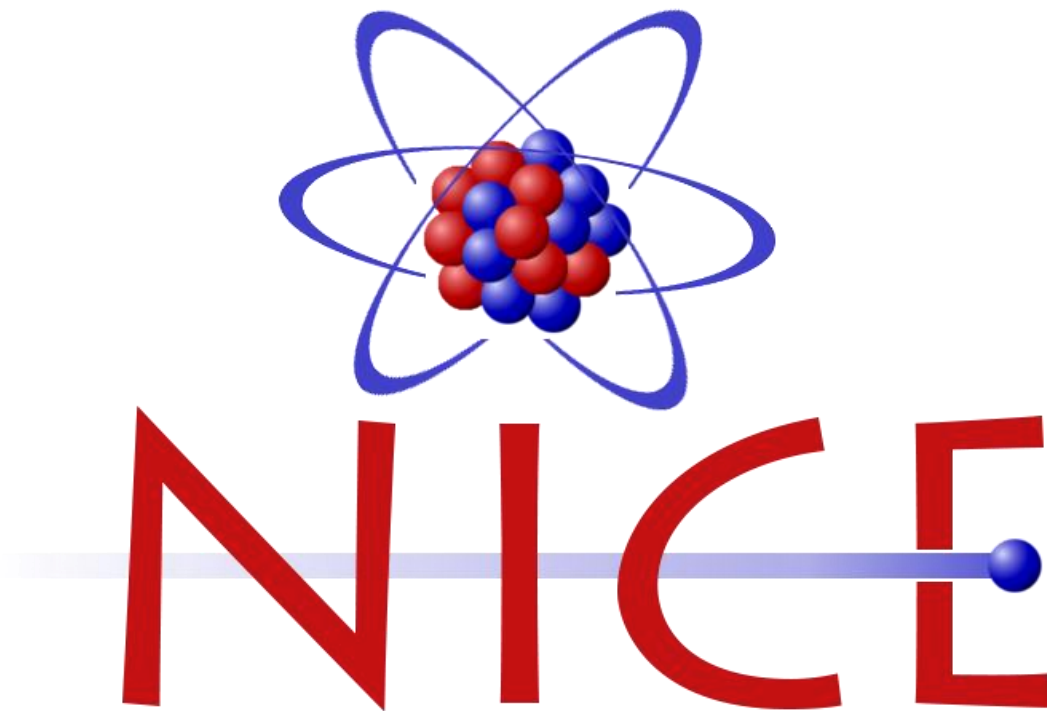


NICE Instrument Control Environment



<https://www.nist.gov/ncnr/nicesoftware/nice-help>

- Experiment->New Experiment
Edit title and description, press **Create New Experiment** button.

NICE Client (Alt-C)

File View Experiment Window Help Console Settings

MACS - Triple Axis Mode (Simulated) (Expe... nonims0) **Submit Bug** **On** Reactor Power:100.0%, 22.0MW Cold Source:4.6PSI, 55.0K **IDLE** **Pause** **Stop**

Create New Experiment

Title: 2025 Summer School

☐ Has Proposal (IMS) ID:

Import from IMS: **Import**

Description: NCNR 2025 Summer School

Keywords (' , ' separated):

Participants:

Name	ORCID	Email
No content in table		

Add **Remove** **Add email to NICE contacts**

NICE Contact Emails:

Local Contact:

Data Publishing: ☒ normal ☐ deferred ☐ proprietary

Path:

☐ Copy files, from common, on creation

Create New Experiment **Cancel**

- Window->Sample Table

Press **Add Sample** button. Edit name and description in the sample table.
Use **Taxonomy** tab to add predefined properties such as mass.

Sample Table

File View Experiment Window Help

MACS - Triple Axis Mode (Simulated) (Exp... nonims1) Submit Bug On Reactor Power:100.0%, 22.0MW Cold Source:4.6PSI, 55.0K ? IDLE Pause Stop

Sample Table Taxonomy

Name Data Type Units Description Default Value Add Prope...

