Remote Beamtime
2021-run

Accept
Let us know if you accept your allocated shifts & fill in the Users questionnaire
Deadline: 21 December 2020

Plan your experiment
Consult our “Remote experiment preparations” (see next)

Prepare for meeting
We will contact you to schedule a Zoom meeting in January. 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.

Send your samples
Consult our “Sample Shipment” (see next)
Deadline: at least 1 week prior to 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.

The day of the experiment
We will let you know when is time to connect (~9 AM CST), please wait. We will be under constant communication via your selected App.

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.

Overnight
Current APS regulations restrict the on-site staff access. In most cases, we will be physically present in the beamline until ~5-6 PM (CST). Plan ahead your overnight experiment considering minimum support by the beamline staff members.

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.

For questions please contact:
Dongzhou Zhang (d.zhang@cars.uchicago.edu)
Jingui Xu (xu@cars.uchicago.edu)

13-BMC end-date: March 15, 2021
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.

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

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How many samples can you measure?

... it really depends

In general, we aim for 1-2 cells per day. 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!

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 ~5:00 - 6:00 PM (CST). During overnight you will be on your own, unless an emergency case rises of course.

Please, keep in mind, beamtime will last 1-2 day for you, but many consecutive days for us 😊

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
Sample Shipment

Where to ship my samples?

Dongzhou Zhang  
GSECARS  
Bldg. 434A, APS, 9700 S. Cass Ave  
Argonne, IL 60439, USA  
Phone: (630)252-0444  
E-mail: dzzhang@cars.uchicago.edu

When to ship my samples?

“The earlier the better”

✓ Samples must be in our hands 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?

Use set screws

Clean diamond tables thoroughly & cover with tape

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.