
ESRF
The European Synchrotron

daiquiri

web based UI framework for data acquisition and beamline control

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Software Engineer / BCU (UI Coordinator)

What is daiquiri?

A modular *web* based UI framework for data acquisition and beamline control

Does not depend on the scan engine

- **Actors / scan data interface**

Does not depend on the controls system

- **Thin hardware layer**

Daiquiri Projects

daiquiri

python server

flask rest
socketio

daiquiri-ui

javascript ui

react
redux

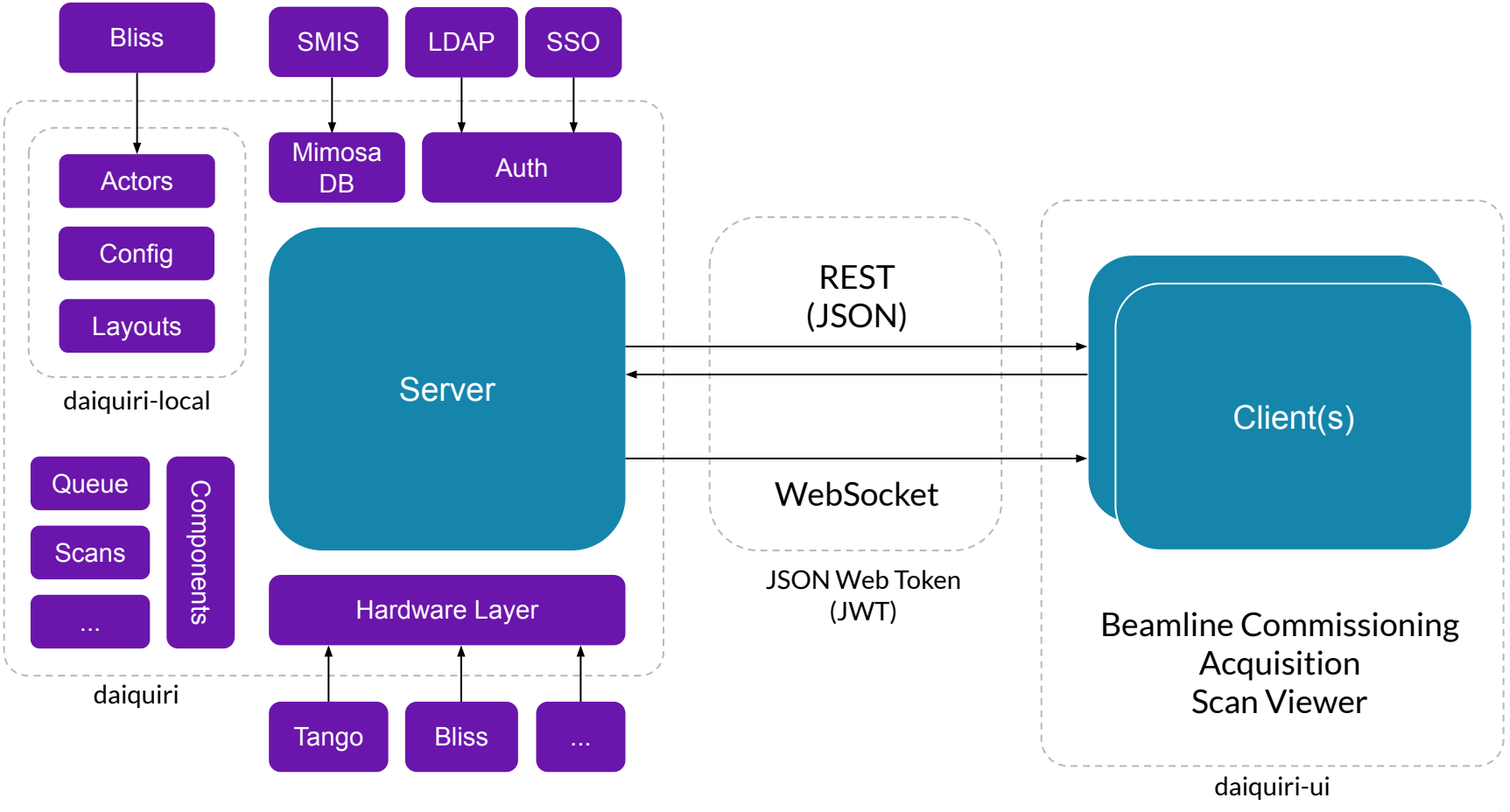
daiquiri-local

local beamline specific implementation

cookiecutter project

wrapper scans
config files

Architecture



Concepts - Acquisition client

Authentication / authorisation

- **Know who is logged in and whether to elevate privileges**
  - Limit access to specific hardware, scans, layouts to staff
- **Because a session is selected can automatically enforce data policy**

Multiple sessions can be logged in

- **Only one session can control the beamline at a time**
  - System of control request / response. Staff can always take control
- **Session mirroring**

Queue

- **Automated control of the beamline (e.g. overnight)**

Metadata

- **SMIS - User office information**
- **Bliss data is transient**

Type of Application

1. Fully integrated acquisition UIs

   Directed UI for repeatable experiments

   Highly accessible for novice users (UX)

2. Simplified parameterisation

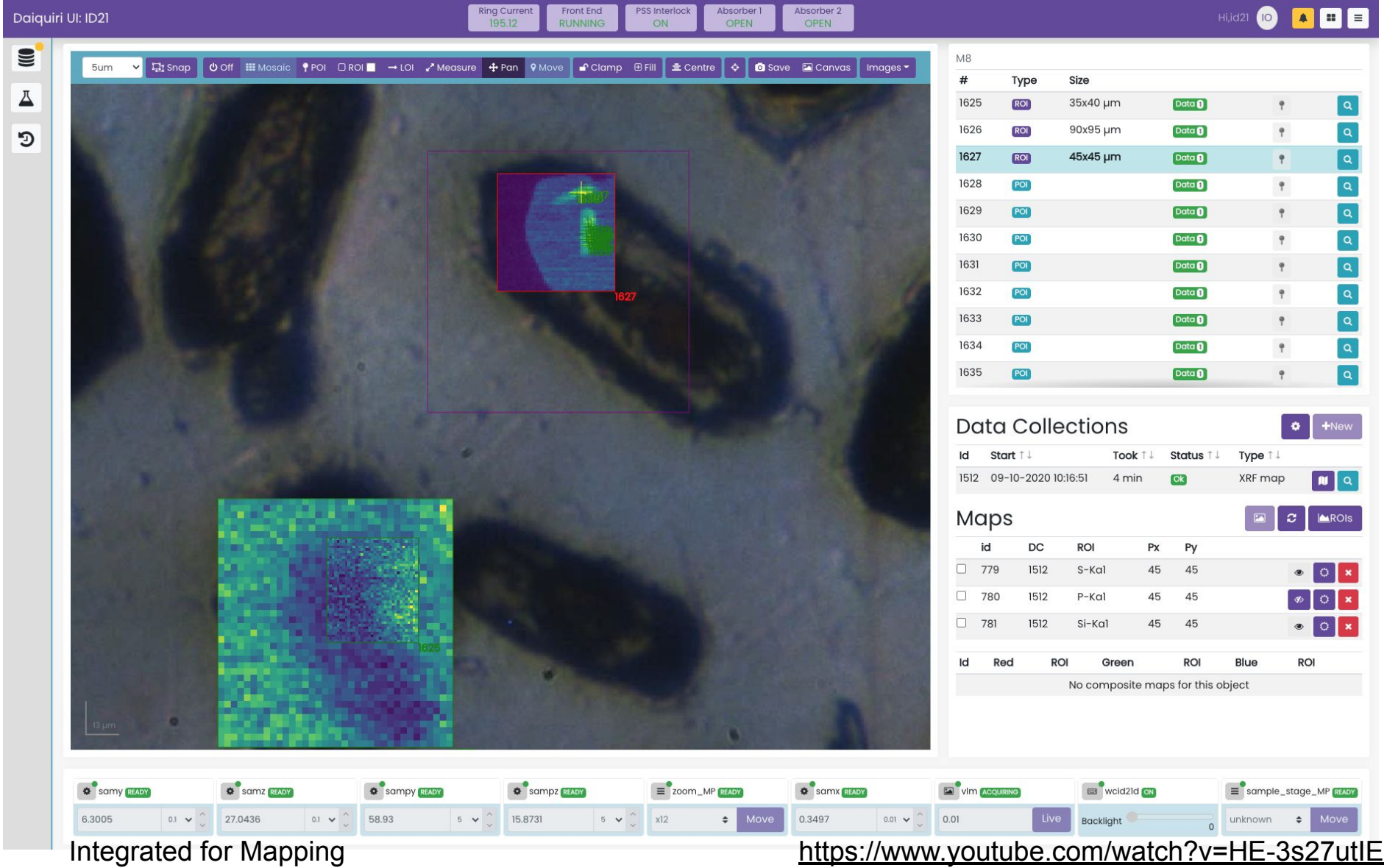
   Interfaces to configure scan parameters and save them to disk

