
2025 International Workshop on Applications of High Energy Proton Radiography

Freiberg / Germany

June 01 – June 03 2025

Main Topics

- Status and technical capabilities of the PRIOR-II user facility at GSI/FAIR
- Capabilities of the Freiberg shock-wave laboratory
- General ultrafast diagnostics for HED experiments
- Scientific research that benefits from Proton Radiography as a diagnostic (materials research, plasma physics, manufacturing, etc.)
- Opportunities for establishing national and international partnerships and collaborations



2025 International Workshop on Applications of High Energy Proton Microscopy

The HED@FAIR collaboration is pleased to announce the 2025 “International Workshop on Applications of High Energy Proton Microscopy”, June 01 – 03, 2025 at Freiberg University, Germany.

Recently, the PRIOR-II proton microscope has been commissioned at GSI, which is capable of visualizing ultra-fast macroscopic processes in dense matter (up to several tens of g/cm^2) with micrometer spatial resolution performance. This unique and powerful instrument will be available as a user facility to the international community for experiments on plasma physics, materials science and beyond. In the first dynamic campaign in 2027 the focus will be on HED states of matter generated through the use of high explosives. However, the capabilities of PRIOR are not limited to HE experiments and can be extended to accommodate other drivers such as light gas guns as well.

The workshop specifically aims at covering areas of science where high-speed, high energy proton radiography can make significant scientific contributions:

- Dynamic Compression Science,
- High-Energy-Density Science,
- EOS Measurements,
- Materials research (e.g. damage and failure analysis),
- Process-Aware Manufacturing Science.

An international panel of researchers and collaborators will discuss High Energy Proton Microscopy in general, its current status and application possibilities, technical specifications of the facilities and the enablement of scientific experiments at the PRIOR-II facility at GSI and FAIR.

Registration and further information: https://indico.gsi.de/e/prad2025

Preliminary Schedule:

Sun., 01.06.2025
19:00 – 22:00 Conference Reception and Dinner at Werner Haus

Mon., 02.06.2025
08:30 – 09:00 Registration
09:00 – 10:30 Opening & Oral Presentations
10:30 – 10:45 Coffee Break
10:45 – 12:15 Oral Presentations
12:15 – 13:30 Lunch Break (not included)

13:30 – 15:00 Oral Presentations
15:00 – 15:15 Coffee Break
15:15 – 16:30 Poster Session or Oral Presentations
19:00 – 22:00 Scientific Discussions at Stadtwirtschaft

Tue., 03.06.2025
08:30 Meeting at “Reiche Zeche”-Shaft
09:00 – 12:00 Visit of the Subterranean Shock Wave Laboratory Freiberg
12:00 – 13:30 Lunch Break (not included)
13:30 – 15:00 Oral Presentations (depending of the number of registered participants)
15:00 – 15:15 Coffee Break
15:15 – 16:30 Scientific Round Table & Concluding Remarks

Wed., 04.06.2025
14:00 Optional visit of the GSI/FAIR facilities in Darmstadt

How to get to Freiberg

By plane: Airport Dresden, further with city train to Dresden Main Station and with train to Freiberg (S3 or regional train direction Chemnitz-Zwickau-Hof)

By train: With ICE to Dresden Main Station and with train to Freiberg (S3 or regional train direction Chemnitz-Zwickau-Hof)

By car: Autobahn A4, exit Siebenlehn, further 18 km (B 101)

Conference venue:
Krüger-Haus
Schlossplatz 3
09599 Freiberg

Important Dates:

- Deadline for registration: 25.04.2025
- Deadline for abstract submission: 07.04.2025
- Author notification: 14.04.2025

Abstract submission: https://indico.gsi.de/e/prad2025

With best regards,
On behalf of the Scientific Chair

Program Committee
Scientific Chair: Matthew S. Freeman, LANL, Los Alamos, USA

Organizing Committee
Martin Schanz, GSI, Darmstadt, Germany
Gerhard Heide, TUBAF, Freiberg, Germany

List of hotels in Freiberg

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