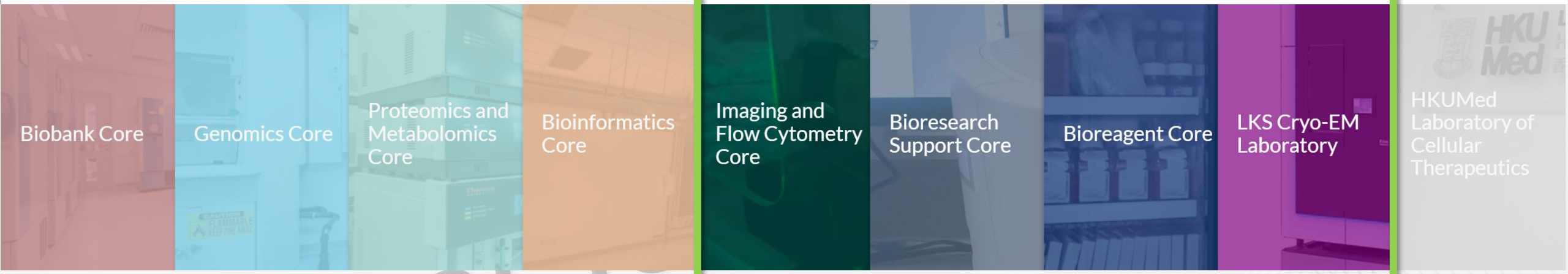
General Policy

Li Ka Shing Cryo-EM Laboratory

Cores in CPOS

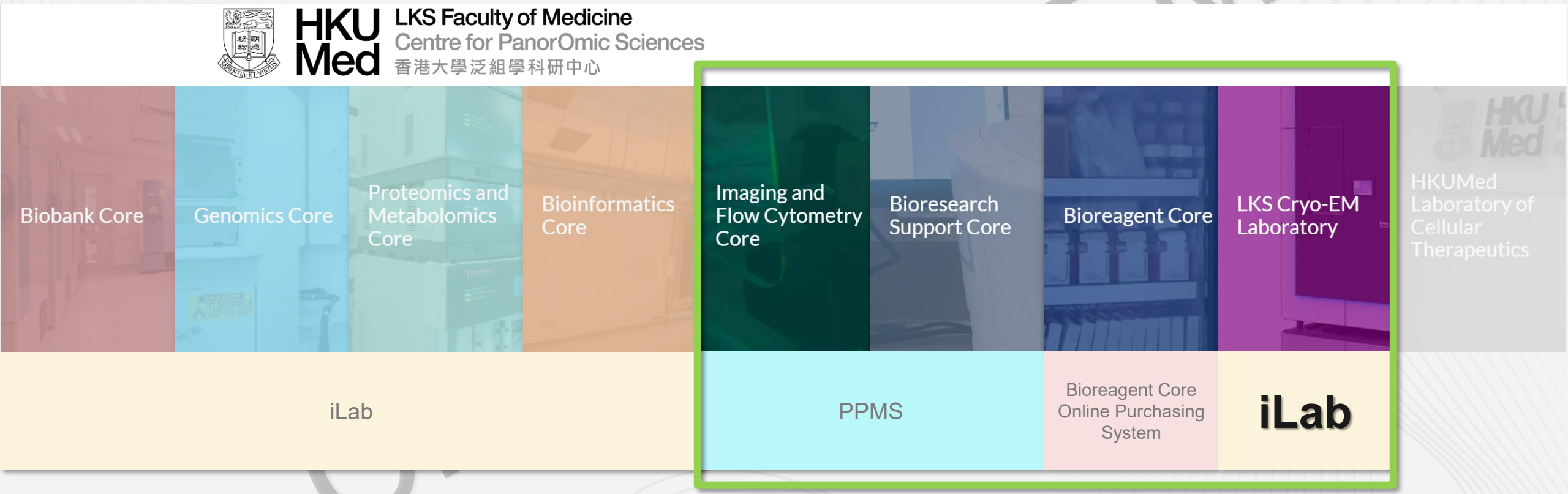
HKU Med LKS Faculty of Medicine
Centre for PanorOmic Sciences
香港大學泛組學科研中心



FMB Cores

Laboratory Block, 21 Sassoon Road

Online Platform

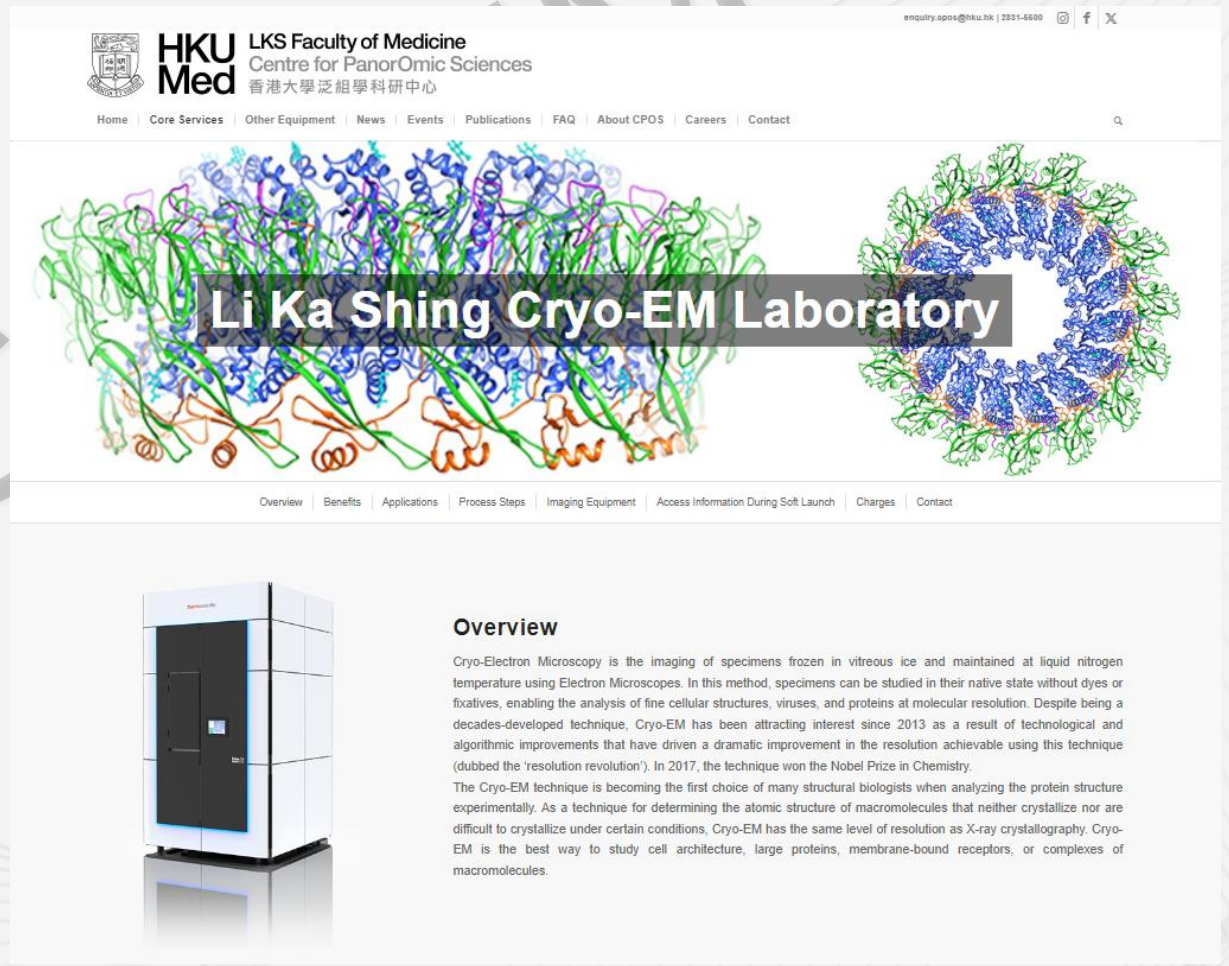


Li Ka Shing Cryo-EM Laboratory

Email: cryoem.cpos@hku.hk

Tel: 3910-2938

Opening hours: 9:00 am to 5:30pm



General Rules and Security

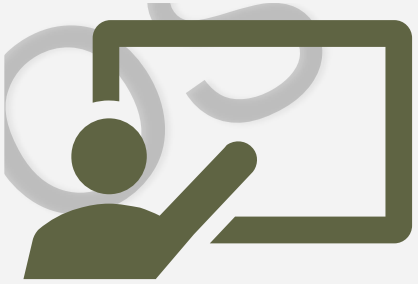
The core is under surveillance **24/7**

Do **NOT** lend account to other users

Only access booked equipment

The last user of the day must turn off light and lock the doors

No drinking and eating at the computer area



Must attend training before using instrument

Always wear appropriate protective clothing and glasses when working in the laboratories.