   For beamlines with less repeatable experiments

3. Monitoring

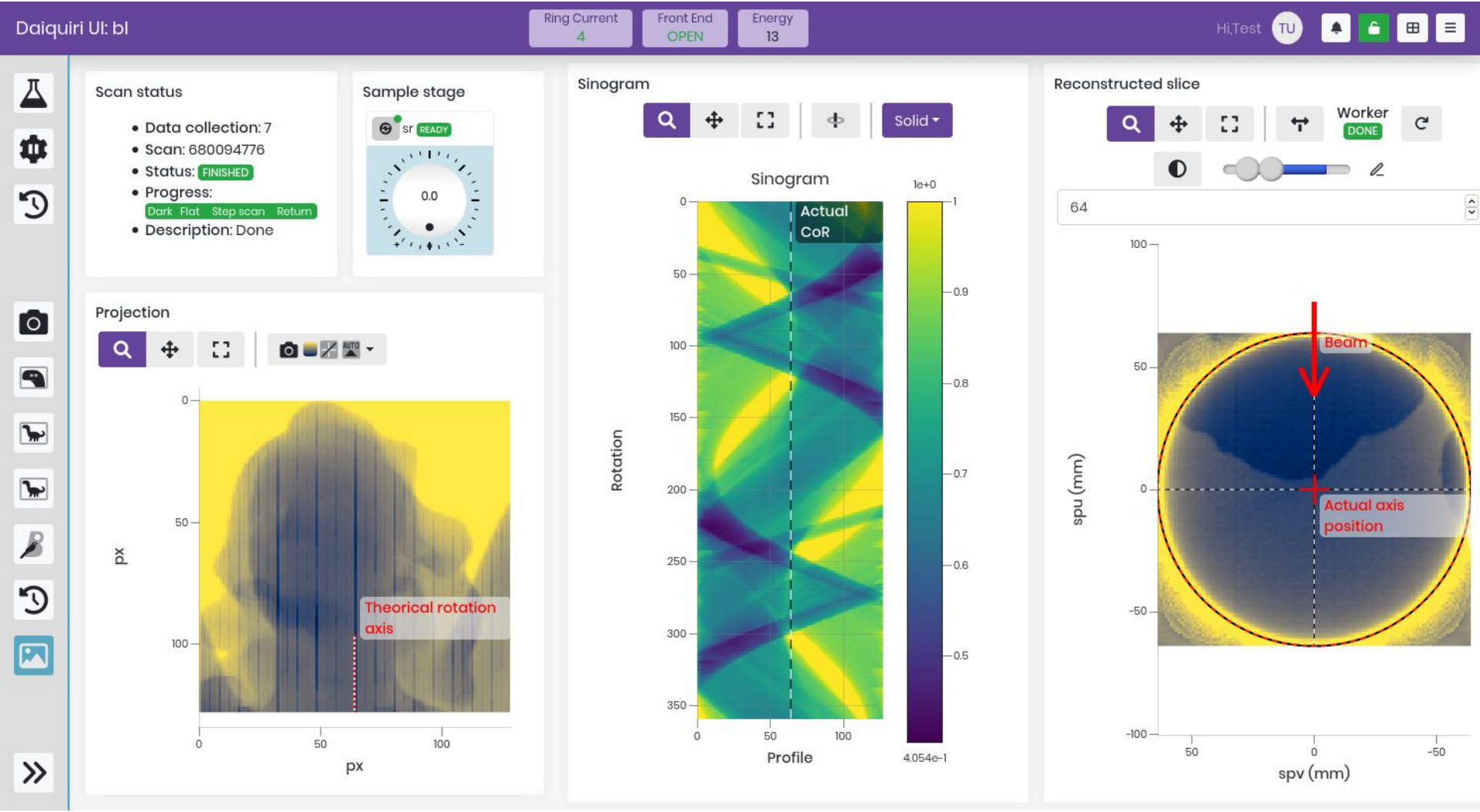
   Monitoring of motors and beamline components

BCU staff can deploy 2 & 3 without UI team intervention

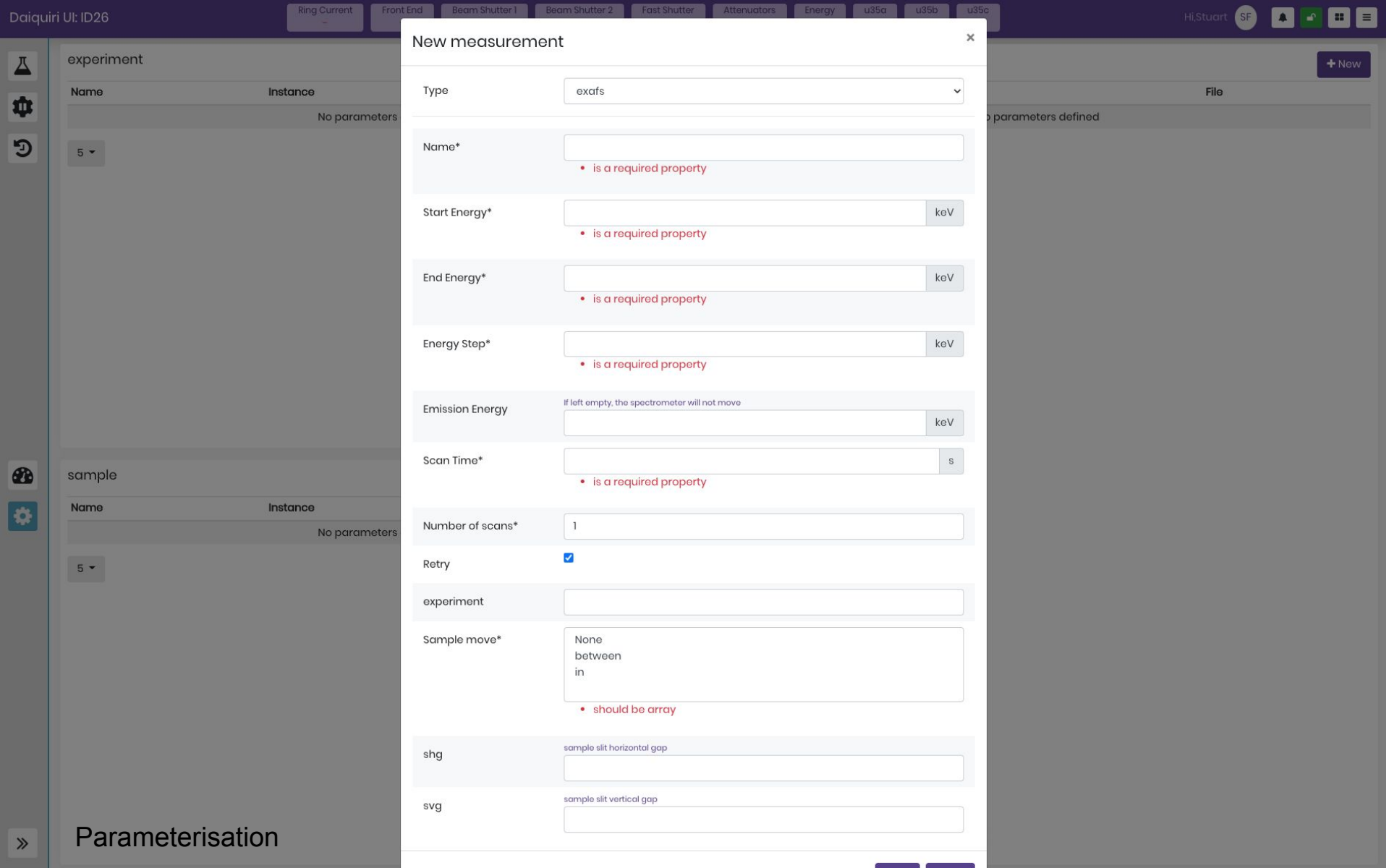


Integrated for Mapping

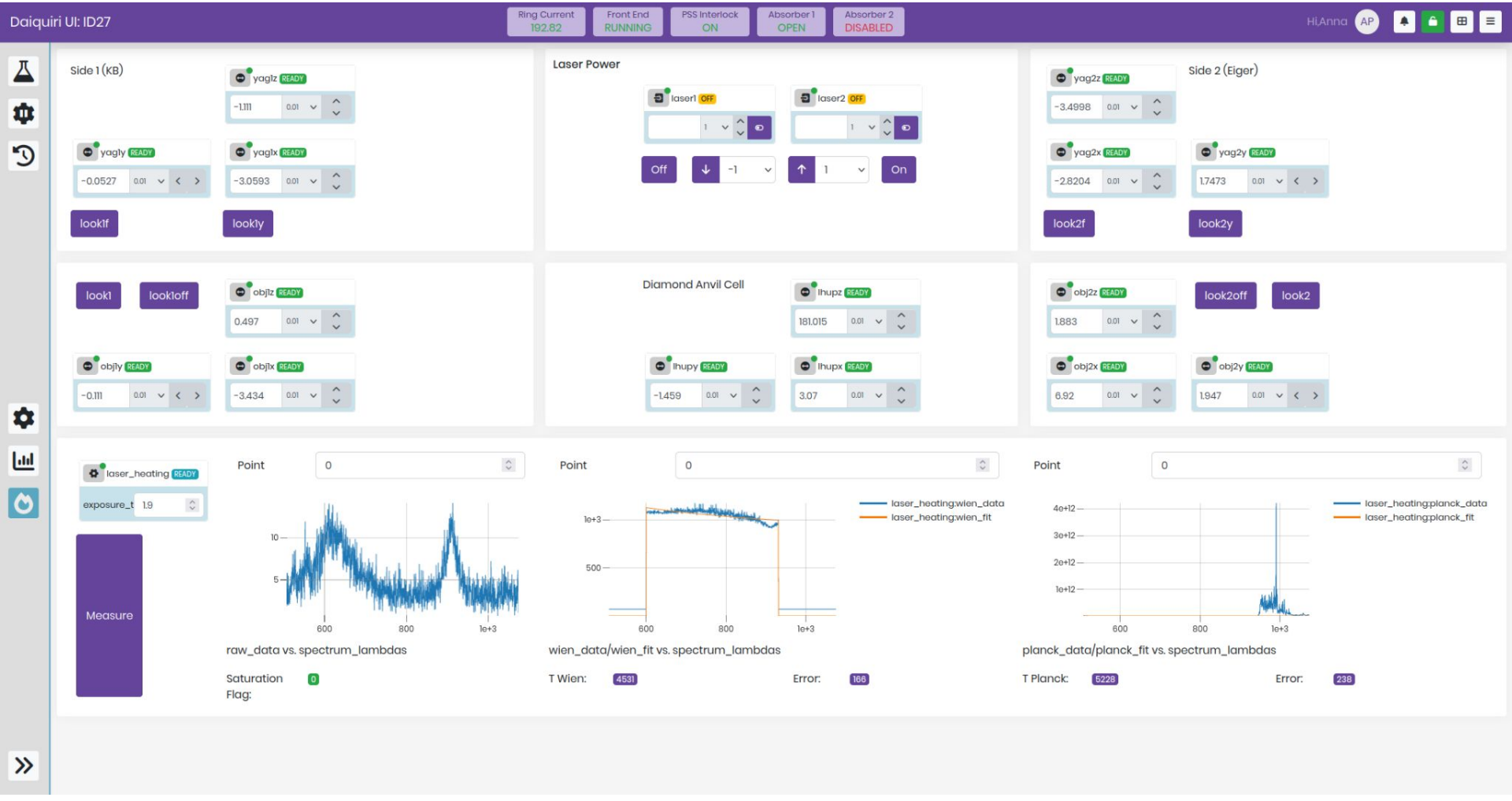
https://www.youtube.com/watch?v=HE-3s27utIE



