1   TS Talos F200X G2 STEM LEVEL 1 SOP

1.1   *VELOX SOFTWARE TROUBLESHOOTING*

1.1.1   Message error

When Velox is acquiring or processing large datasets, it might display the error message that it must close.

If this occurs, close Velox and reopen it. However, it will not let you use the software (SW) or save the data you collected during the acquisition.

The data is not deleted but will not reappear; data processes such as EDX spectra, annotations, profiles, etc., will not be saved.

Go to your folder in USER DATA (C:) to reopen the files.

1.1.2   Loss of EDX icons on TEM and STEM mode

Although rare, loss of communication between the EDS detector and Velox can occur, resulting in the EDS icons, View EDS and Acquire EDS disappearing from the Acquisition – Velox window.

To recover the lost icons in the Velox software, follow the next steps:

1) Close the Velox SW
2) Close the Microscope Launcher Software window by clicking the "stop" (■) button and wait until all open software is closed (TEM UI and FluCam)
3) Logout of the Windows OS on the MPC
4) Restart the session with the corresponding credentials.
5) Start the Microscope Launcher Software by clicking on "play" (►) button.
6) Wait for the TEMUI and FluCam software open, and then open Velox.

FEMR staff must restart the microscope PC (MPC) if these steps do not work. However, you may continue to image your sample(s) in TEM or STEM mode. Report the issue to FEMR staff via email or text immediately.
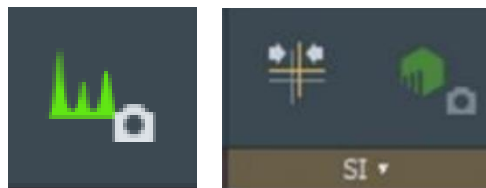

Figure 1. The loss of the View EDS and Acquire EDS icons after communication is lost between the EDS detector and Velox in TEM or STEM mode.

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1.2 VACUUM LOST

1.2.1 CETA 16M CMOS CAMERA (BM-C) IS STABLE (TEXT IS GREEN)

If you lose the vacuum when inserting or retracting the sample holder, remove the holder from the column and verify the camera status (Cool. BM-C: Stable). You can recover the vacuum if the text is green (Fig. 50),

Figure 2. If the text for Ceta 16M CMOS camera (BM-C) is green after losing the vacuum, it will be operational after recovering the vacuum.

To recover the column vacuum, select the Vacuum/HT tab>Vacuum (Supervisor)> (Click on the arrow) > Control > press the RECOVER or to "ALL VACUUM" button. *Do NOT press the Col. & Detect Vented button*. Column vacuum may take between 40 to 60 minutes to recover. Report this issue to FEMR staff.
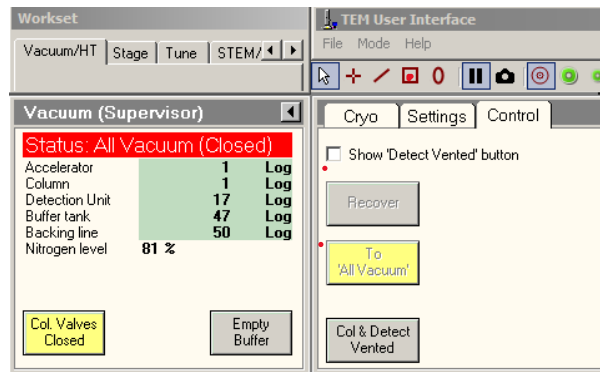

Figure 3. Control windows showing the Recover and To All Vacuum buttons. They will appear in black letters when the vacuum is lost; in this example, they are grey because the vacuum is stable.

1.2.2 CETA CAMERA ACTIVE (RED COLOR)

Although rare, vacuum loss can disable the CETA 16M CMOS camera (Cool. BM-C: Active; **Figure 2**). Only FEMR staff can recover the camera, and likely your session is ended. Confirm the vacuum is pumping down, log out of the MPC and write a comment in the logbook. Report the issue to FEMR staff via email or text immediately.