User Responsibility

User should strictly follow the standard operation protocol (SOP)

Please operate the instruments carefully and gently

Keep workspace / sample preparation bench tidy and clean

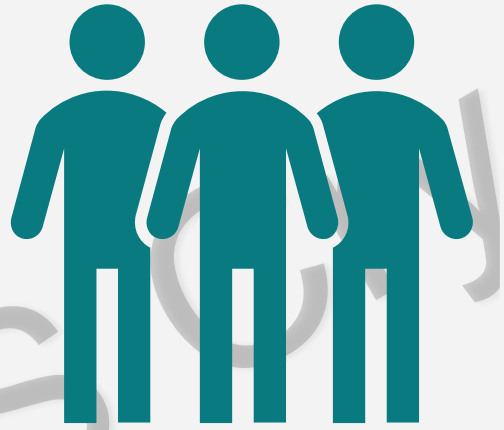
Report any problem related to instruments

Write down experiment settings in logbook

If you are uncertain about performing a particular procedure, please contact Cryo-EM core staff.

General Safety

Staff has the right to query and, if necessary, stop any activity that is considered unsafe.



Avoid working alone during non-office hours in the laboratory.

Plan your work well before getting started.

General Safety

Fire Extinguisher

First Aid Box

Safety shower at corridor

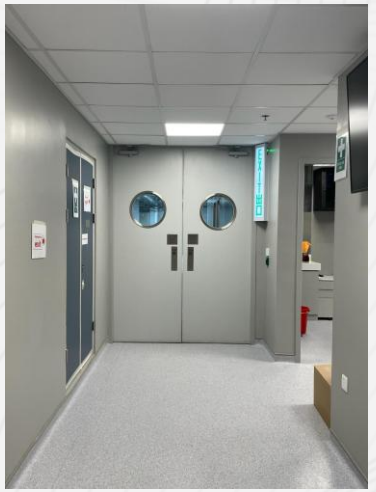
Fire Escape Route and First Aid box.

No gloves on computer and areas accessible by others.

Dispose biological waste in designated bins.

Dispose sharps / glasses in sharp box.

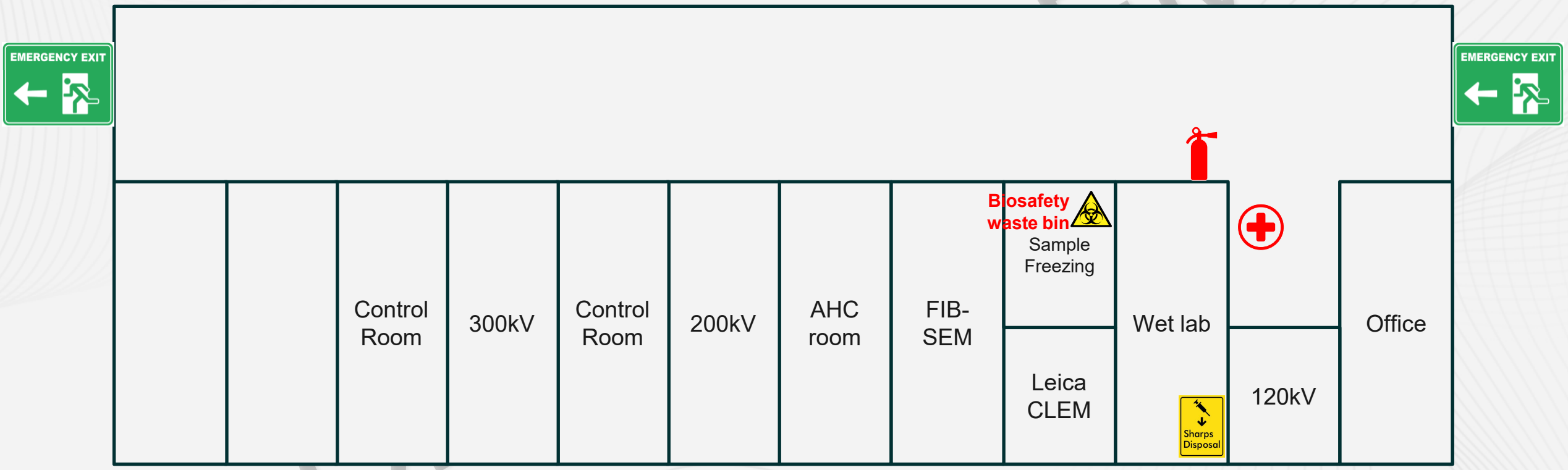
Emergency Exit



Biological waste bin

Sharp box

Safety (Floor Plan)



Safety (Gas)

Liquid Nitrogen

Containers for Liquid Nitrogen

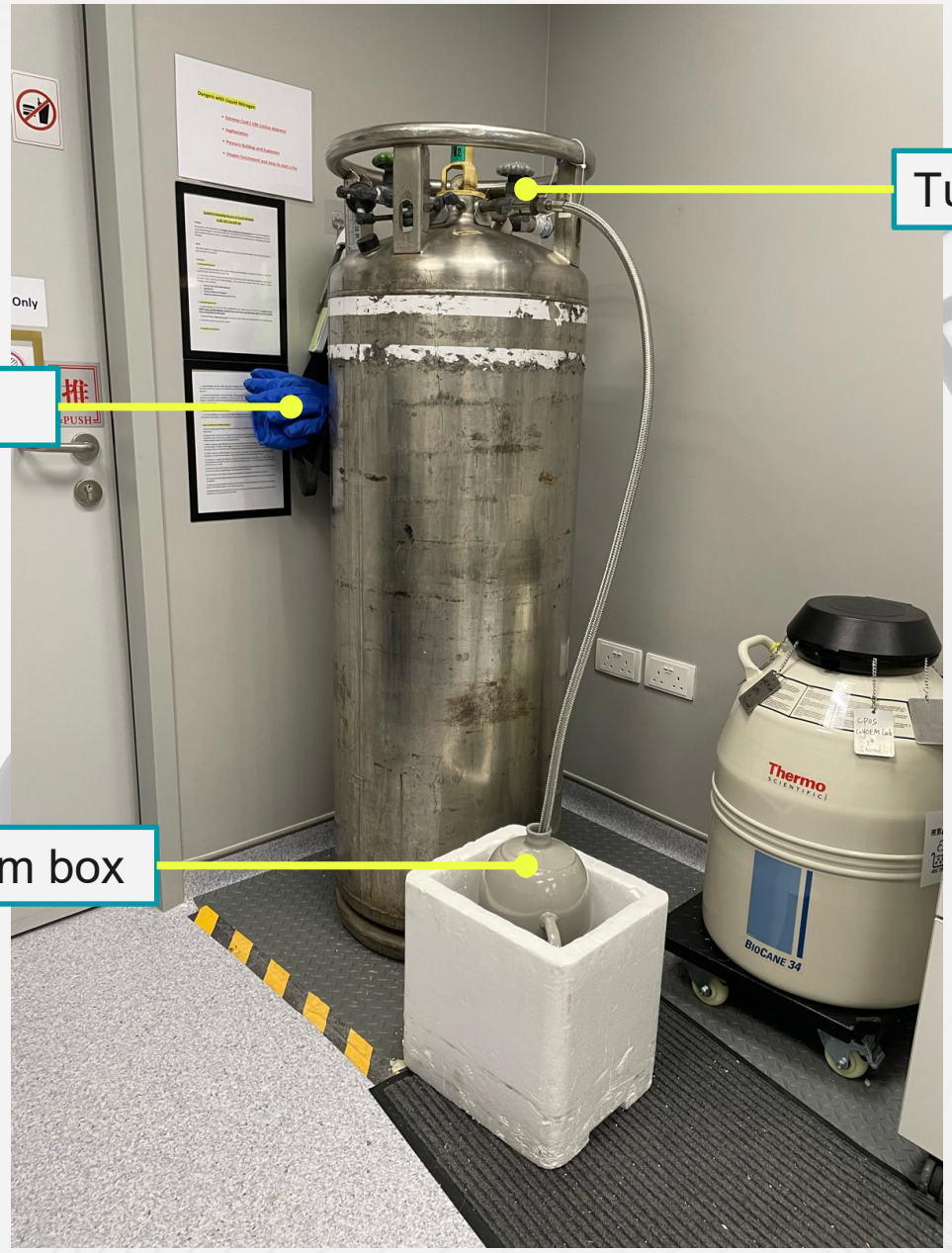
Dewar

Always put on the floor

Stainless steel vacuum bottle (with loosen cover)