Integrated for Tomo



Parameterisation

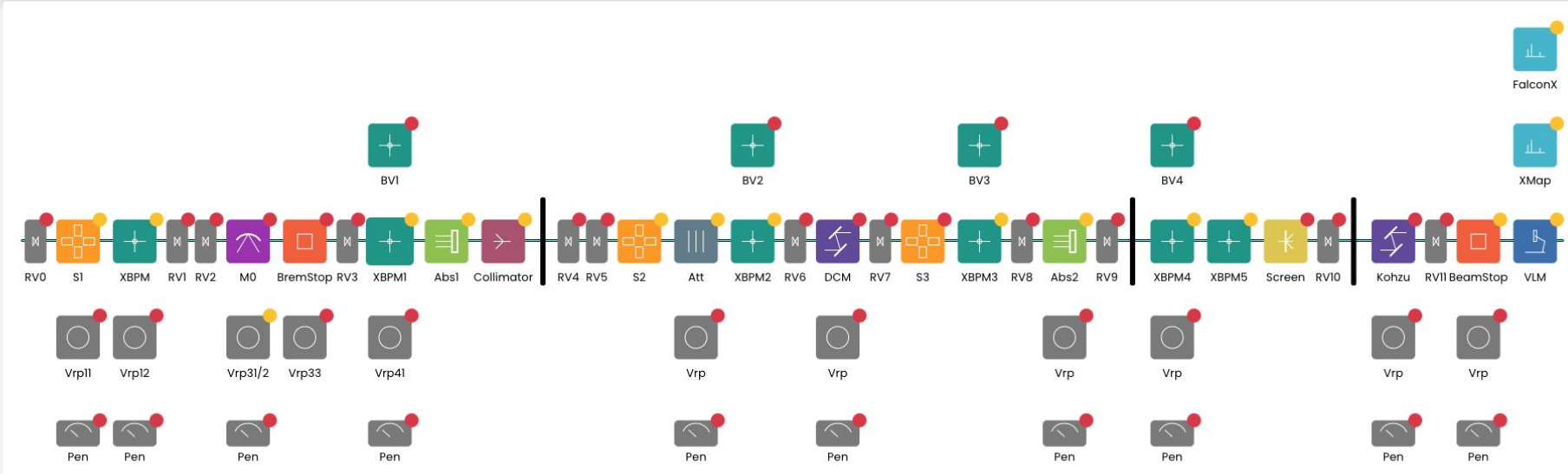

Daiquiri UI: ID27
Ring Current
192.82
Front End
RUNNING
PSS Interlock
ON
Absorber 1
OPEN
Absorber 2
DISABLED
Hi,Anna
AP
Side 1 (KB)
yag1z READY
-1.111
0.01
yag1y READY
-0.0527
yag1x READY
-3.0593
look1f
look1y
Laser Power
laser1 OFF
laser2 OFF
Off
-1
1
On
Side 2 (Eiger)
yag2z READY
-3.4998
yag2x READY
-2.8204
yag2y READY
1.7473
look2f
look2y
look1
look1off
obj1z READY
0.497
obj1y READY
-0.111
obj1x READY
-3.434
Diamond Anvil Cell
lhupz READY
181.015
lhupy READY
-1.459
lhupx READY
3.07
obj2z READY
1.883
look2off
look2
obj2x READY
6.92
obj2y READY
1.947
laser_heating READY
exposure_t
1.9
Measure
Point
0
raw_data vs. spectrum_lambdas
Saturation
Flag:
0
wien_data/wien_fit vs. spectrum_lambdas
laser_heating:wien_data
laser_heating:wien_fit
T Wien:
4531
Error:
168
planck_data/planck_fit vs. spectrum_lambdas
laser_heating:planck_data
laser_heating:planck_fit
T Planck:
5228
Error:
238

Monitoring

Daiquiri UI: ID21

Ring Current 173.75 | Front End STANDBY | PSS Interlock ON | Absorber 1 OPEN | Absorber 2 FAULT

Hi,id21



bv1 | bv2 | bv3 | bv4

Screen OUT In

Led OFF On

vlm ACQUIRING

2 Live

Front End STANDBY — Open

Absorber 1 OPEN — Close

Absorber 2 FAULT — Open

diode_idet_MP READY	diode_io1_MP READY	diode_io2_MP READY	led_trans_MP READY	rcdet_MP READY	sample_stage_MP READY	sxm_attenuators_MP READY	osa_MP READY	pinhole_MP READY
in_KB Move	io1_out Move	unknown Move	led_out Move	out Move	unknown Move	Al_6um Move	unknown Move	out Move

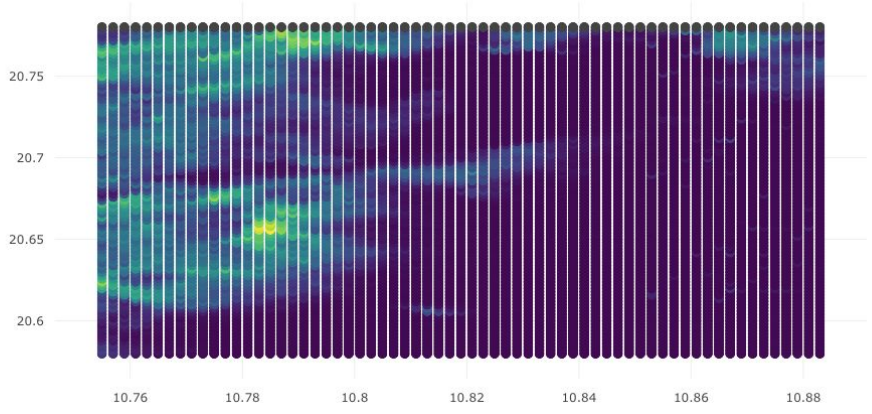
Scans

Follow

Title	Start	End	Points	Count Time	Status	
zaptrajund enetraj 2.8 2.9 400 0.1	06-10-2020 05:51:03	06-10-2020 05:51:56			FINISHED	View
zaptrajund enetraj 2.8 2.9 400 0.1	06-10-2020 05:49:22	06-10-2020 05:50:14			FINISHED	View
zaptrajund enetraj 2.8 2.9 400 0.1	06-10-2020 05:44:05	06-10-2020 05:44:58			FINISHED	View
zaptrajund enetraj 2.8 2.9 400 0.1	06-10-2020 05:31:44	06-10-2020 05:32:35			FAILED	View
l2scan samy 10.753951 10.883951000000001 65 samz 20.580100000000005 20.9581 189 0.05	05-10-2020 20:14:39		12350	0.05	RUNNING	View
l2scan samy 5.4019010000000005 5.701901 150 samz 20.644272000000004 20.842272 99 0.05	05-10-2020 12:11:48		15000	0.05	RUNNING	View
zaptrajund enetraj 2.8 2.9 400 0.1	05-10-2020 05:46:46				RUNNING	View
zaptrajund enetraj 2.8 2.9 400 0.1	04-10-2020 03:05:18				RUNNING	View
l2scan sampy 22.832000000001866	28-09-2020 09:57:23		16200	0.02	RUNNING	View

Scalar Plot

Axes | Series | Compare Scans | Points All (12350) | Page 1



Spectra Plot

Point 6499

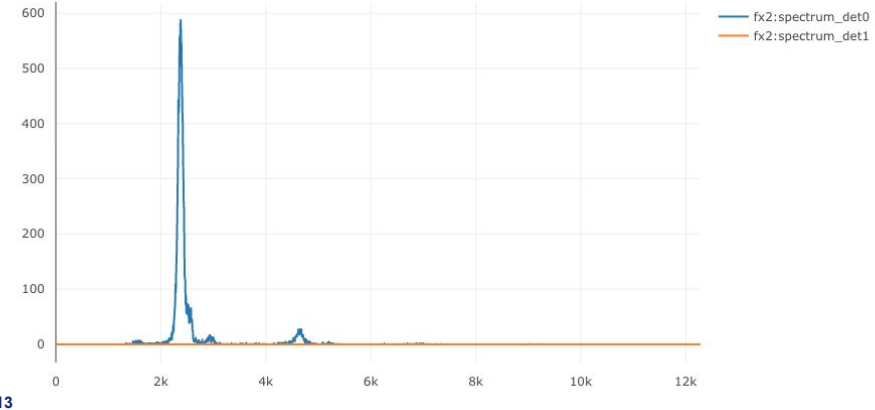


Image Plot

Node | Point 6499

Zoom:100%

Data Collection Details

Status	Finished
Type	XRF xrd map
Start	20-09-2023 12:04:01
End	20-09-2023 12:04:29
Took	28 sec
Scan Number	2037287499
Files	/data/bl/tmp/blc00001/sample2/sample2_roi7_4/sample2_roi7_4.h5
Energy	10.0000 keV
Dwell	0.1 s
Beam Size	0.0007 x 0.0003 µm
Steps Horizontal	5
Steps Vertical	5
Step Size Horizontal	10 µm
Step Size Vertical	10 µm
Map Size	50x50 µm
Points	25

