Q3. How to apply an instrument?

A3. Before applying, users should fully read the instructions on ASCEM website. The following are only some key points.

Please find details here.

中央研究院冷凍電子顯微鏡設施
ASCEM *Academia Sinica Cryo-EM Facility*

| About | Access | CryoSample/Data | Training | People | Announcement | Research | Links | Chinese |

Key notes for CEM1

Online Booking
- Submit a "**Service Request**" on DAAIS Online Facility Reservation System, click **CEM1**.
- To follow the rules of the Inst. of Chem., every Mon., Tue. & Thur. afternoon can the staff assist users.

Data Collect
- Staff operation: max. 2 grids/hr. are limited for screening and 1 grid/hr. for data collection.
- Collected data files will be emailed to users.

Notes for samples

Grids must be delivered to **ASCEM at the Interdisciplinary Building B2** before the machine time. If the grids will be prepared by staff, then **2 days before** is required for the sample delivery.

Key notes for Vitrobot – CryoEM sample preparation

- Self-operation is open to certified users (need to take training courses).
- Request for staff operation (please book **Vitrobot2**).

Online Booking
- Submit a "**Service Request**" on DAAIS Online Facility Reservation System.
- User PI needs to approve the request after recieving a **system "notice email"**, then the applicant can use Vitrobot.

▸ Case (New cases , Disposed & Pending case , Not-closed cases , Closed cases , Integrated query)

Service Request - Disposed & Pending case

| | No. | Date of application | Applicant | PI | G |

Must Do
- Applicant needs to complete "Time & Charge Confirmation".

Academia Sinica Cryo-EM Center (ASCEM) 108.01.01起

	Facility/Equipment
Apply	ASCEM Training Course
Apply	CEM 1, JEM1400 Cryo-EM
Apply	CEM 1, JEM1400 Cryo-EM-old (111.01起停用)
Apply	CEM 2, FEI Tecnai F20 TEM-1
Apply	CEM 3, Talos Arctica
Apply	CEM 4, Titan Krios
Apply	FEI Vitrobot-2
Apply	FEI Vitrobot-3

Sample buffer recommendation

(1) Use hydrophilic buffer that most suitable for sample, low-salt concentration, better not to add surfactant, and better no sucrose or glycerol.

(2) Buffer viscosity will affect ice layer thickness, the more viscous the buffer when making the sample, the ice layer will be too thick or be empty.
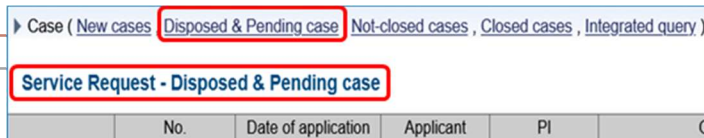
Key notes for CEM2

Online Booking
- Submit a "**Service Request**" on DAAIS Online Facility Reservation System, click **CEM2**.
- User PI needs to approve the request after recieving a **system "notice email"**, then the applicant can use CEM2.

Data Collect
- Time slots: (1) 09:00-12:00, (2) 14:00-17:00, (3) 00:00-24:00 (Only certified users can book for the non-working hours.)

▸ Case (New cases , Disposed & Pending case , Not-closed cases , Closed cases , Integrated query)

Service Request - Disposed & Pending case

	No.	Date of application	Applicant	PI	G

Must Do
- Applicant needs to complete "Time & Charge Confirmation".

Notes for samples
- Grids must be delivered to staff at least two days before the machine time.
- Applicant can be on site during the booked machine time for sample discussion.

Key notes for CEM3
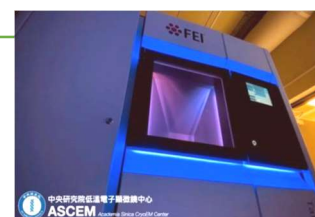
Cryo-EM sample prepare (Vitrobot)
- Contact staff, submit the "**Form of Grid Location**".
- Grids must be delivered to staff **two days before** the machine time. Damaged grids can't be clipped.

Online Booking
- Submit a "**Service Request**" on DAAIS Online Facility Reservation System, click **CEM3**.
- For the 1st time, apply for a training course also, **ASCEM Training Course → Talos Training (EPU).**

Data Collect
- Time slots: (1) 10:00-14:00 morning (2) 14:00-18:00 afternoon (3) 18:00-09:00 overnight data collection (Please set up by 17:30, staff will check parameters and allign machine.).

Other notes
(1) On the fly motion correction (default parameters) is applicable for overnight data collection. (Free, saving time and space ~1/25x)
(2) ASCEM hard disk space is limited (360TB), so back up data on your own soon. Raw Movies will be kept for ~2 months, and Motion corrected Micrographs ~4 months.

Online Booking

- Submit a "**Service Request**" on DAAIS Online Facility Reservation System, click **CEM4**.
- Grids must be delivered to facility staff at least **two working days** before the machine time. Damaged grids can't be clipped.
- Contact staff, submit the "**Grid Location Form**".

*Time required for data acquisition :	○ 1 Day ○ 2 Days (different grids / day) ○ 2 Days
*Prefer Schedule (Ex. When will the grid be ready? or week day / weekend?) :	
*My grid is ready for Krios data collection anytime (勾選 Yes 表示申請者了解 Session 可能會動態調整而提前進行) :	○ Yes (I understand the slot may be shift before the email notification) ○ Not yet

Data Collect

- In the "preferred schedule" field, you may provide the available or not available time. If not specified, Manager will schedule time by the order of case applicaiton.
- For the best use of machine time, Manager may dynamically adjust schedule.

Other notes

(1) On the fly motion correction (default parameters) is applicable.

(2) Due to the limited hard disk space, Krios can only keep Raw Movies for ~3 months, please back up soon on your own.