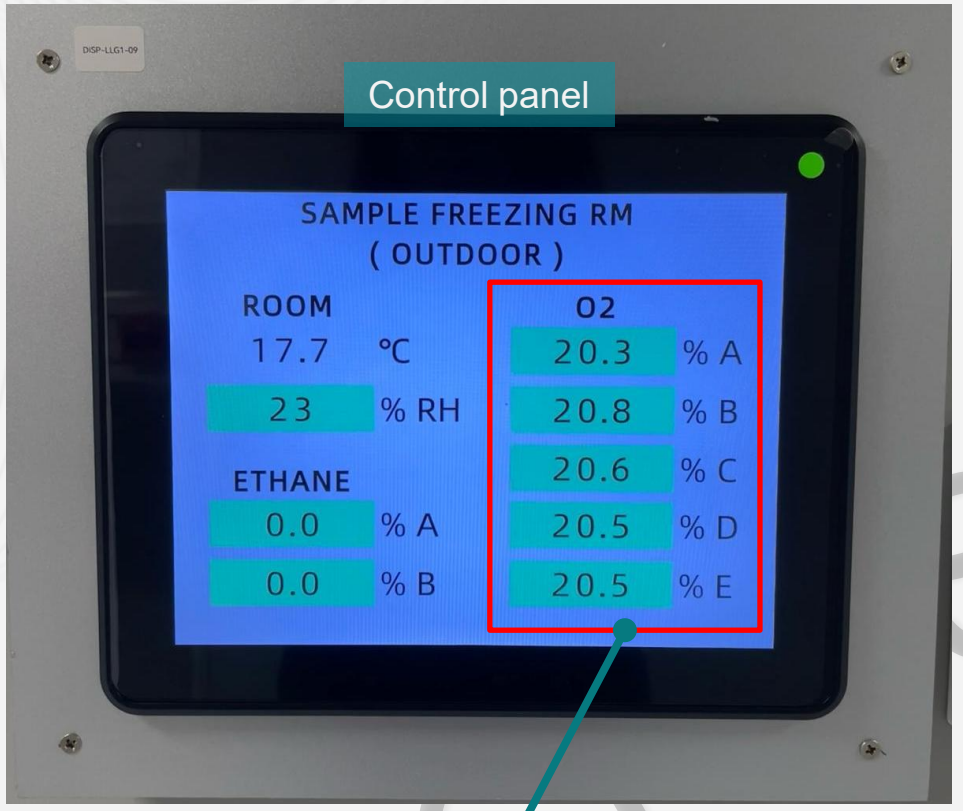
- **AM** Dewar: Available from 9 AM to 1 PM.
- **PM** Dewar: Available from 1:30 PM to 5:30 PM.
- **Night** Dewar: Available from 6 PM to 11 PM

Get Liquid Nitrogen



Protection

Oxygen Detector



Control panel

Oxygen sensor


Alarm example

If the O_2 VALUE shows red or alarm in the room, user should leave the room immediately and report it to staff.

Getting Access to Cryo–EM Lab

1.Submit the following forms

a) Sample Safety Information e-Form (for new PI/ new project)
https://hku.au1.qualtrics.com/jfe/form/SV_4U6w9XviII3F5gG

b) iLab Registration Form to enquiry.cpos@hku.hk and cc cryoem.cpos@hku.hk

https://info.cpos.hku.hk/wp-content/uploads/2025/07/iLab-User-Registration-Form-202507.xlsx

c) Training Application

Submit Training Request in iLab system

2.Training for 120kV

a)Submit training request in iLab

b)Training (with sample prepared, contact staff for booking)

Sample Information e-Form

iLab Registration Form

Charging

Training	HKU-Med	HKU
1st training	Free	$500
Re-training	$700	$1000

User should use the instrument **within 2 months** after training.

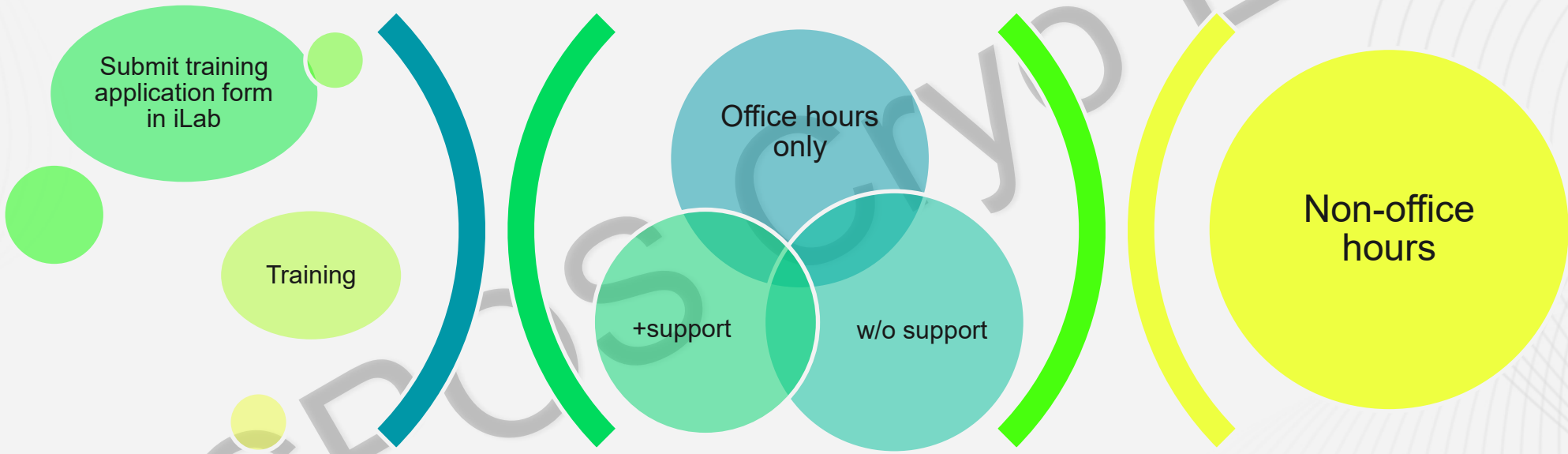
- If user has not booked within 2 months, **re-training** is required before using the instrument.

Usage	Min. usage / Session	HKU-Med	HKU
120kV	1 hours	$150 / hour	$160 / hour

Charge will be based on **(1) booking** or **(2) usage** whichever longer.
Same charge will be applied for no-show (not recommended).

User Type

- Do not transfer your booking session without notifying CPOS staff.
- Fill in correct information (e.g. usage time) in the logbook.



User type:

Training

Trained User

Mon to Fri:
9:30am to 12:30pm;
1:30pm to 5:30pm

Experienced User

Mon to Thu: 9:30am to 12:00am;
Fri: 9:30am to 5:30pm

Talos L120C TEM (120kV)