Comments: Click to edit

File	Type
4_args.json	params
4_stdout.log	log

Close

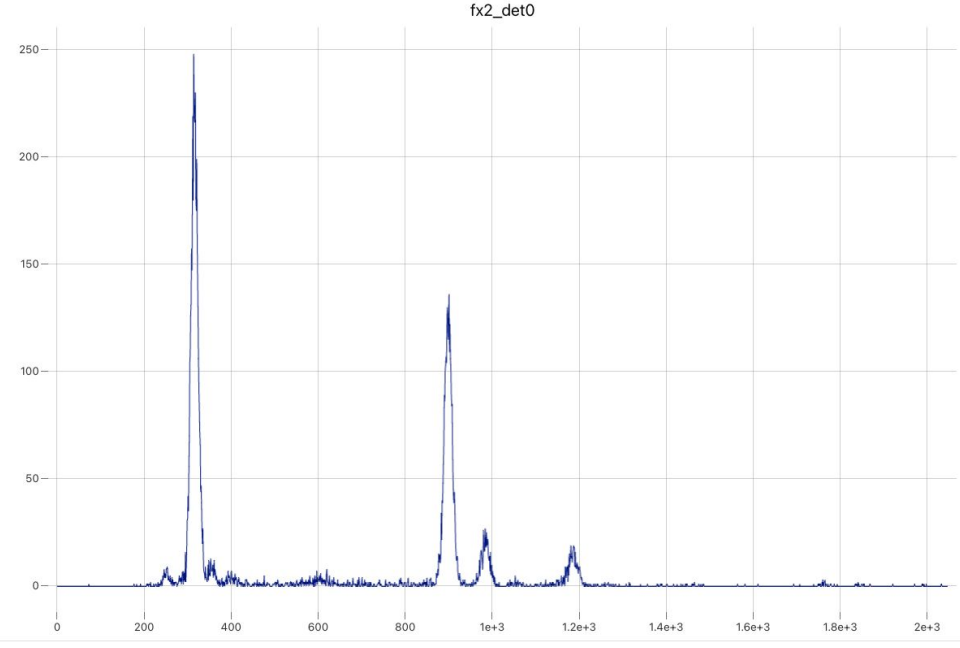
Explore in H5Web

absorp2
absorp3
bchk
diode_bv3
fdet
fluo1
fluo2
fx2_det0
fx2_det0_AlKa
fx2_det0_BaL1
fx2_det0_BiM
fx2_det0_CaKa
fx2_det0_CdL
fx2_det0_CeL
fx2_det0_ClKa
fx2_det0_CoKa
fx2_det0_CrKa
fx2_det0_CuKa
fx2_det0_FeKa
fx2_det0_HgM
fx2_det0_ILb
fx2_det0_KKa
fx2_det0_MgKa
fx2_det0_MnKa
fx2_det0_NiKa
fx2_det0_PKa

1.1 > measurement > fx2_det0 | Display | Inspect

Matrix | Line | Heatmap | X Linear | Y Linear | Auto-scale | Errors | Grid | Line | Points | Both | Export slice

n 80 2048
x D0 D1
D0
0:79



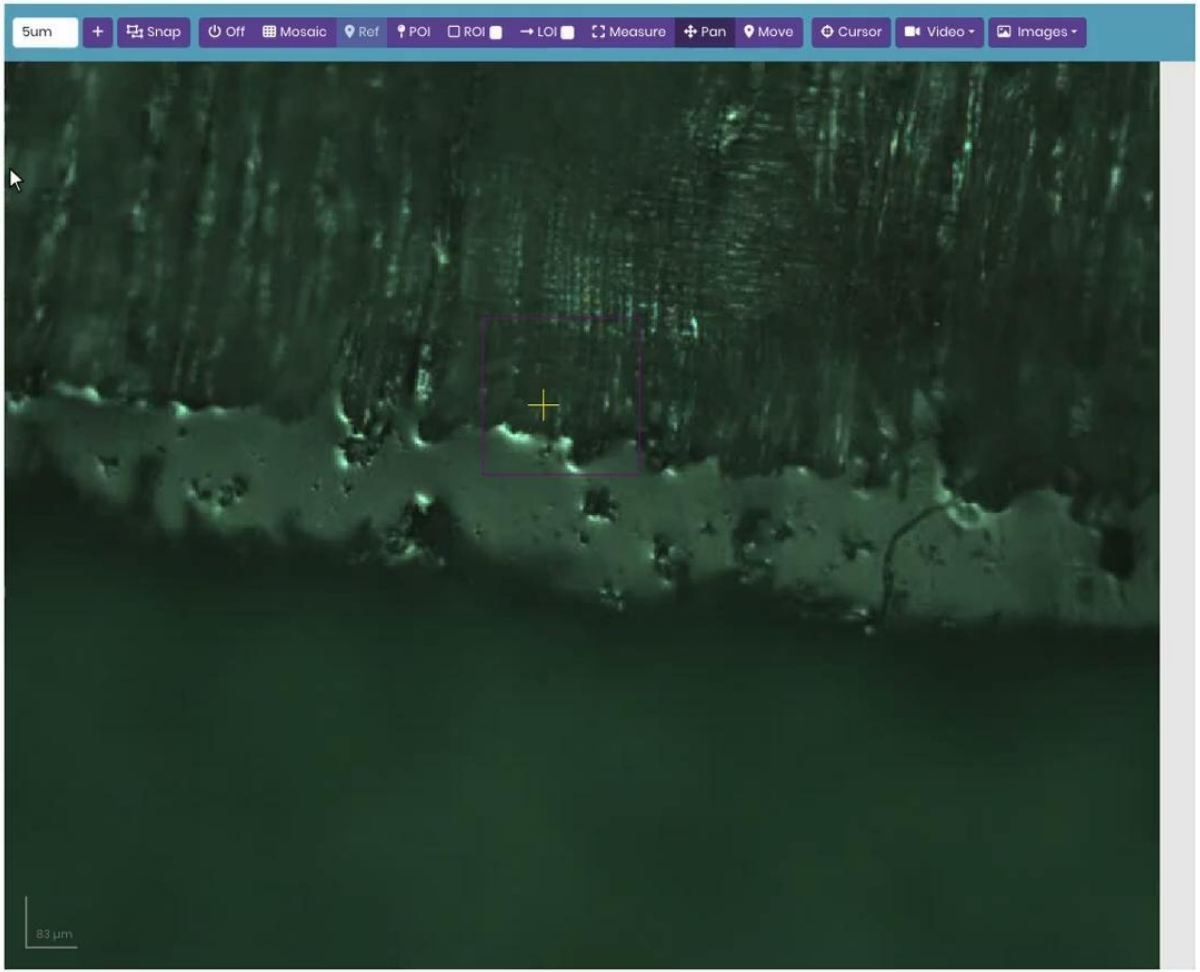
Close

https://github.com/silx-kit/h5web
https://github.com/silx-kit/h5grove

Daiquiri UI: ID13

Ring Current 21.724 | Front End STANDBY | PSS Interlock ON | Safety 1 OPEN | Safety 2 DISABLED | Safety 3 DISABLED | Fast Shutter CLOSED | Energy 13.005

Hi,Stuart SF



Sample6_Lab

#	Type	Size	Tags
No objects defined			

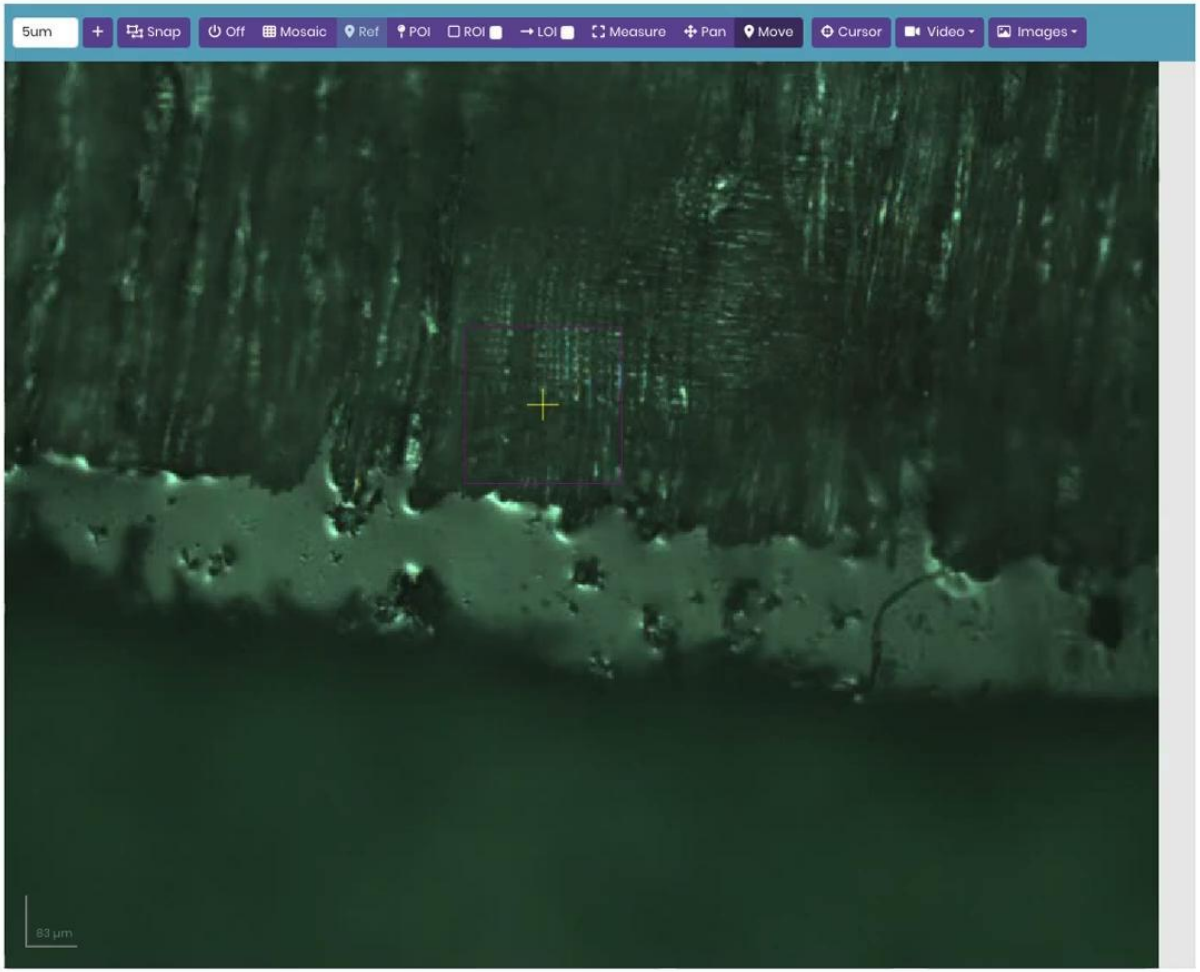
No object selected

nny READY	nnz READY	nnp2 READY	nnp3 READY	nnx READY	nnp1 READY	nzoom READY	nvolpi5 ON	nvlm ACQUIRING
-0.4876 0.1 mm	-2.7441 0.1 mm	97.5 1	139.4999 1	4.41 0.1 mm	125 1	x5 Move	16 %	0.0001 *10 s Live ...

