

# Beamline Handbook

Version 3 – 02.11.2021

## BL14.1

Symptom	Check	Fix	2. Check
Sample mounting doesn't start (error loading)	Did you remember to turn the CATS robot ON?	Turn the robot on. Either use the button on the rightmost panel of <i>MXCuBE</i> or go to the menu "Show SC-details".  In case the sample icons on which you can right-click " <i>mount</i> " remain greyed out, restart <i>MXCuBE</i> and then turn the robot on.	Try mounting your sample again.
Sample mounting doesn't start	Is the robotic tool automatically drying?	Wait, until the dry and soak process is finished and repeat the mount again	Operation shall perform properly
Diffraction images are either completely white or completely black.	1) Check on the panel if the experimental hutch beam shutter is open? 2) Check on the panel if the Main Beam shutter is open? 3) Check on the panel if the beam shutters are unlocked? (see Status BESSY II) 4) Did you optimize the beam?	1) Beam shutters unlocked and Main Beam shutter open: open experimental hutch beam shutter. 2) Beam shutters unlocked and main beam shutter closed: open Main Beam shutter, wait 5-10 minutes, then open Experimental Hutch Beam shutter (only possible for local users, otherwise call user support/techn. call service). Then do a beam location search at the MD2 PC. 3) If the beam shutters are locked, watch the messages on the info terminal. 4) If no, optimize the beam intensity from the right panel of <i>MXCuBE</i> and do a beam location at the MD2 PC.	Take a test image and look for the beam stop shadow and/or diffraction. Open the image in <i>adxv</i> and check the total number of counts on the image.

<p>The data collection or sample characterization has been added to a queue and started by "Collect Queue", but no images are being recorded.</p>	<p>Does the queue say "waiting for input"?</p>	<p>Click "continue".</p>	<p>Is the data being collected now? If yes, proceed normally. If not, delete all previous commands from the queue and try again.</p>
<p>The detector did not move to the resolution or to the detector distance that was set for the data collection.</p>	<p>Did you check the maximum resolution and/or the detector distance limits that are available on this beamline? <i>Note: The maximum resolution depends on the selected energy.</i></p>	<p>Move your mouse over the "Set to" field at the resolution panel and you get an info box of the limits available for the beamline at this wavelength → Set the resolution according to these limits.</p>	<p>Try collecting data again.</p>
<p>Problems with backing up data, e.g. drive not mounted, backup not running or too slow.</p>	<p>Did you check that the format of your hard drive is suitable for our beamlines? (NTFS)</p>	<p>Reformat your hard drive, e.g. on your laptop.</p>	<p>Try mounting your hard drive again and starting the backup. <i>Note: only disks formatted as NTFS are supported.</i> If you do not have a suitable disk and you cannot reformat, ask your local contact for a HZB-MX disk on a loan basis.</p>
<p>Forgot the backup command?</p>	<p>Connect your hard drive connected to the computer named SAVE1.</p>	<p>Run the following command: px-dbs &lt;data&gt; &lt;hard drive&gt; 5, e.g. <i>px-dbs /141dat/pxrdat/px12345/20200303/ /media/myHardDrive/ 5</i></p>	
<p>A diffraction plan has been accidentally added to the queue.</p>		<p>Uncheck the "Characterisation" button when setting up the queue for collecting test images. <i>Note: this needs to be done after every restart of MXCuBE</i></p>	
<p>Data collection stopped in the middle of a data set. No more</p>		<p>Wait for the goniometer to finish its rotation, then press the button "Stop", then record a single image.</p>	<p>Once the single image has been recorded and written successfully and the detector cover has been closed after data collection,</p>

images are being written. The detector cover stays open.		<i>Note: please do not press the "Stop" button, while the goniometer is still rotating.</i>	you should be able to resume normal operation.