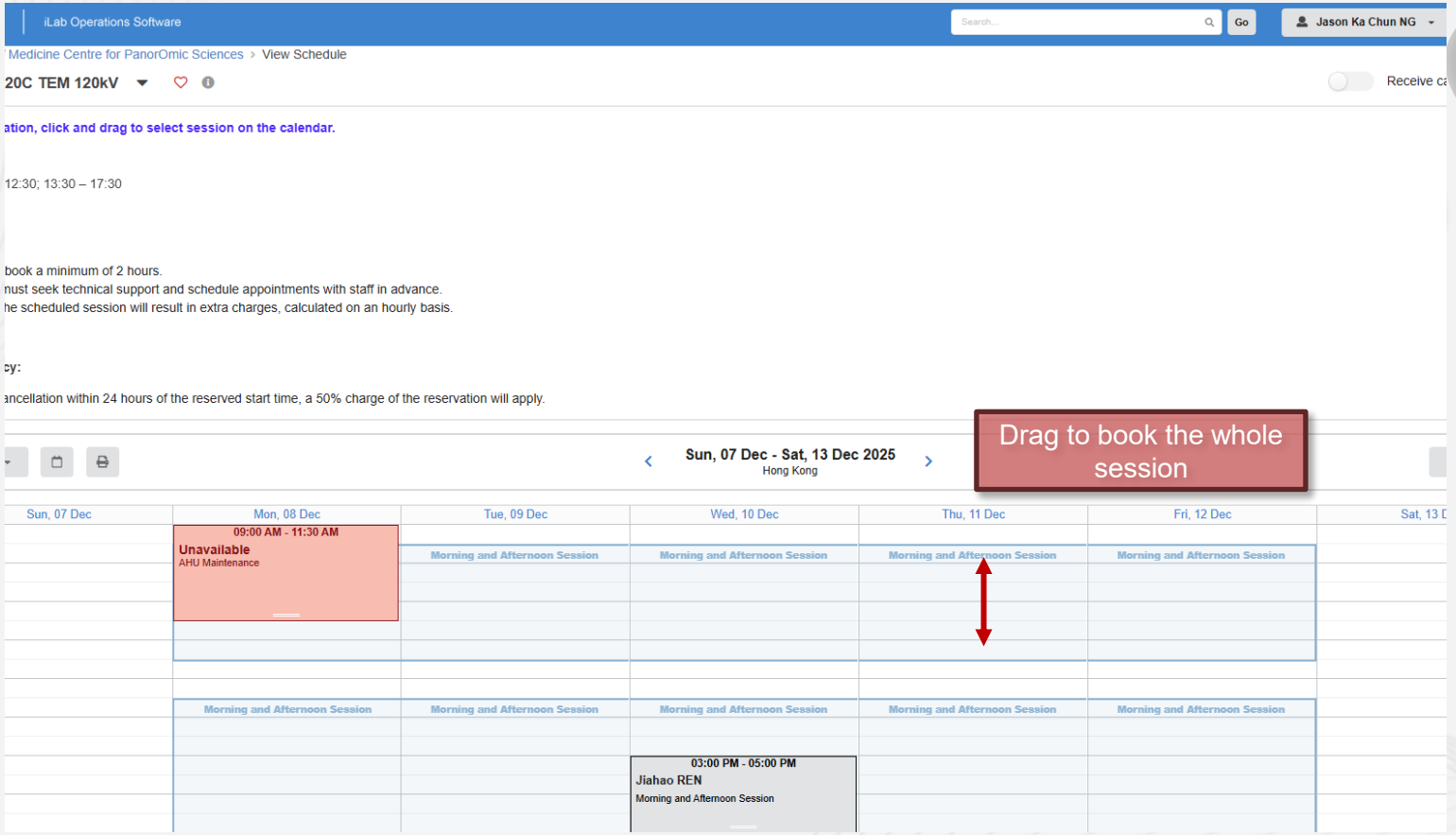
Booking Sessions

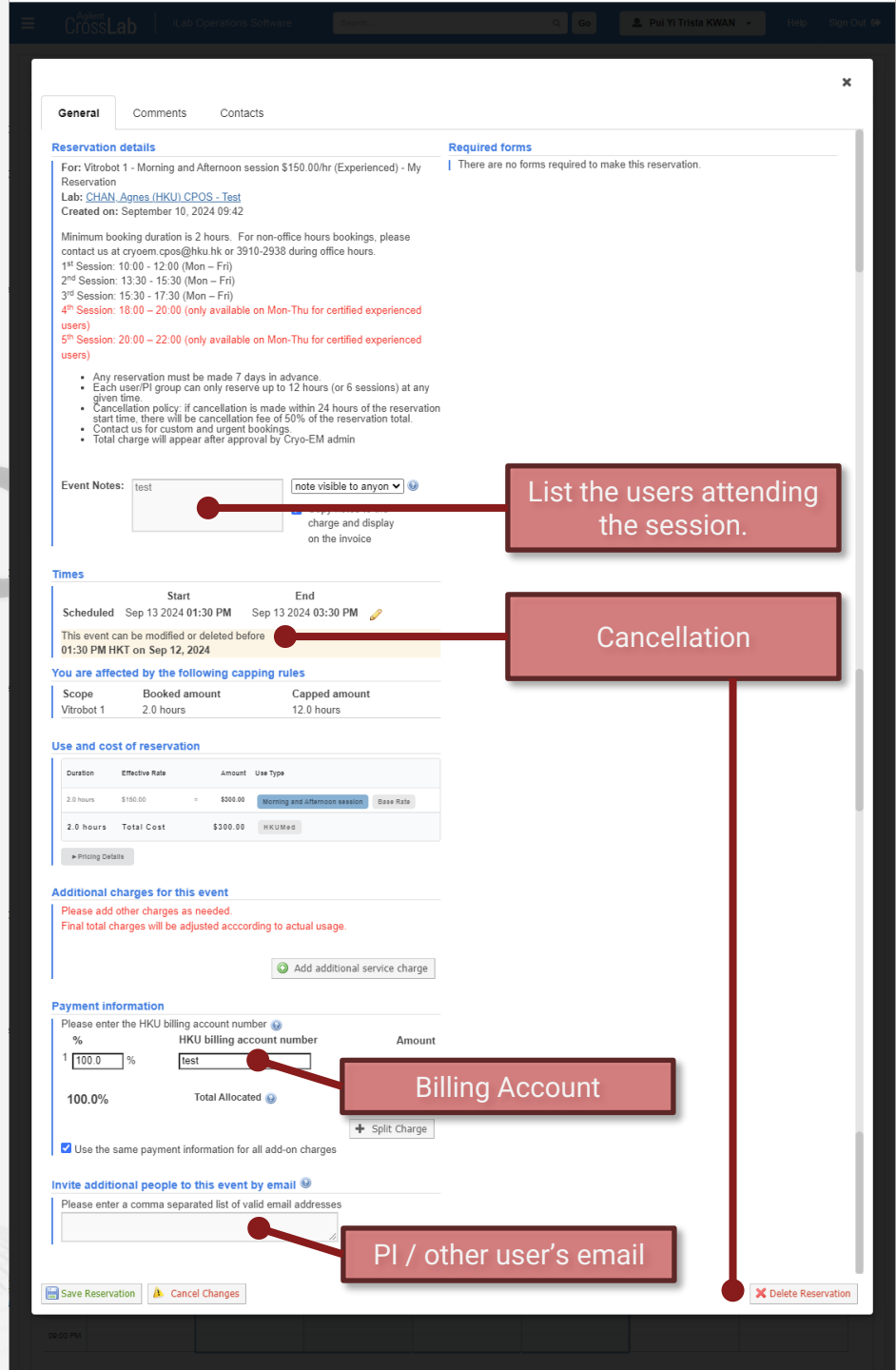
Office Hour	
Morning Session	9:30 am – 12:30 pm
Afternoon Session	1:30 pm – 5:30 pm

Minimum booking hours: 1 hour

Booking Policy

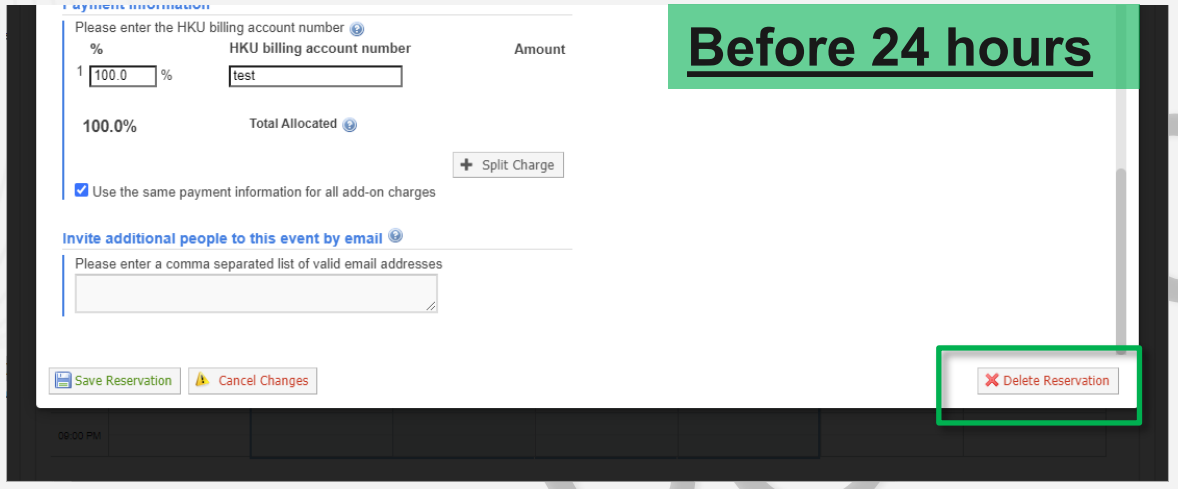
- Open for 28 days booking
- Card access: User can access the instrument on the booking date



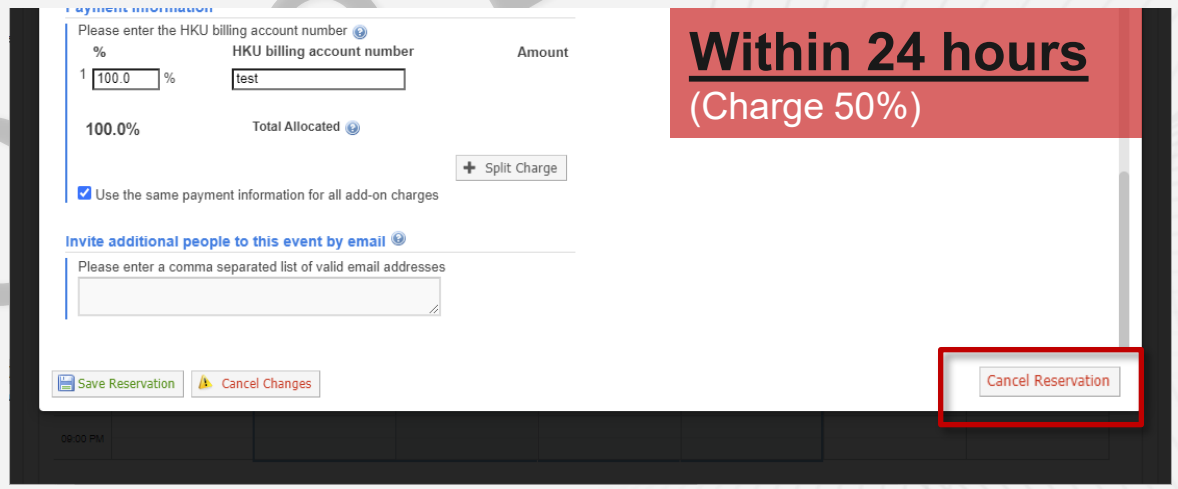


Cancellation Policy

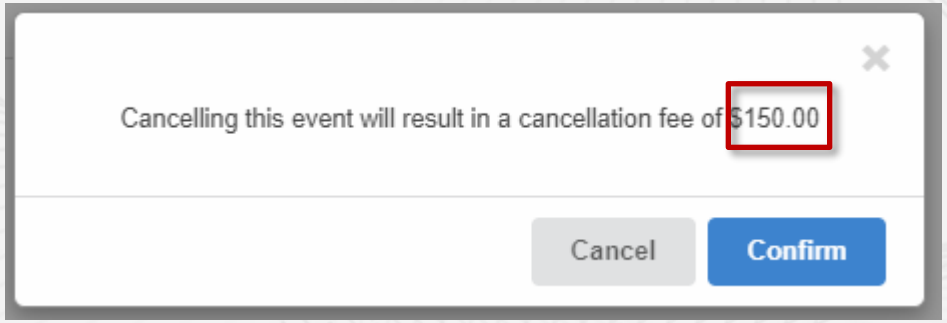
- Before 24 hours → Free cancellation
- Within 24 hours → 50% charge
- Session starts → 100% charge