Daiquiri UI: ID13

Ring Current 177.77 | Front End STANDBY | PSS Interlock ON | Safety 1 OPEN | Safety 2 DISABLED | Safety 3 DISABLED | Fast Shutter CLOSED | Energy 13.005

Hi,Stuart SF

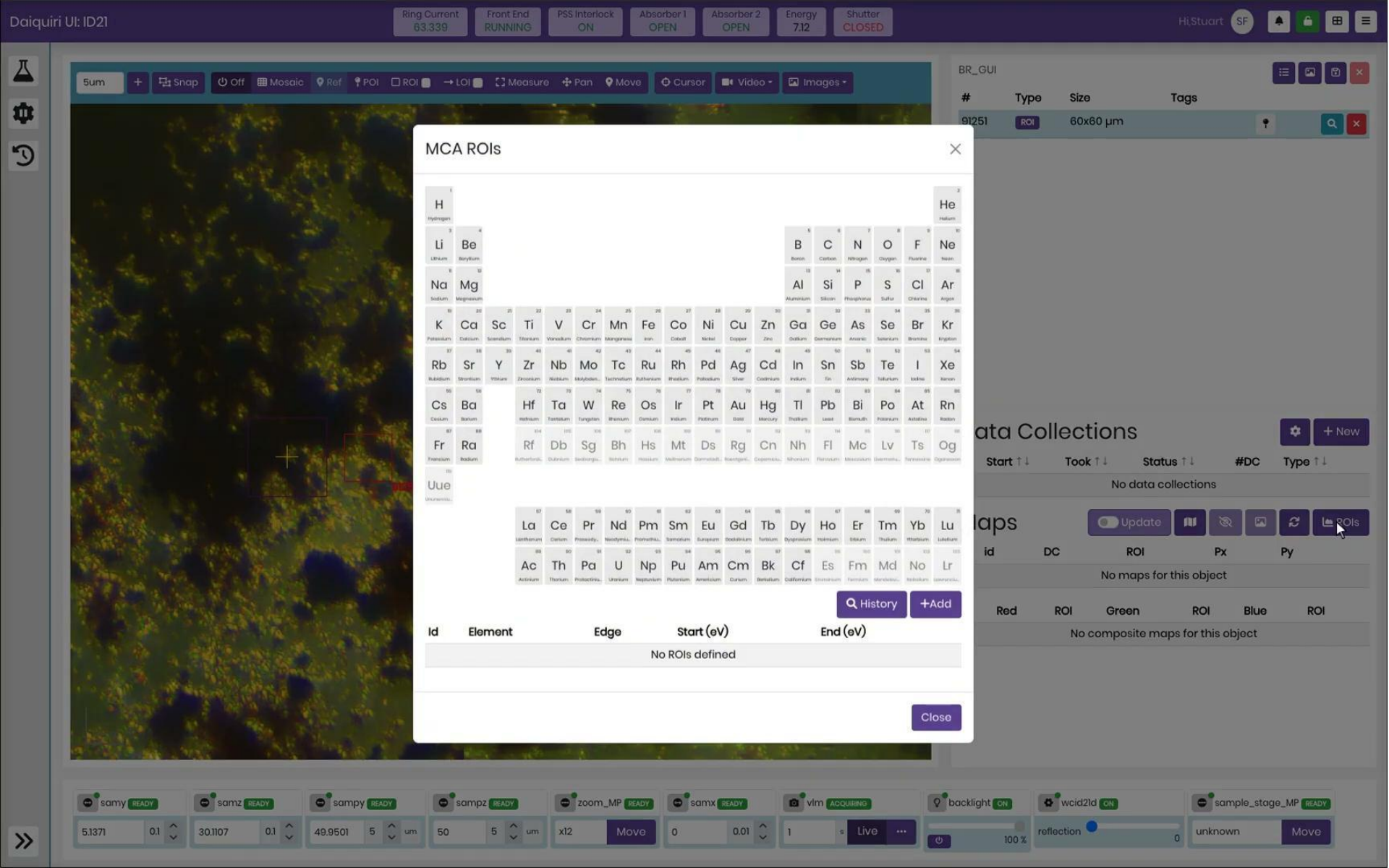


correlated

#	Type	Size	Tags
No objects defined			

No object selected

nny	nnz	nnp2	nnp3	nnx	nnp1	nzoom	nvolpi5	nvlm
READY	READY	READY	READY	READY	READY	READY	ON	ACQUIRING
-0.4953 0.1 mm	-2.8374 0.1 mm	125 1	125 1	4.4 0.1 mm	125 1	x5 Move	16 %	0.0001 *10 s Live


Daiquiri UI: ID21
Ring Current 63.339
Front End RUNNING
PSS Interlock ON
Absorber 1 OPEN
Absorber 2 OPEN
Energy 7.12
Shutter CLOSED
Hi Stuart SF
5um
Snap
Off
Mosaic
Ref
POI
ROI
LOI
Measure
Pan
Move
Cursor
Video
Images
BR_GUI
Type Size Tags
91251 ROI 60x60 µm
MCA ROIs
H He
Li Be B C N O F Ne
Na Mg Al Si P S Cl Ar
K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr
Rb Sr Y Zr Nb Mo Tc Ru Rh Pd Ag Cd In Sn Sb Te I Xe
Cs Ba Hf Ta W Re Os Ir Pt Au Hg Tl Pb Bi Po At Rn
Fr Ra Rf Db Sg Bh Hs Mt Ds Rg Cn Nh Fl Mc Lv Ts Og
Uue
La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu
Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No Lr
History
+Add
Id Element Edge Start (eV) End (eV)
No ROIs defined
Close
ata Collections
New
Start Took Status #DC Type
No data collections
laps
Update
ROIs
id DC ROI Px Py
No maps for this object
Red ROI Green ROI Blue ROI
No composite maps for this object
samy READY 5.1371 0.1
samz READY 30.1107 0.1
sampy READY 49.9501 5 um
sampz READY 50 5 um
zoom_MP READY x12 Move
samx READY 0 0.01
vlm ACQUIRING 1 s Live
backlight ON 100 %
wcid21d ON reflection 0
sample_stage_MP READY unknown Move

+ DISCOVER TASKS

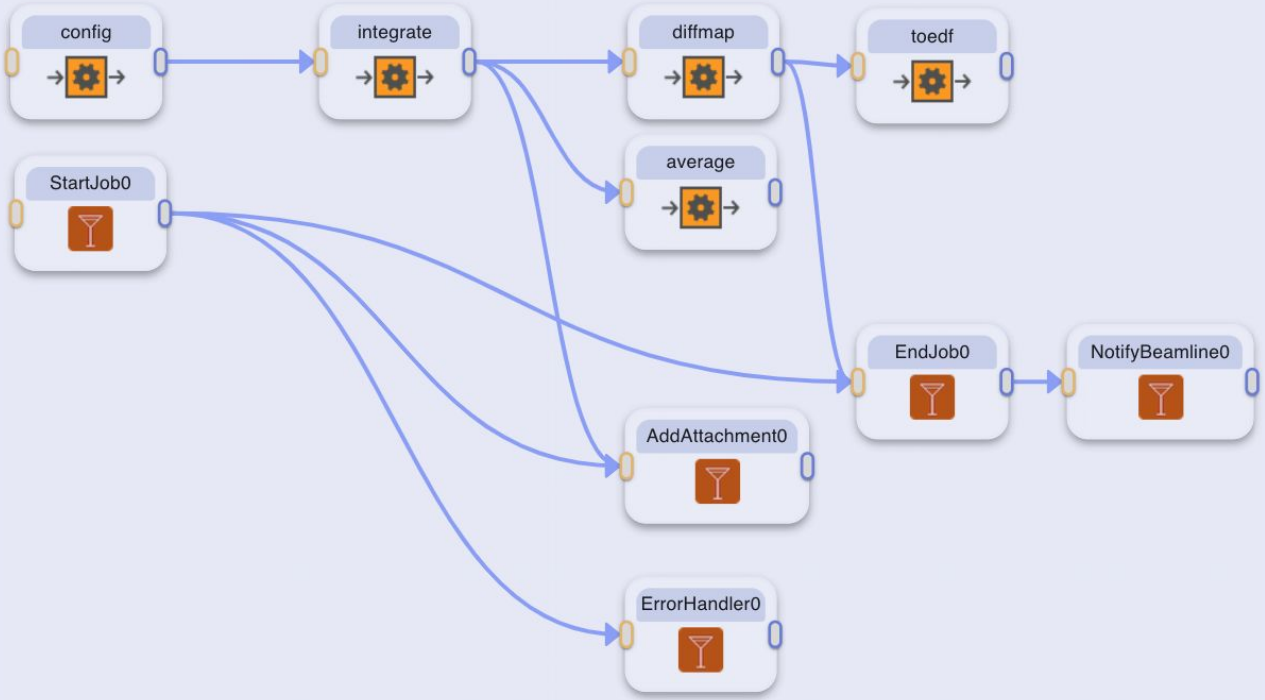
ewokscore

sidecar

- AddAttachment
- AddMap
- AddMappingROI
- AddMessage
- AddProcessingJob
- BlissFileWatcher
- CreateROIMapFr…
- CreateScalarMap
- EndJob
- ErrorHandler
- GetMetadata
- Inputs
- Integrate1dMap
- LimaFileWatcher
- NotifyBeamline
- ParseMetadata
- StartJob

