University of Arizona CAMECA SX100

Taking Pictures

Step 1 Get the image you want to take a picture of on the SEM screen

Step 2 If necessary: Change to the SEM tab

	Select this Tal
General Ø Vacuum 🍄Beam 🖴 SEM	_□× ()WDS 1,Position
Vacuum (Pa) Gun 2.3 10 ⁻⁶	Light µscope
Column 4.0 10 ⁻⁵	Mode Reflected Transmitted
Sample Exchange	Polarizer Off On Set Offset
Beam SEM Setups Load Save	Field of View (µm) 502 ▼
Beam HV (kV) 25 ▼ 1 (nA) 20.00 ▼	Quality Low Med. High User
Size (µm)	1024*768 💌 0.640 s 💌
Scanning 0ff <u>On</u> Raster Length (μm) 66.1355 💌	SEM1 SE Adjust
WDS Peak Ratemeter Sp1 Sp TAP LPET	2 Sp3 Sp4 Sp5
Sound 0n/0ff ▼ 28343 ∰ 74307 Volume (%) 0 ▼ 74307 <	7 🗺 38805 🗺 33075 🗺 43500 🗺
Fast Acquisition WDS Spectrum Profiles Images 0 Mosaic 1*1 Mosaic 1*1 0	Quanti Steps Time 2'30'' DTime
L	

Step 3 Set the frame time to 15.36 seconds (or longer)

eral Ø Vacuum Beam ESEM ØWDS Position Eisplay cquisition Acquisition 1 4 12 Resolution 1024'768 Frame Time 0.640 s 0.320 s	Press this Button
0.640 s 1.280 s 15380 s 10.720 s 30.720 s 1.440 s	Then
LUT Mode Live image Image 1 - Label 1	Select 15.36 s from the drop
Waveform Distance Zoom Ratemeter Rotation Reset All ideo Channel 1 2 Signal BSE Z Adjust	uown menu.
Gain Low Med. High	

Note: 15.36 is the recommended frame time for our usual resolution of 1024 x 768. Other frame times may be better at other resolutions.

Step 4 Wait until the picture on the SEM screen has been completely scanned.

Then: Freeze the SEM Picture

Acquisition [1 4 [12]	Resolution 1024*768	Frame Time 15	.360 s 💌	
VS1				Click th
BSE Z				Checkbe
Display				
	_			
		Mode Live image		
	ſ	Image I - Lapel I	-	
	VS1	Save & Display		
Waveform Distance	Zoom	Rotation Reset	All	
Video				
Video Channel 12	Signal BSE Z 💌 Adjust	BSE Gain Low Med	High	
Video Channel <u>1</u> 2 Contrast Manu Auto	Signal BSEZ ▼ Adjust In Offset Manu Auto	BSE Gain Low Med. DC Auto		

Step 5 Save the raw Image File

SX Control Image: SX Control General Image: SEM Image: SEM	
VS1 BSE Z	
Mode Live image Image 1 - Label 1	Press this
Save & Display Waveform Distance Zoom Ratemeter Rotation Reset All	Button
Video Channel 1 2 Signal BSE Z Adjust Gain Low Med. High	
Contrast Manu Auto In Offset Manu Auto DC Auto Off	
Brightness Manu Auto Coupling AC DC Polarisation Grad Bias	

Then:



In the pop-up window.

Step 7 Wait for the picture to show up in the Results screen.

Step 8 Unfreeze the SEM picture:

The second secon			Unclick th
US1 BSE Z			Checkbox
Display			
		Mode Live image	
	VS1		
Waveform Distance	Zoom	Rotation Reset All	
Video			
Video Channel 12	Signal BSE Z 💌 Adjust	BSE Gain Low Med. High	
Video Channel 1 2 Contrast Manu Auto	Signal BSE Z 💌 Adjust	BSE Gain Low Med. High DC Auto Off	

Step 9 Change the Frame Time back to 0.64 seconds.

ieral /9 Vacuum 🏛 Beam 🛛 🛤 🕻 (JWDS 🎵 Position 👘 🖉 🎩 🏻 💻 🖉	Press this
cquisition Acquisition 1 4 12 Resolution 1024*768 ▼ Frame Time 15.360 s ▼ 0.320 s 0.020 s <t< th=""><th>Button</th></t<>	Button
VS1 1.280 s 15.360 s 30.720 s 61.440 s	Then
LUT Mode Live image	Select
Image 1 - Label 1	0.640 s
V	trom the
Waveform Distance Zoom Ratemeter Rotation Reset All	drop down
Waveform Distance Zoom Ratemeter Rotation Reset All R	from the drop down menu.