Before 24 hours



Within 24 hours
(Charge 50%)



Easi-glow

Grid discharge treatment

Cryo EM

LKS Cryo-EM Laboratory
(Wet Lab)

Imaging and Flow
Cytometry Core
(L601, 6/F)

Easi-Glow (In Cryo-EM Lab)

- Glow discharge treatment → mild plasma clean →turns the grids to be hydrophilic
- Discharge the grid just before vitrification
- The protocol should be optimized
- NEVER click "SAVE PROGRAM SETTINGS"
- Orientation of the grid: The side of carbon film should face upward

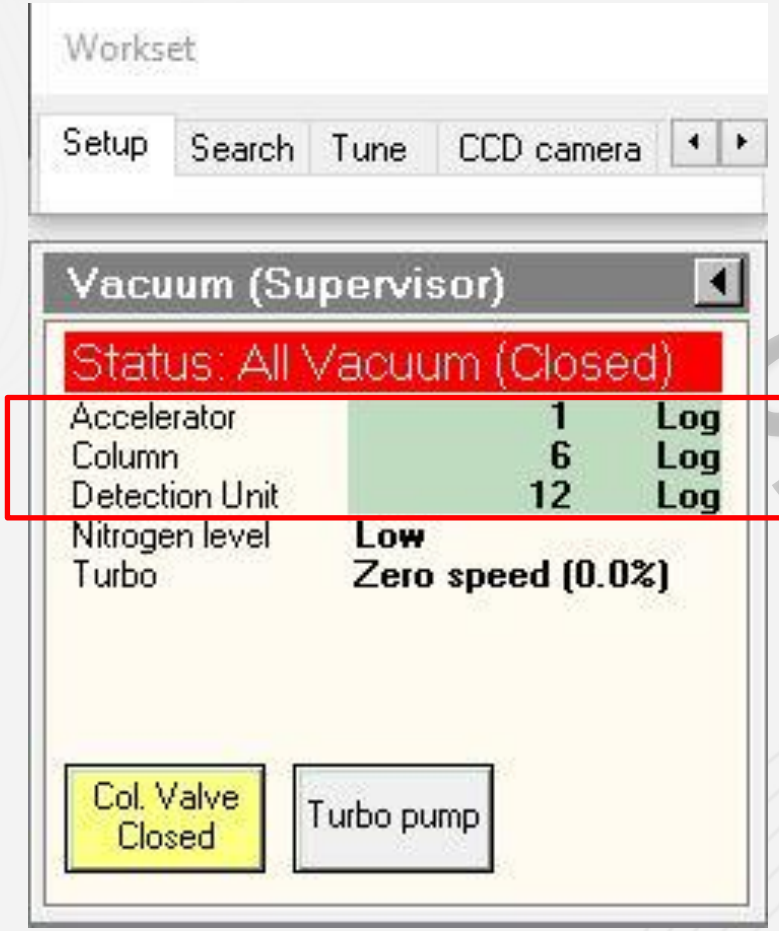
Standard Setting

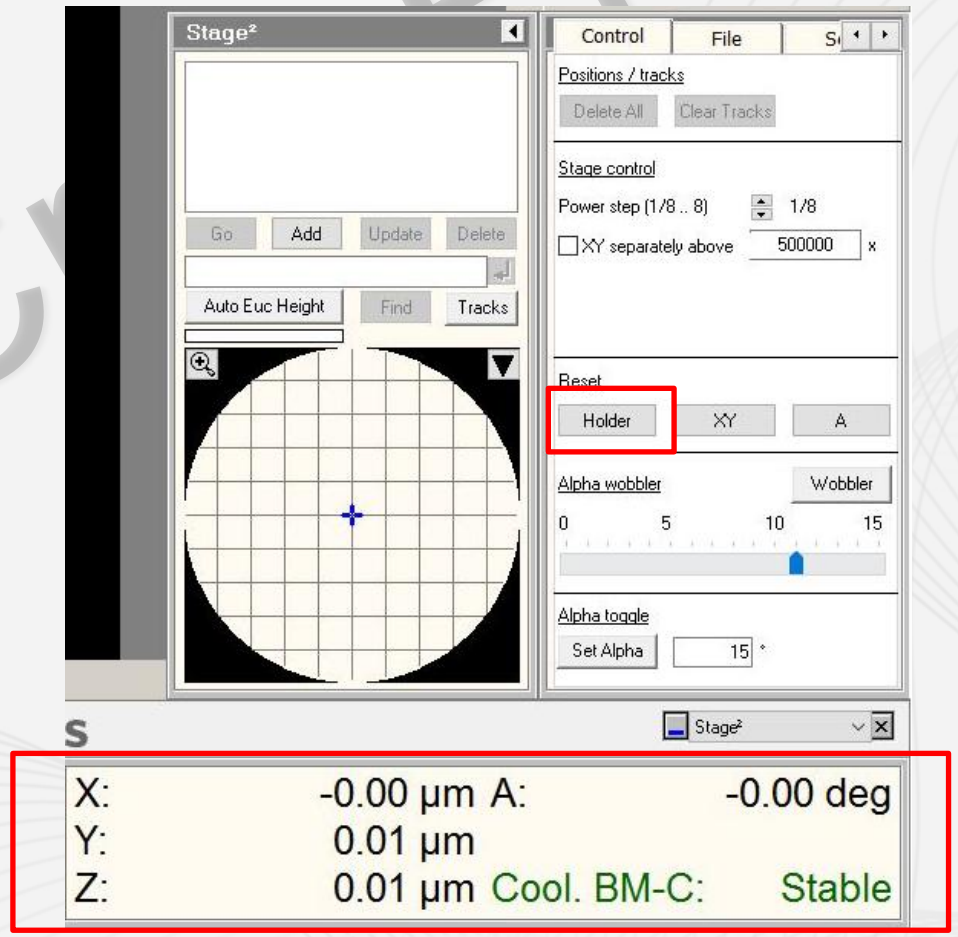
Pressure	0.39mBar
SET	15mA
GLOW	00:01:00
HOLD	00:00:10
Polarity	Negative