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1.3   INCREMENT OF "COLUMN LOG" VALUES

Always verify the column vacuum values when using the microscope. If the column vacuum is >10 Log or goes down to ~1 or 2 Log but increases during a short period, it may indicate contamination of the O-ring on the sample rod.

If this is the case, retract the sample rod and verify the O-ring is free of debris, e.g., hair, fibre, dust, etc. (**Figure *4***). Use the binocular microscope to view and remove any debris. Please contact FEMR staff if the O-ring must be regreased with Fomblin.
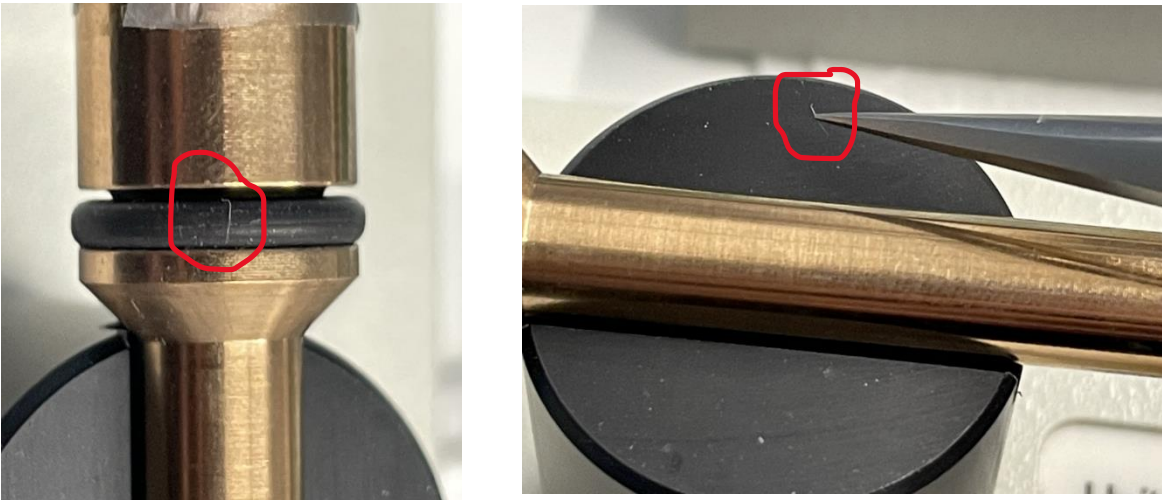

Figure 4. Example of dust on the O-ring causing a small vacuum leak in the airlock of the TEM.

1.4   ULTRA-VNC SOFTWARE FOR REMOTE CONNECTION BY FEMR STAFF

If you require technical assistance, call, text, or email FEMR staff at any time; however, most issues can be resolved remotely by FEMR staff by following the instructions below.

Ensure the UltraVNC software is connected in the MPC and the SPC. Confirm this by locating the "eye" icon at the right-hand corner of the taskbar. If the icon is yellow, there is a remote connection. If the icon is blue, the server is ready to connect, and FEMR staff can log in remotely.

If the icon does not appear, go to the taskbar or search for the UltraVNC software with the **blue** icon and click on it.
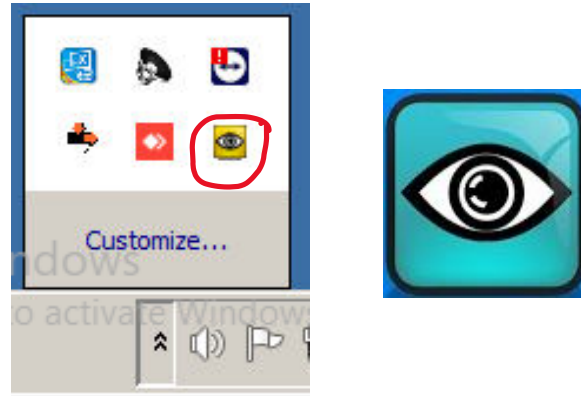
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Figure 5. UltraVNC software icons as shown in the taskbar. Left (blue: server is ready to receive remote connections, yellow: already connected. If the icon s not visible, it's not activated. The UltraVNC icon shown on the right must be opened to activate the server.

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