ewoksid13

- AverageIntegration



Workflow

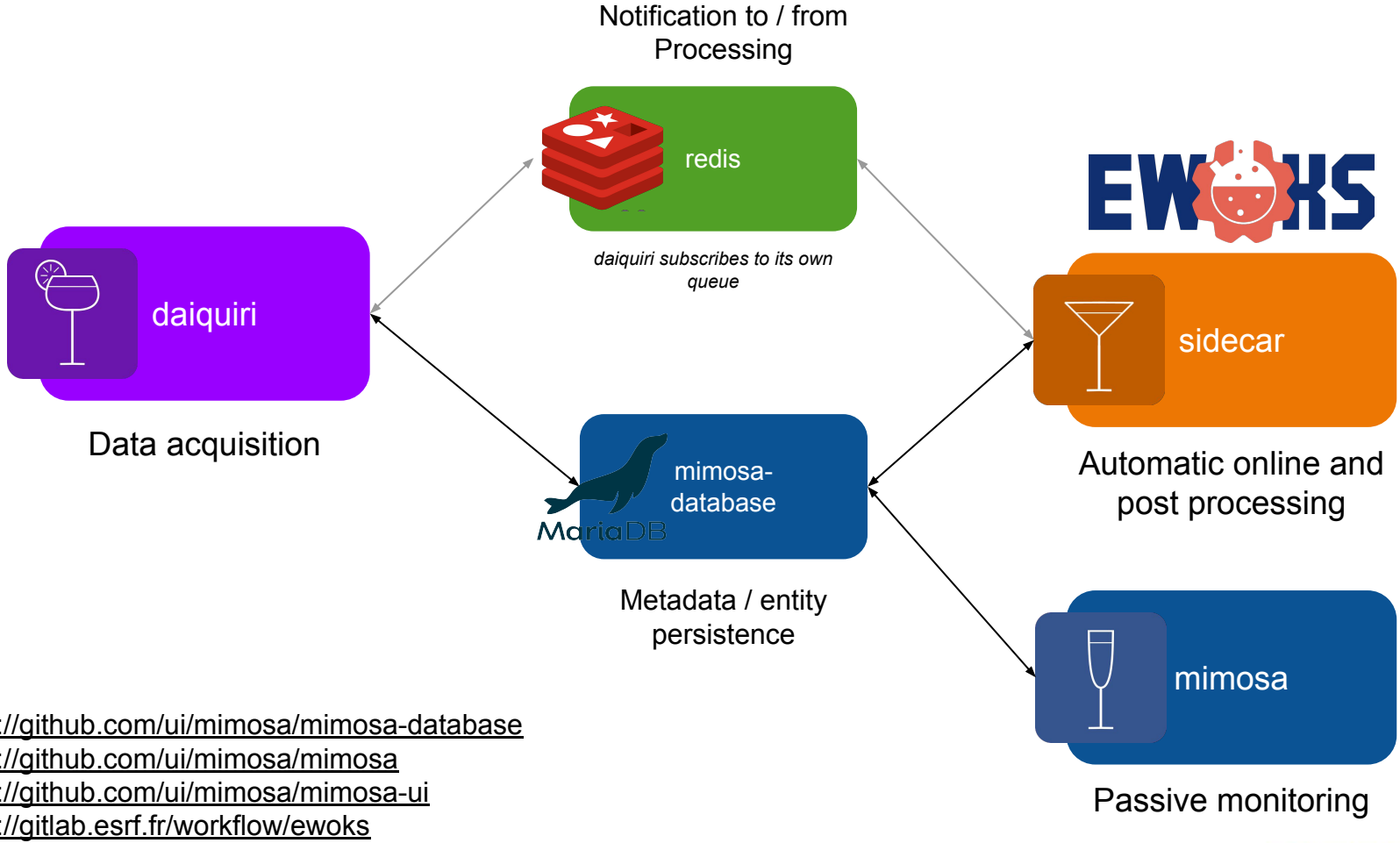
Label: juno daiquiri

Comment

Category

Canvas Background Color

Global Infrastructure

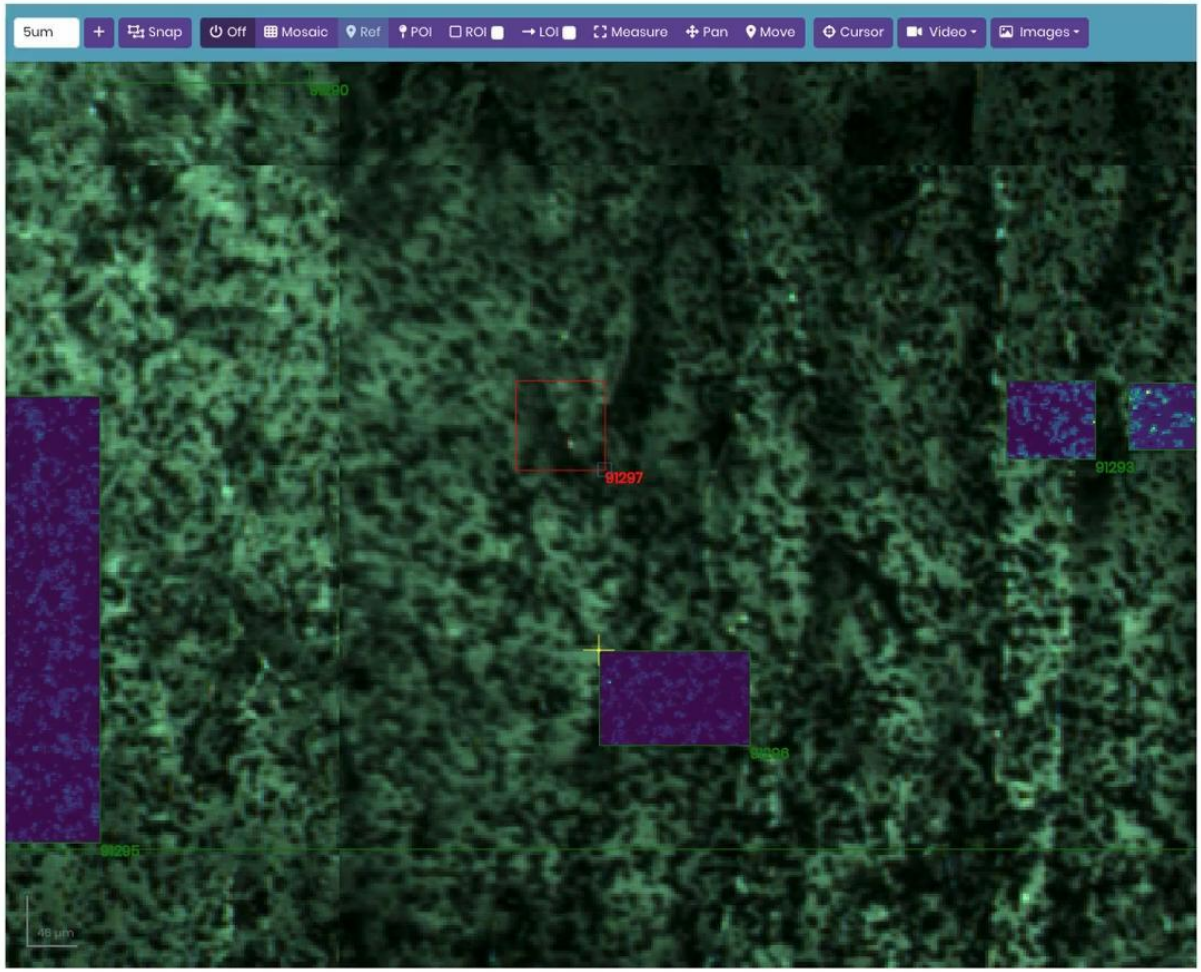


https://github.com/ui/mimosa/mimosa-database
https://github.com/ui/mimosa/mimosa
https://github.com/ui/mimosa/mimosa-ui
https://gitlab.esrf.fr/workflow/ewoks
https://gitlab.esrf.fr/workflow/sidecar

ID13

Ring Current	Front End	PSS Interlock	Safety 1	Safety 2	Fast Shutter	Energy
36.610	OPEN	ON	OPEN	OPEN	CLOSED	13.005

Hi Stuart SF



dq_Cu_powder

91268	ROI	300x300 µm	Data 1	
91269	ROI	400x400 µm	Data 1	
91270	ROI	1.5x1.5 mm	Data 2	
91290	ROI	200x200 µm	Data 4	
91292	ROI	200x200 µm	Data 1	
91293	ROI	80x70 µm	Data 2	
91294	ROI	60x60 µm	Data 1	
91295	ROI	400x400 µm	Data 1	
91296	ROI	135x85 µm	Data 1	
91297	ROI	80x80 µm		

Data Collections

+ New

Id	Start	Took	Status	#DC	Type
No data collections					

Maps

Update ROIs

id	DC	ROI	Px	Py
No maps for this object				

Id	Red	ROI	Green	ROI	Blue	ROI
No composite maps for this object						

ustry READY	ustrz READY	ustrx READY	uzoom READY	uvolpi5 ON	uvlm ACQUIRING
-19.9165 0.1	-7.2601 0.1	-71.8435 0.01	x5 Move	22 %	0.0005 *10 s Live

Layout

Defined in yaml

Layout:

- row, col, container, grid
- tab, panel

Components (chunk and lazy load):

- hardwaregroup
- synoptic
- scantable
- scanplot0,1,2d
- mapping
- tomography

Templating (partials)

```yaml
name: Simple Layout
description: A simple layout
children:
  - type: row
    children:
      - type: col
        children:
          - type: scantable
            title: Scans

  - type: row
    children:
      - type: col
        children:
          - type: hardwaregroup
            title: Diffractometer2
            ids:
              - id: omega
                step: 90
                steps: [45,90,180]

...
  !include
  file: partials/scanviewer.yml
```