User should record their own setting after optimization

Preparation

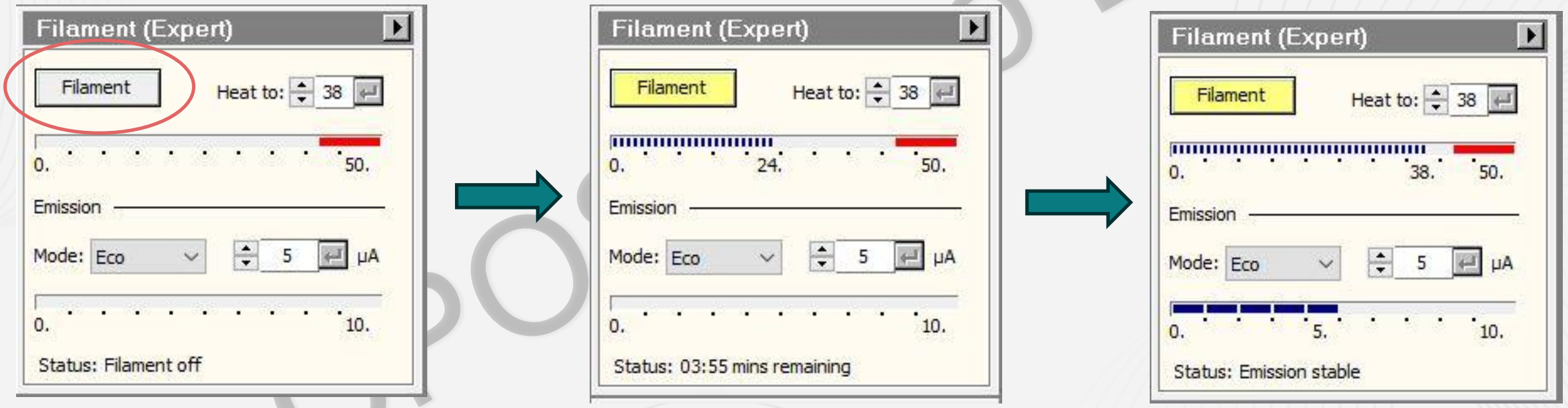
1: Check vacuum and stage is home





Preparation

2: Filament On（10 minutes）



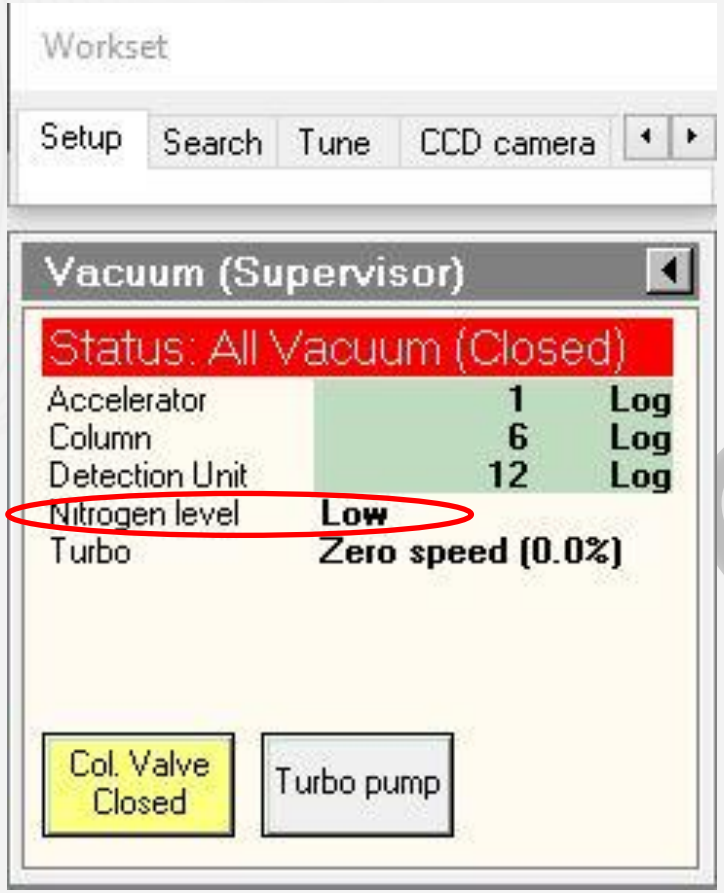
Preparation

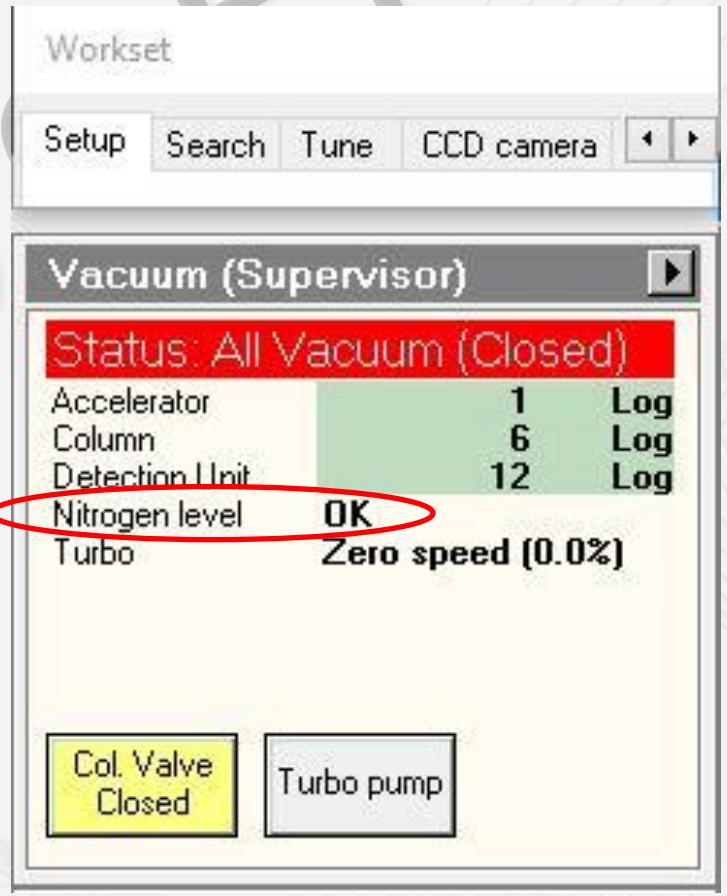
3: Filling LN2

Preparation

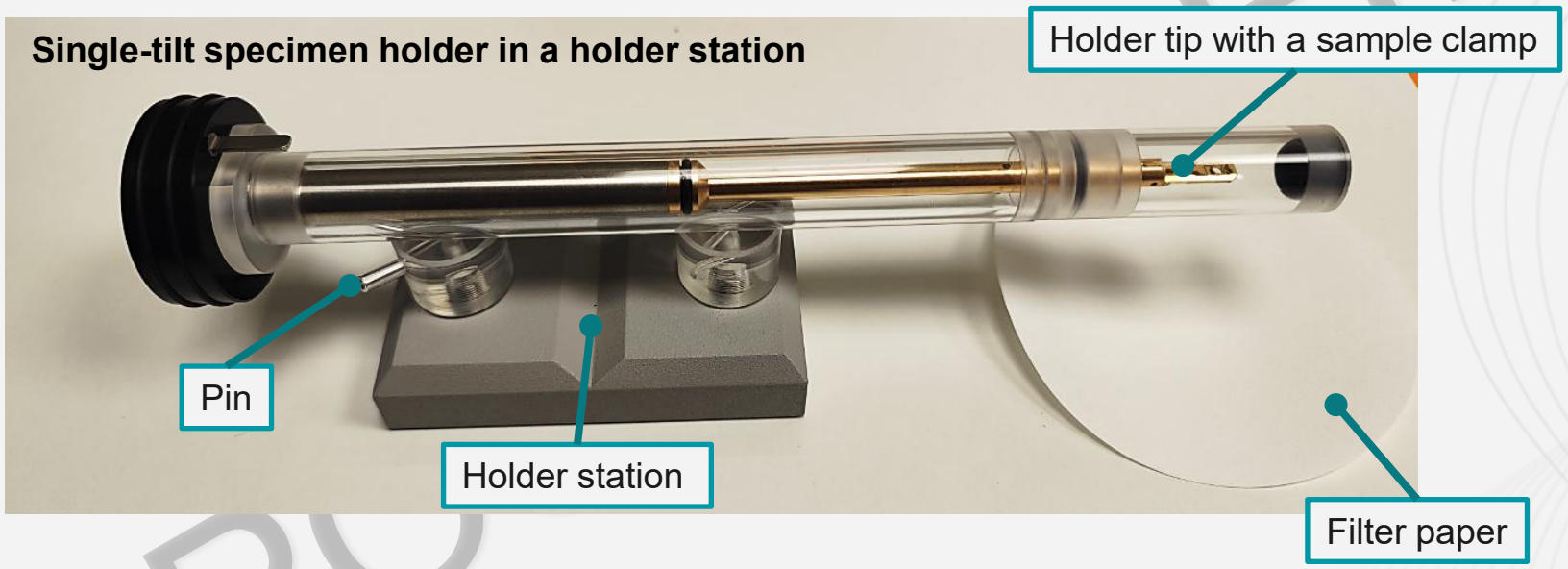
3: Filling LN2

When low level, refill LN2 (about 3hrs)