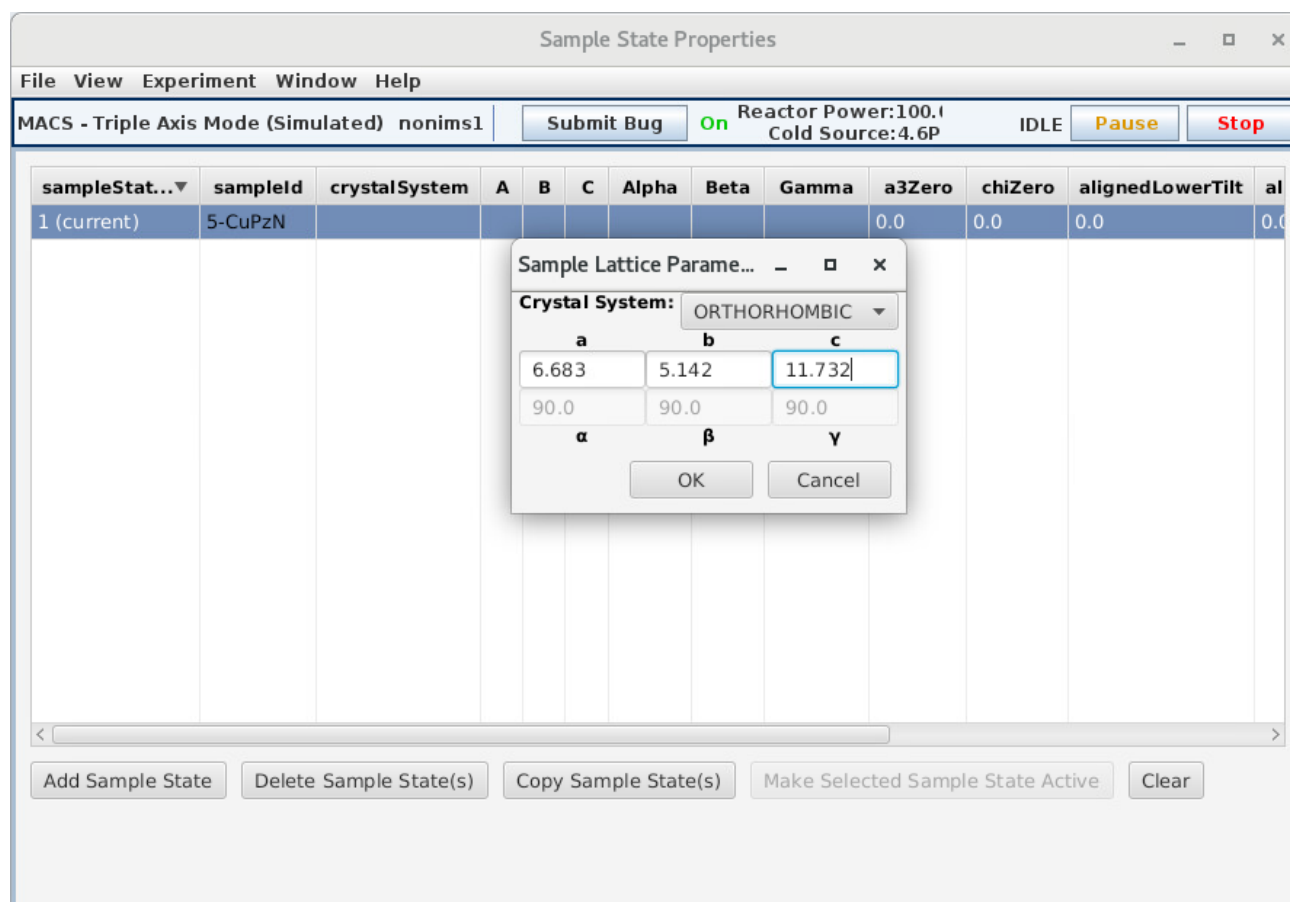
String

localID	name	description	mass (g)	UUID
5 (current)	CuPzN	.D spin-1/2 AFM Chain	1.0	79bacacf-af4d-4990-bba7-0c6fda98fd57

Add Sample Delete Sample(s) Copy Sample(s) Import Samples Export Samples Make Selected Sample Active Remove All Samples