Schemas and Forms

Asynchronous validation, calculation, warning

Automatically re-loaded

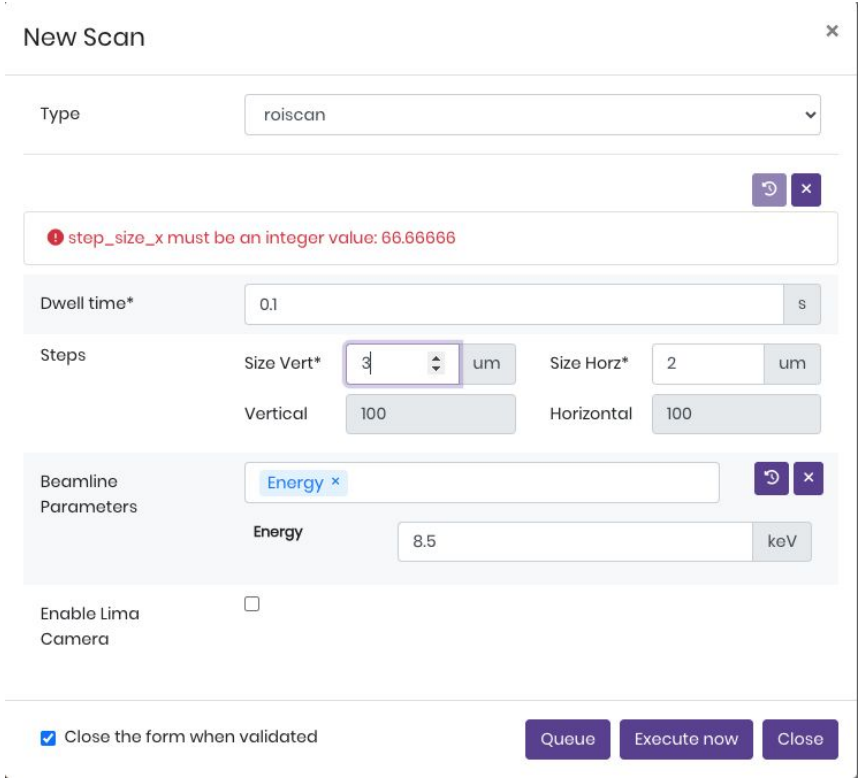
```python
class ExampleSchema(ComponentActorSchema):
    motor = OneOf(["robz", "roby"], required=True, title="Motor")
    motor_start = fields.Float(required=True, title="Start Position")
    motor_end = fields.Float(required=True, title="End Position")

    @validates_schema
    def schema_validate(self, data, **kwargs):
        raise ValidationError("Invalid!")

    def warnings(self, data, **kwargs):
        return {"warning1": "Object will use stepper"}

class ExampleActor(ComponentActor):
    schema = ExampleSchema
    name = "example"

    def method(self, **kwargs):
        ...
```



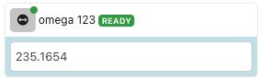
https://github.com/rjsf-team/react-jsonschema-form

Motor

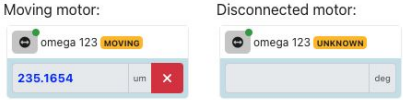
Name	Type	Default Value	Required	Description
step	number		No	Default step size to use for up / down arrows
steps	number[]		No	Array of selectable step sizes
precision	number		No	Number of decimals to show
extended	boolean		No	Whether to show popup to configure extended parameters
readOnly	boolean		No	Whether this widget is read only
header	string		No	Kind of header displayed
incicon	string		No	Specify a fontawesome to inc the value
decicon	string		No	Specify a fontawesome to dec the value
swapincdec	boolean		No	If true inc and dec icon are swapped
horizontalarrows	boolean		No	Show the step arrows horizontally instead of vertically
largearrows	boolean		No	Show large step arrows

Display a motor widget.

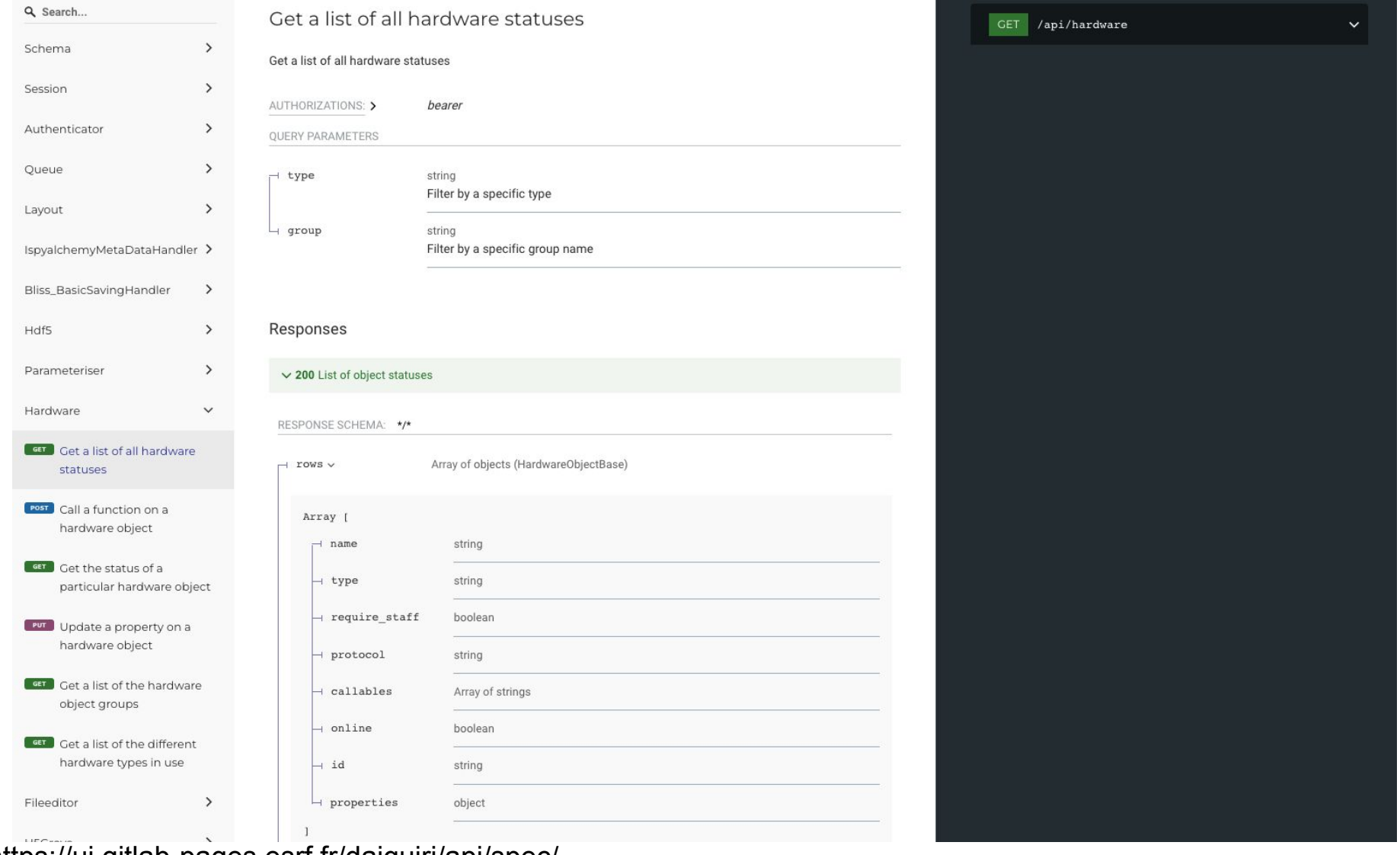
Interactive example



Device states references



https://ui.gitlab-pages.esrf.fr/daiquiri-ui



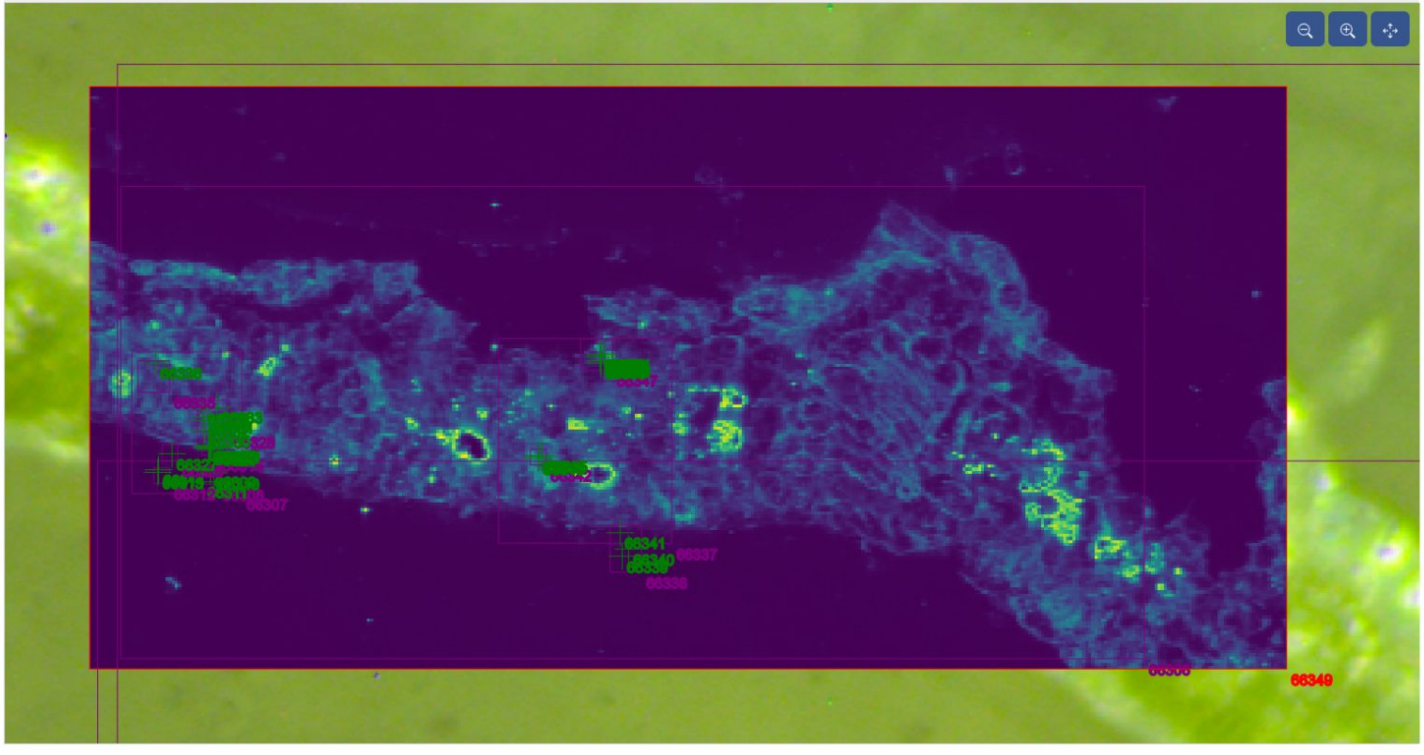
https://ui.gitlab-pages.esrf.fr/daiquiri/api/spec/

