

Remote Beamtime 2021-3 run

Accept

Let us know if you accept your allocated shifts & fill in the Users questionnaire

Deadline: 25 August 2020



Plan your experiment

Consult our "Remote experiment preparations" (*see next*)

Prepare for meeting

We will contact you to schedule a Zoom meeting in September. We will also send you instructions for the software which you will need during your beamtime.



Trainings & ESAF

All participants must have approved ANL site access & must complete their safety training prior to the meeting. ESAF forms must be submitted at least 3 weeks before your beamtime.

The meeting

Follow our guidelines & install all needed software prior to our meeting. Prepare a few slides to share with us during our meeting. We will discuss your experimental plan, answer questions and test your connection to the beamline computers.



Send your samples

Consult our "Sample Shipment" (*see next*)

Deadline: at least 1 week prior to your beamtime

The day of the experiment

We will let you know when is time to connect (~9 AM CDT), please wait. We will be under constant communication via your selected App.



Overnight

Current APS regulations restrict the on-site staff access. In most cases, we will be physically present in the beamline until ~6-8 PM (CDT). Plan ahead your overnight experiment considering minimum support by the beamline staff members.

Receive your samples

Packing takes time. We will safely pack & ship your samples back to you once the beamline periods are over. Exceptions may apply only with reasonable justification.



Off-line Support

When the beamtime period is over we will be able to assist you further: e.g. *data transfer, data processing software, discuss results, schedule Raman measurements etc.*
13-IDD end-date : 5 November 2021
13-BMD end-date : 1 November 2021

For questions please contact:

Vitali Prakapenka (prakapenka@cars.uchicago.edu)
Stella Chariton (chariton@cars.uchicago.edu)

Remote Experiment Preparations

How to use your remote beamtime effectively



- ✓ Make a clear plan & set priorities among your cells. Challenging experiments should be done first.
- ✓ Think in advance your “Plan B” in case things do not go as expected
- ✓ Bring cells to target pressure before shipping
- ✓ Membrane is your best friend. If it fits your experiment, please use it.

Short symmetric and mini-BX90 cells are an exceptionally great fit for our beamline allowing double sided laser heating. Other cell types can have membrane too, but our space is limited and thus only one-side observation/heating will be possible. Membrane is great for your overnight experiment.

*** Our current capability for decompression experiments using membrane is limited. Please consult us in advance.*

How many samples can you measure?

... it really depends

In general, we aim for 2-4 cells per user. Some cells need very fast collections (e.g. *heat and map*) while others are more time-consuming (e.g. *collecting EoS*). It is always best to send us extra samples & set priorities. If there is time left or we see another opportunity for you to collect then we will gladly notify you. *Always stay tuned!*

All samples MUST ...

... have very clear name labels



... indicate desired orientation or presence of cBN seat(s)

... have clean diamond tables

... have very distinct markings for left-handed screws

How can we help you ...

Every morning we perform beamline alignments, collect calibrations and optimize our equipment to your needs. Once all is ready, you can connect. We will place your cells in position, help you get started and operate with confidence. All users will receive a detailed manual to refer to before the Zoom meeting. We will be there to help you to control pressure and temperature and solve technical problems, if any. However, our physical presence is restricted by APS regulations. We will be at the beamline until ~6:00 - 8:00 PM (CDT) and we may quickly help you again to set your overnight sample by ~10:00 PM (CDT). During overnight you will be on your own, unless an emergency case rises of course. Please, keep in mind, beamtime may last 1 day for you, but over 1 month for us ☺

sample shipment

Where to ship my samples?

Vitali Prakapenka

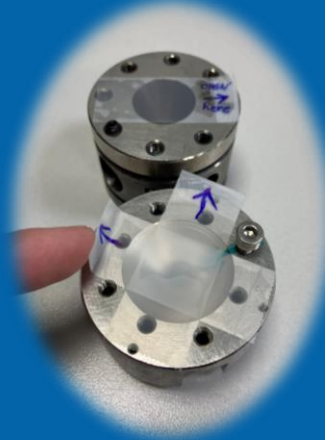
CARS, The University of Chicago
Bldg. 434A, APS, 9700 S. Cass Ave
Lemont, IL 60439, USA
Phone: (630)252-0439
E-mail: prakapenka@cars.uchicago.edu

When to ship my samples?

"The earlier the better"

- ✓ We strongly advice to ship samples at least **1 week** before your scheduled beamtime
- ✓ Cells that require gas loading at GSECARS must arrive as early as possible
- ✓ Please, try to ship your samples in a single package delivery

How to pack my samples?



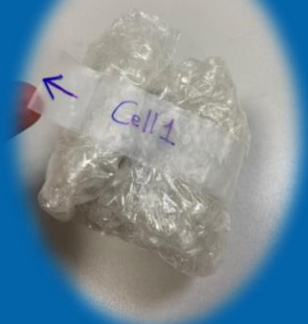
Clean diamond tables thoroughly & cover with tape



Use set screws



Use sufficient packing material & containers with hard exterior (e.g. pelican cases)



Cover with bubble wrap & provide easy opening & clear labels



Contents description & others

- ✓ Use word/phrases such as: *"non-hazardous mineralogical samples in metallic (steel) holders for optical measurements"*
- ✓ Avoid word/phrases such as: *"diamonds", "cell", "pressure", which may cause unnecessary delays in customs*
- ✓ E-mail us the **Tracking Number** as soon as you send your samples
- ✓ FedEx is our main delivery service. Other options are UPS, USPS, DHL. Ask us for more details.