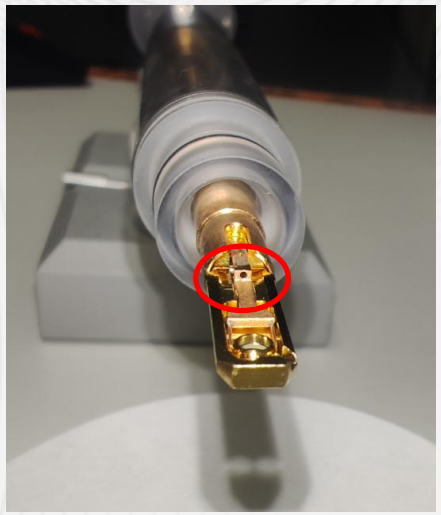


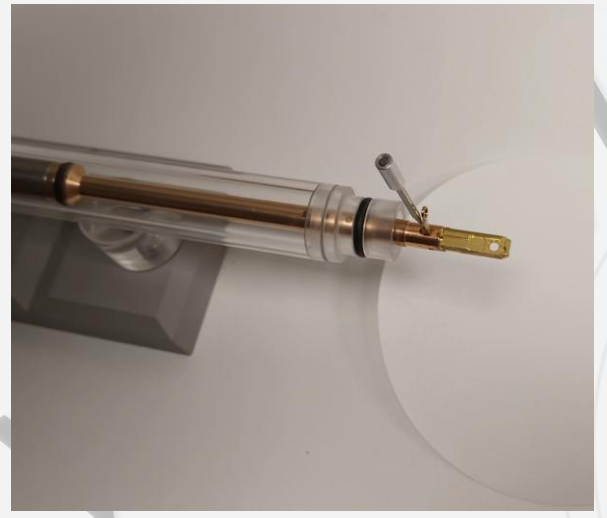
Loading Sample



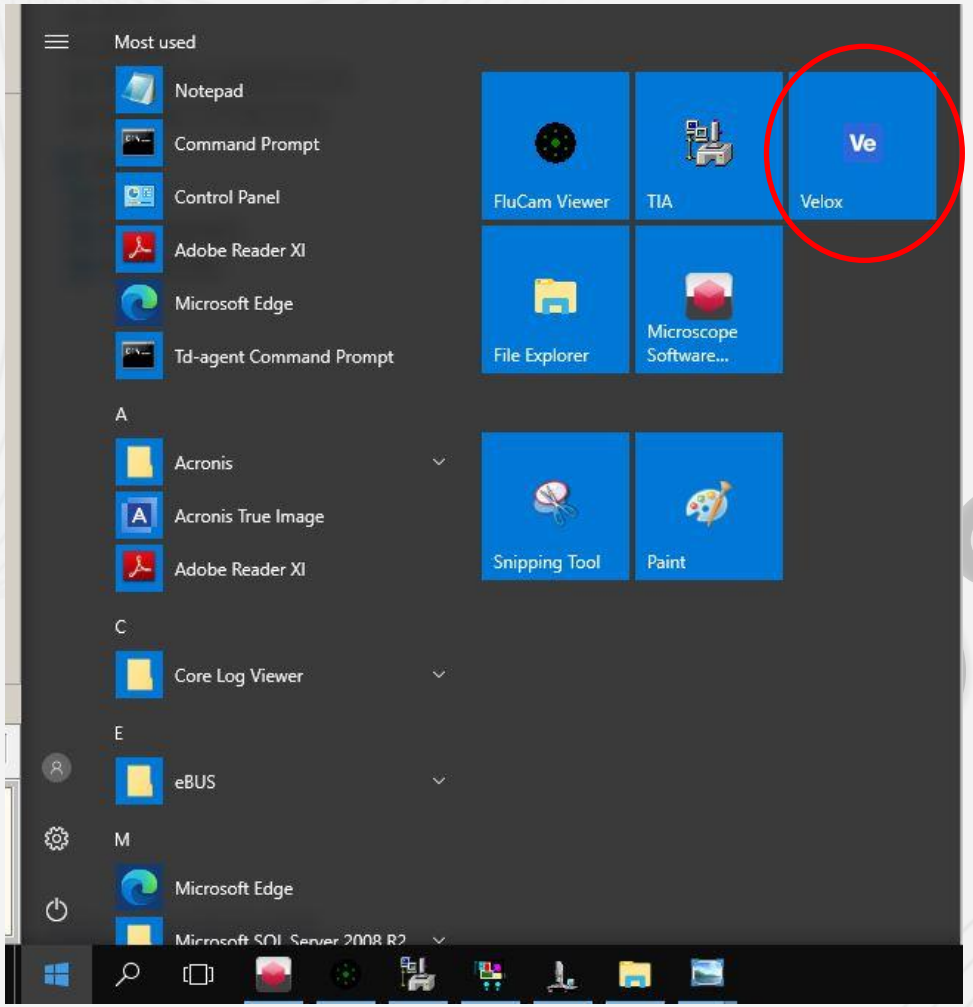
Loading Sample

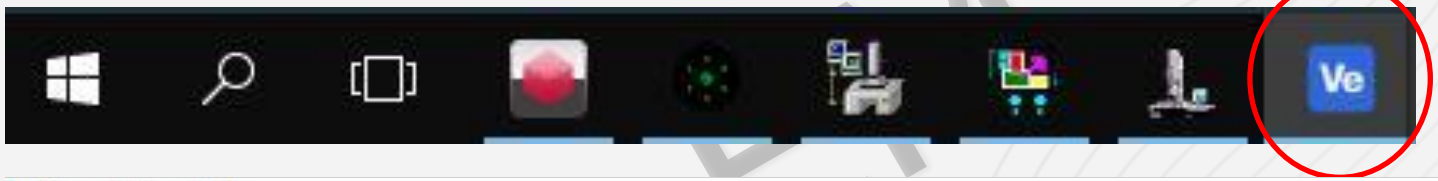
Loading Sample

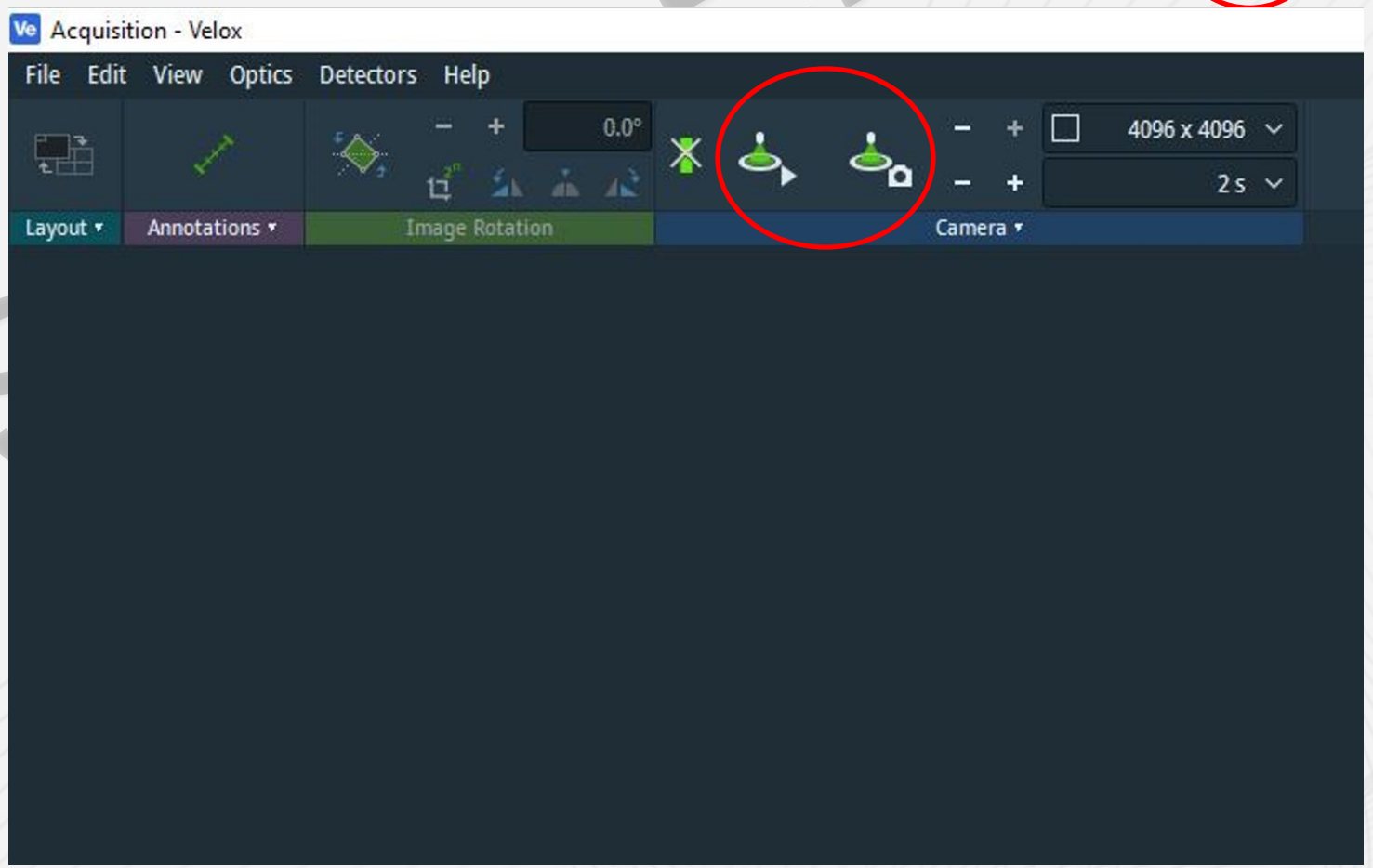




Beam Alignment and Image Acquisition

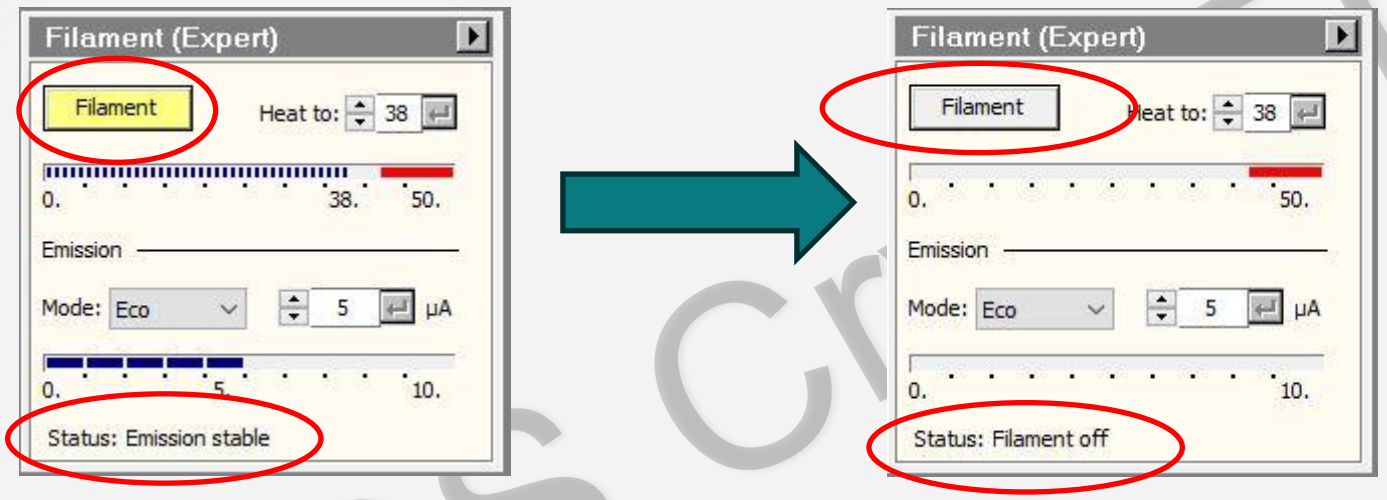






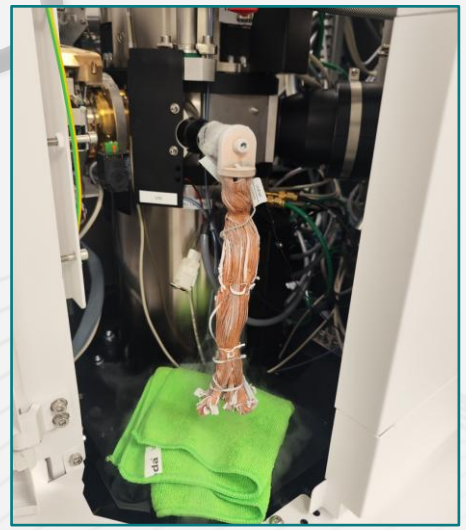
After Experiment

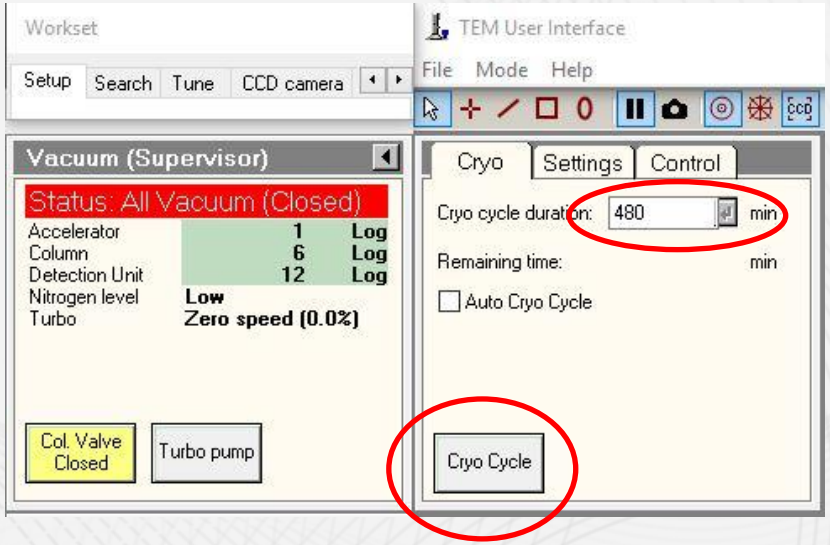
1: Filament off



2: Cryo Cycle (for users finished by 17:00)