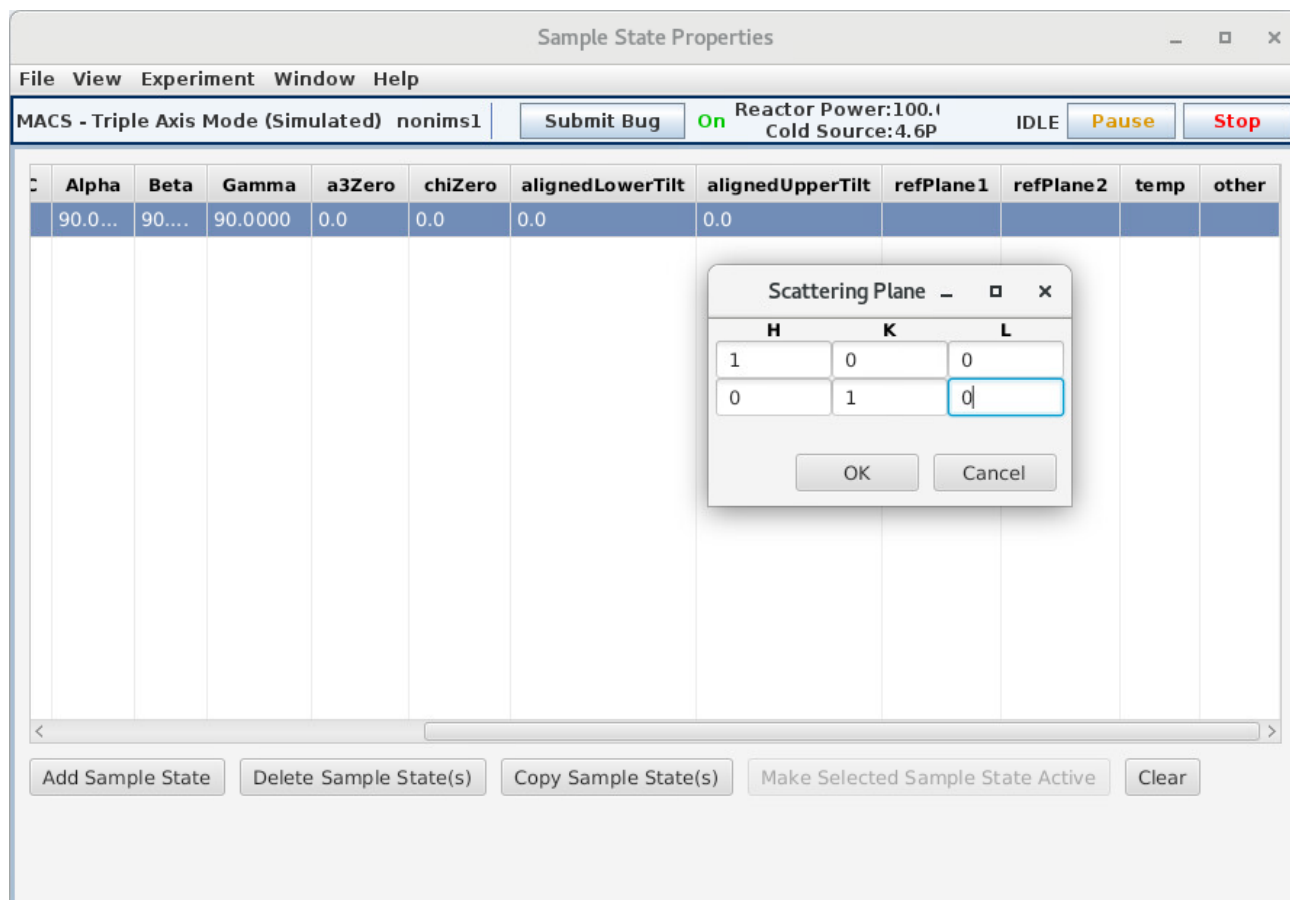
- Window->Sample State Properties

Press **Add Sample State** button. Edit lattice parameters by clicking on one of the lattice parameter fields. Edit scattering plane by clicking on Refplane1 or Refplane2.



- Window->Sample State Properties

Press **Add Sample State** button. Edit lattice parameters by clicking on one of the lattice parameter fields. Edit scattering plane by clicking on Refplane1 or Refplane2.



- Window->Sample Alignment

Select the first reflection (-2,0,0). Move Ei/Ef if current instrument energy is not at desired value (5 meV).

Sample Alignment

File View Experiment Window Help

MACS - Triple Axis Mode (Simulated) (Experiment - 2023 Summer School): nonims1 Submit Bug ... >> On Reactor Power:100.0%, 22.0MW Cold Source:4.6PSI, 55.0K IDLE Pause Stop

State - Sample 1 - CuPzN (5) Copy Sample State Open Sample State Panel

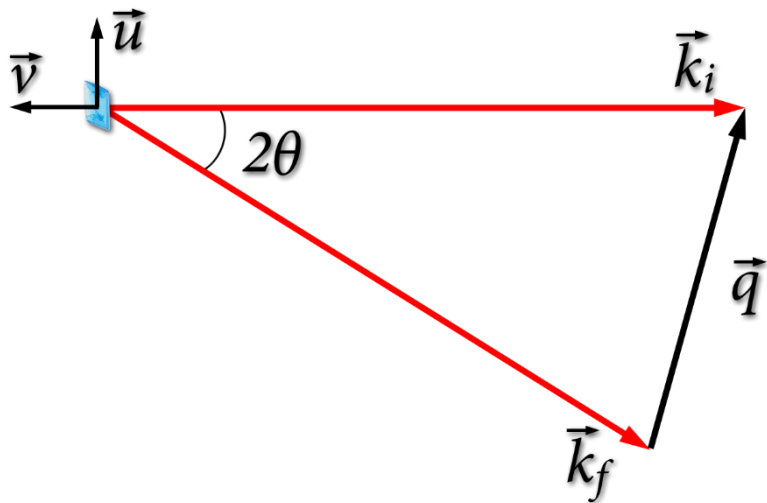
Sample State Parameters
 ss.a3Zero: 0°
 ss.alignedLowerTilt: -0.0096°
 ss.alignedUpperTilt: 0°
 a: 6.6830 Å b: 5.1420 Å c: 11.7320 Å
 α: 90.0000° β: 90.0000° γ: 90.0000°
 HKL1: 1.00, 0.00, 0.00
 HKL2: 0.00, 1.00, 0.00
 Modify Lattice Modify Scattering Plane

Server State
 A3.zero: 70.0000°
 ei: 5.0000 meV
 ef: 4.9999 meV
 smpLltilt: 0.0019°
 smpLutilt: -0.0096°
 A3: -37.2390°
 A4: -74.4930°
 kidney: -14.4931°

Sample Alignment Info
 PTAI Mode: ☒ AUTO ☐ MANUAL
 PTAI: 3 Update PTAI
 Scattering Direction: auto Update Scattering Dir

Reflecti...	State - ...	H	K	L	Obs. A3	Obs. A4	Energy	Scatt. ...	Calc. A3	Calc. A4	Kidney	PTAI	Alt. Sca...	Alt. Cal...	Alt. Cal...	Alt. PTAI	Alt. Kid...
0	1 - CuP...	-2.00	0.00	0.00	15.7725	15.5450	5.0000	-1	-37.2465	-74.4930	-14.4931	3	1	-142.7535	74.4930	20	-1.5068

Move A4 to -74.4930, (ID: 0)
 Refinement A3 for ID: 0
 Update Sample Lower Tilt to Server Value of: 0.0019°
 Add Reflection Delete Reflection(s)
 Reflection Finder Search 1st Reflection
 Align Tilts for ID: 0
 Update Sample Upper Tilt to Server Value of: -0.0096°
 Move A4/A3 to -74.4930, -37.2465, (ID: 0)
 Refine Lattice for ID: 0
 Update Sample A3 Zero to Server Value of: 70.0000°
 Update Reflection Energy to (ID: 0) Value of: 5.00
☐ Current Sample Reflections only



Refine HKL Reflection #0, H:-2.0000 K:0 L:0

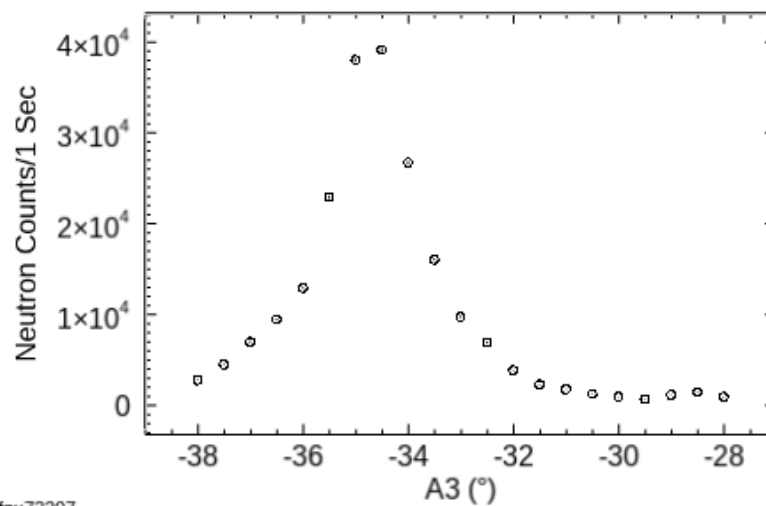
	start	end	step	range	center	# points
A3	-47.2390	-27.2390	1.0000	20.0000	-37.2390	21