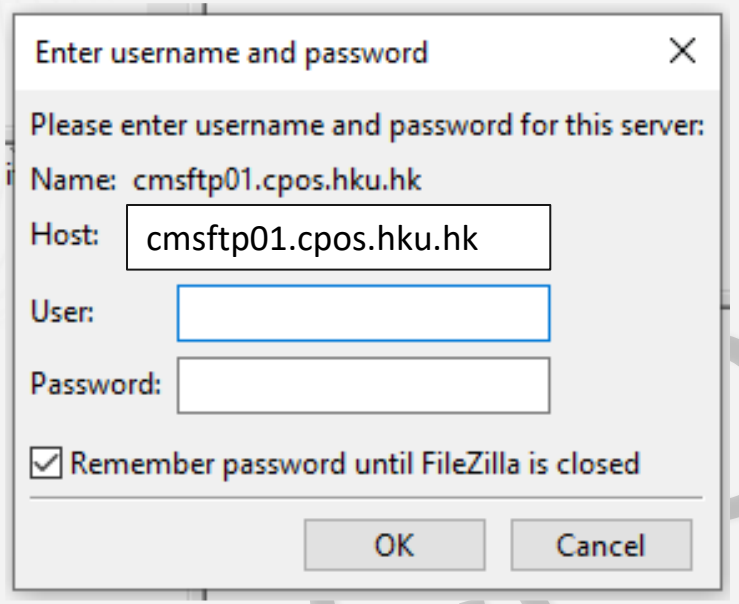
(1) Unload sample (Remember: home stage first)
(2) Take away LN2
(3) Click cryo cycle.





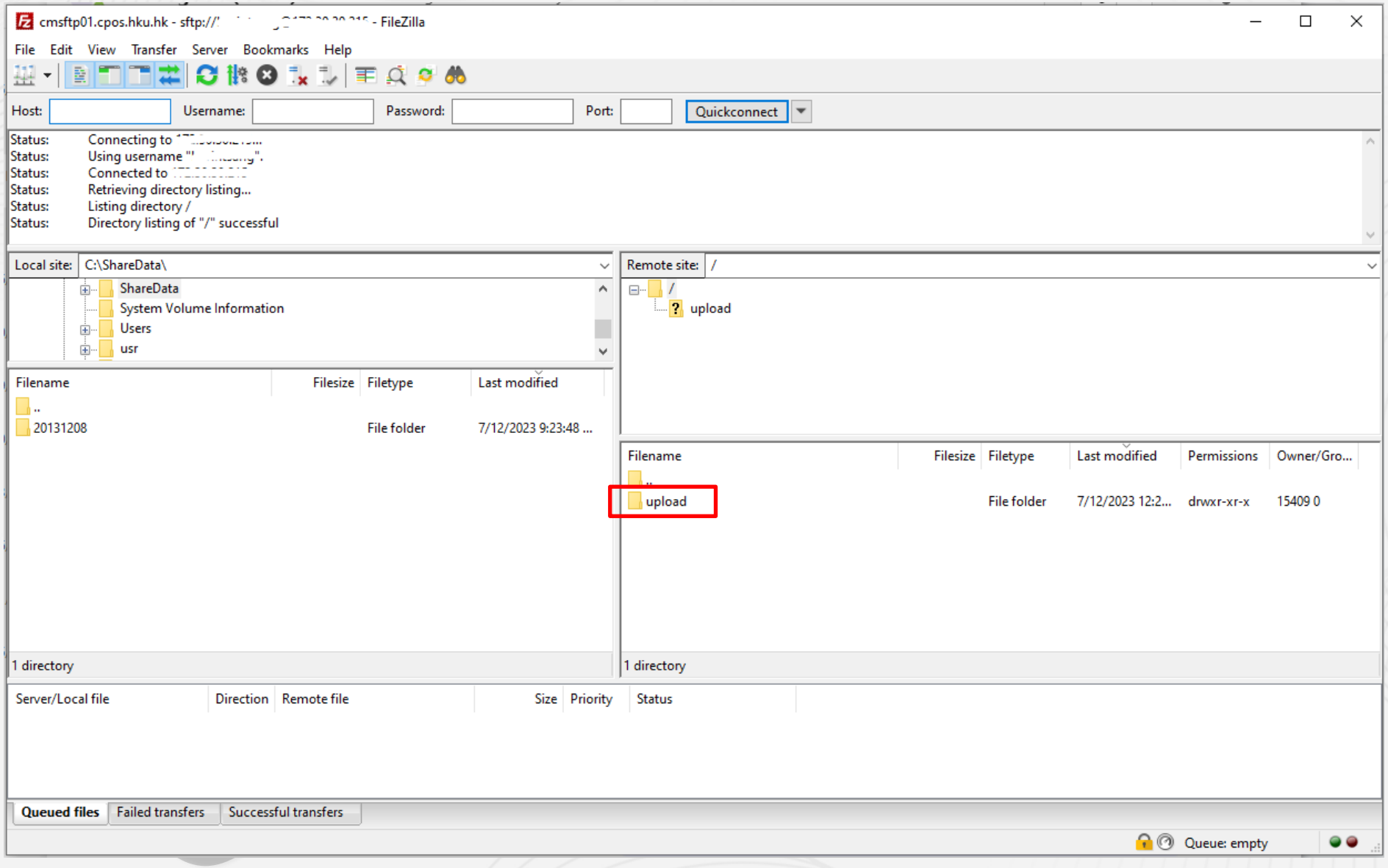
Data Transfer

- Transfer files in the software FileZilla.



For HPC user:
Please input your HPC ID and Password respectively.

For FTP user:
Please acquire the ID and Password from staff.



Your data in DMP server will only be kept for 7 days.
Expired data will be deleted without further notification.