TIME: 1.0 ☐ Move to Fit

Current Values
 a4: -74.4930°
 a3: -37.2390°

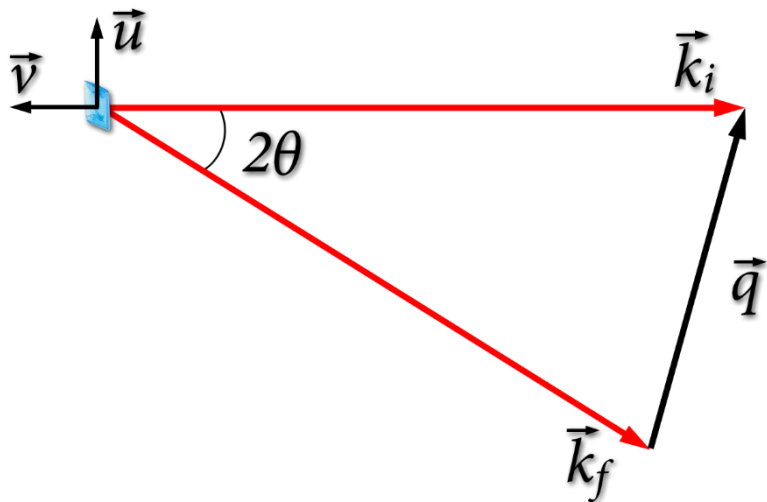
Warnings / Errors:

spec det=ptai



fpx72207

rocking scan



Refine HKL Reflection #0, H:-2.0000 K:0 L:0

Refine A3 Align Tilts Refine Lattice

	start	end	step	range	center	# points
A4	-77.4930	-71.4930	0.3000	6.0000	-74.4930	21
A3	-38.7390	-35.7390	0.1500	3.0000	-37.2390	21

TIME: 1.0 ☒ Move to Fit Run FindPeak

Current Values
 a4: -74.4930°
 a3: -37.2390°

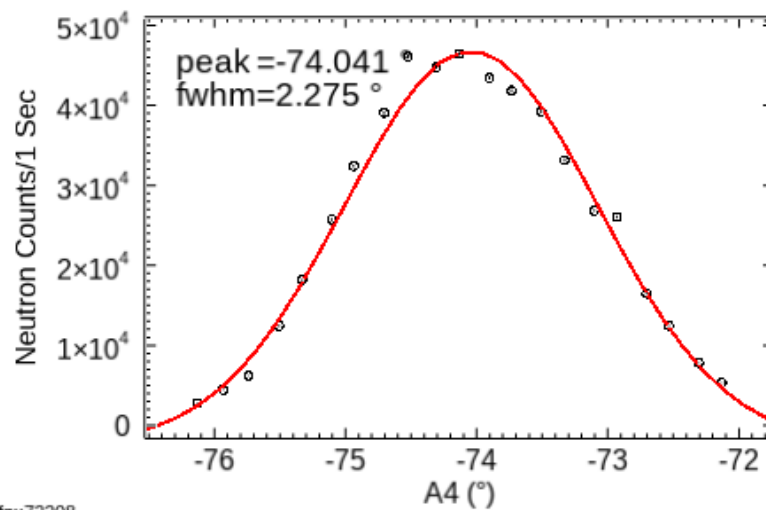
Set Obs. A3/A4 to Current Values Move A4 To Fit Move A4/A3 To Fit

Warnings / Errors:

Dimension	Current Lattice	DSpacing NaN X Conversion Factor	Refined Lattice
<input checked="" type="checkbox"/> a	a: 6.6830		a: NaN Å
<input checked="" type="checkbox"/> b	b: 5.1420		b: NaN Å
<input type="checkbox"/> c	c: 11.7320		c: 11.7320 Å

Update Lattice Redefine A3

spec det=ptai



fp72208

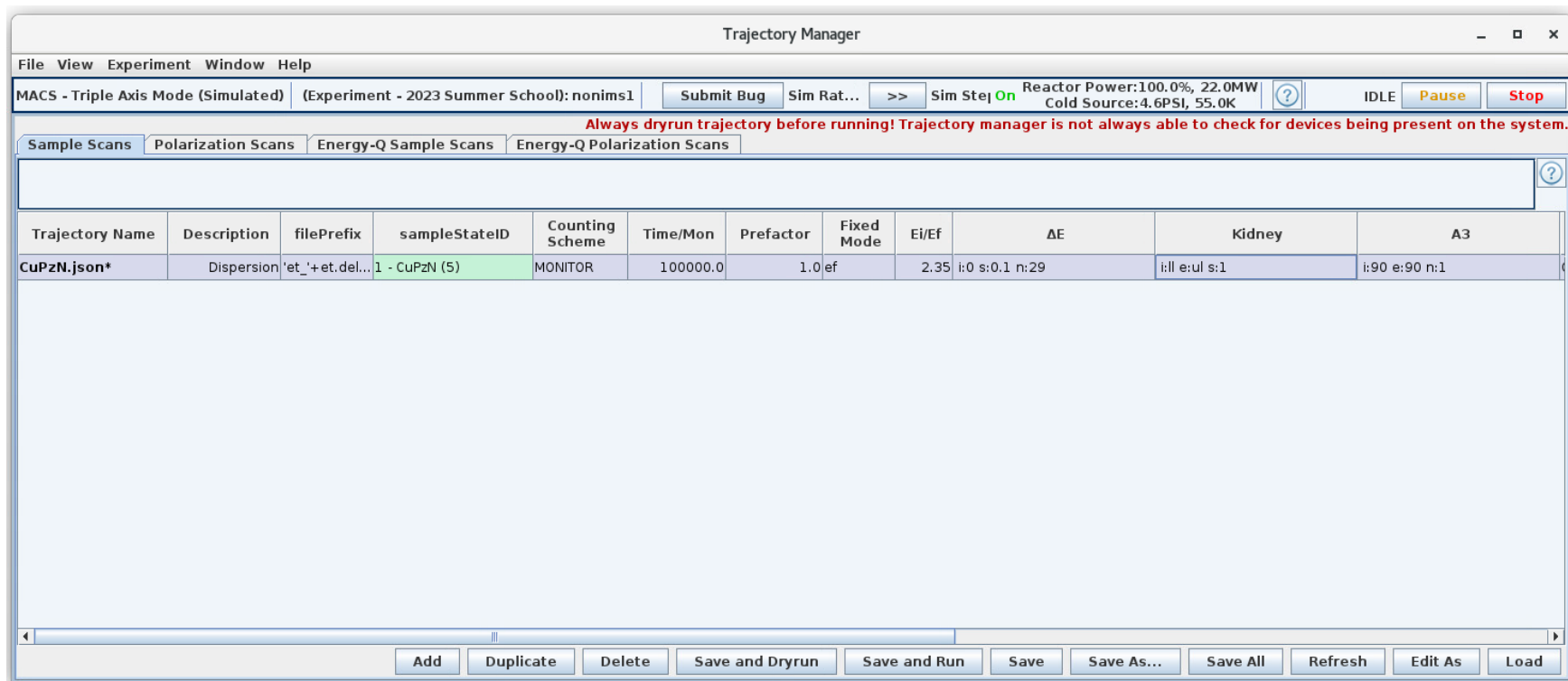
$\theta/2\theta$ scan

- Window->Trajectory Manager

In **Sample Scans** tab, press **Add** button to create a new trajectory.

Press **Save As** button to change the trajectory name.

Press **Save and Dryrun** to dryrun.



Trajectory Manager

File View Experiment Window Help

MACS - Triple Axis Mode (Simulated) (Experiment - 2023 Summer School): nonims1 Submit Bug Sim Rat... >> Sim Step On Reactor Power:100.0%, 22.0MW Cold Source:4.6PSI, 55.0K ? IDLE Pause Stop

Always dryrun trajectory before running! Trajectory manager is not always able to check for devices being present on the system.

Sample Scans Polarization Scans Energy-Q Sample Scans Energy-Q Polarization Scans

Trajectory Name	Description	filePrefix	sampleStateID	Counting Scheme	Time/Mon	Prefactor	Fixed Mode	Ei/Ef	ΔE	Kidney	A3
CuPzN.json*	Dispersion	'et_'+et.del...	1 - CuPzN (5)	MONITOR	100000.0	1.0	ef	2.35	i:0 s:0.1 n:29	i:ll e:ul s:1	i:90 e:90 n:1

Add Duplicate Delete Save and Dryrun Save and Run Save Save As... Save All Refresh Edit As Load