https://github.com/Redocly/redoc

Home Calendar Proposals ihev sfisher Logout

Home » Proposals » ihev » Samples » Review

Search eleaves Image Visibility Map Opacity Hide POIs



#	Type	Data	DC Types
663	ROI	1	XRF map
663	ROI	1	XRF map
663	ROI	1	XRF map
663	ROI	1	XRF map
663	ROI	1	XRF map
663	POI	1	Energy scan
663	POI	1	Energy scan
663	POI	1	Energy scan
663	ROI	1	XRF map
663	POI	1	Energy scan

« 1 2 3 ... 5 » Total: 49

Data Collections

ID	Type	Status
797	XRF map	Finished

« 1 » Total: 1

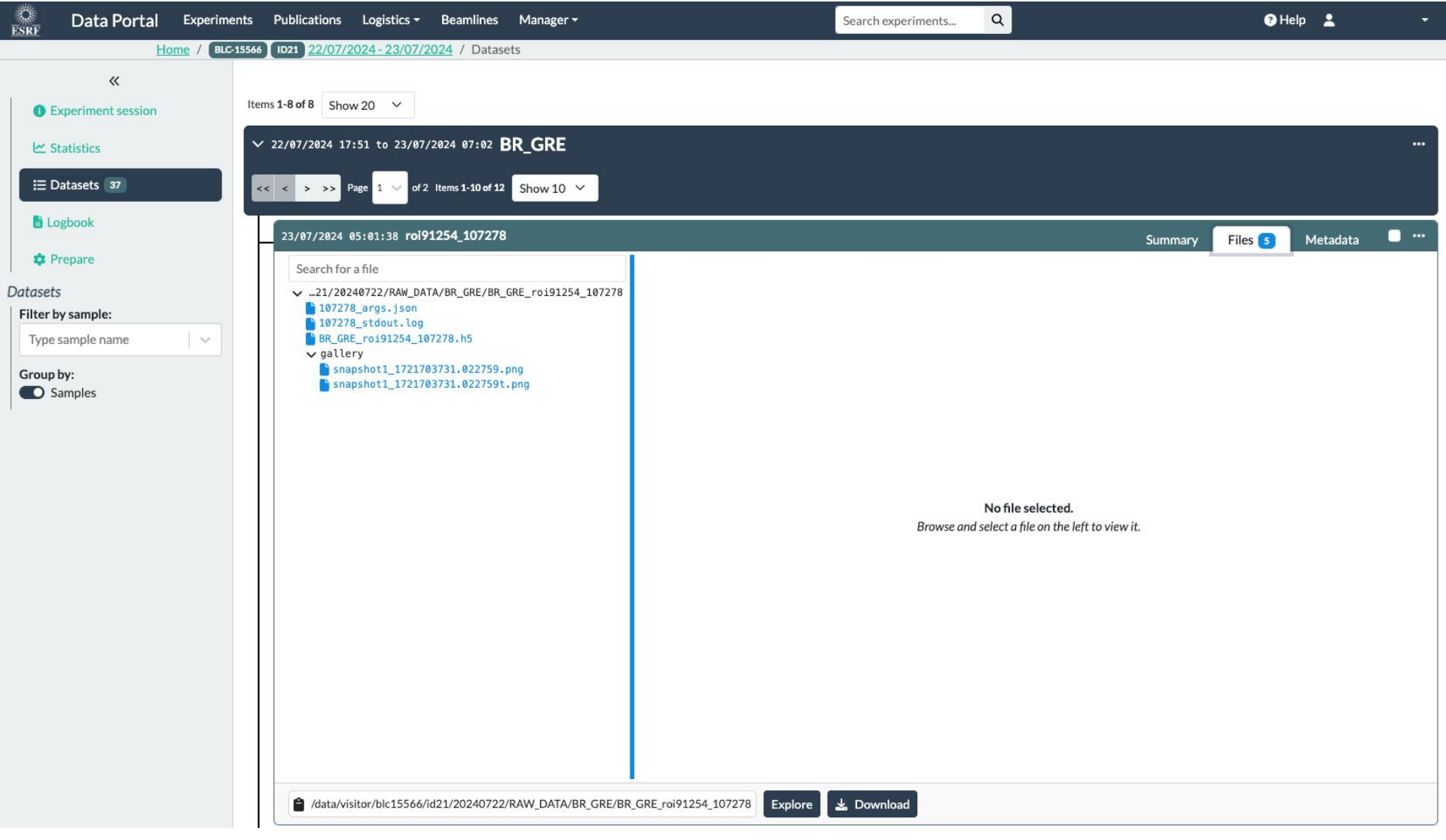
Maps

Create Composite

ID	ROI	Px	Py
816	Fe-Ka1	380	185
816	Ca-Ka1	380	185
816	K-Ka1	380	185

« 1 » Total: 3

Composite Maps


Data Portal
Experiments
Publications
Logistics
Beamlines
Manager
Search experiments...
Help
Home / BLC-15566 ID21 22/07/2024 - 23/07/2024 / Datasets
Experiment session
Statistics
Datasets 37
Logbook
Prepare
Datasets
Filter by sample:
Type sample name
Group by:
Samples
Items 1-8 of 8
Show 20
22/07/2024 17:51 to 23/07/2024 07:02 BR_GRE
<< < > >> Page 1 of 2 Items 1-10 of 12
Show 10
23/07/2024 05:01:38 roi91254_107278
Summary
Files 5
Metadata
Search for a file
…21/20240722/RAW_DATA/BR_GRE/BR_GRE_roi91254_107278
107278_args.json
107278_stdout.log
BR_GRE_roi91254_107278.h5
gallery
snapshot1_1721703731.022759.png
snapshot1_1721703731.022759t.png
No file selected.
Browse and select a file on the left to view it.
/data/visitor/blc15566/id21/20240722/RAW_DATA/BR_GRE/BR_GRE_roi91254_107278
Explore
Download

« Experiment session
Statistics
Datasets 37
Logbook
Prepare

Logbook

Search:

Search

Filter by tags:

Select tags...

Filter by type:

- [x] Comments
- [x] Information
- [x] Errors
- [ ] Command Lines
- [ ] Machine

Order:

- (•) Newest First
- ( ) Oldest First

Date:

Select date

+ New comment | Edit Tags | Take Picture | Download | Help

Items **1-90 of 90** Show 100

18:00:48 Dataset roi91253_107270 (BR_GRE) has been stored into ICAT successfully — SYSTEM, INGESTER

17:54:48 Starting XRF_2Dmap
command: l2scan(sampy, 19.567, 79.567, 30, sampz, 11.194, 69.194, 29, 0.05, fx2, p201, calc_diodes, calc_fx2)
motors:

samy: 5.6814
samz: 26.9226
sampy: 19.567 - 79.567
sampz: 10.194 - 70.194

dataset: BR_GRE_roi91253_107270.h5
steps_x: 30
steps_y: 30
step_size_x: 2.0
step_size_y: 2.0
dwell: 0.05
energy: 7119.999968451801

17:53:22 Dataset BR_GRE_mosaic4419 (BR_GRE) has been stored into ICAT successfully — SYSTEM, INGESTER

17:51:45 Dataset roi91252_107269 (BR_GUI) has been stored into ICAT successfully — SYSTEM, INGESTER

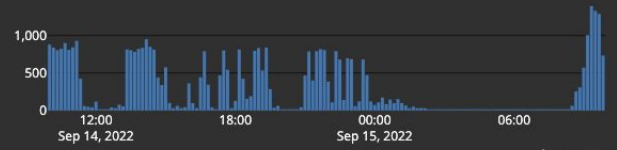
17:09:03 Dataset roi91251_107268 (BR_GUI) has been stored into ICAT successfully — SYSTEM, INGESTER

17:03:44 Starting XRF_2Dmap
command: l2scan(sampy, 19.95, 79.95, 20, sampz, 22.114, 79.114, 19, 0.1, fx2, p201)
motors:

samy: 5.23958
samz: 30.1107
sampy: 19.95 - 79.95
sampz: 20.614 - 80.614

dataset: BR_GUI_roi91251_107268.h5
steps_x: 20
steps_y: 20
step_size_x: 3.0
step_size_y: 3.0
dwell: 0.1
energy: 7119.999968451801

24h messages

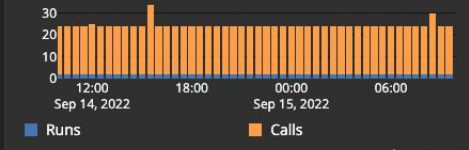


a day ago - Now

Startup Time

14 days ago - Now

Replicator runs



a day ago - Now

Replication Ti...

4.8170625

+0.1295 / +2.76%

a day ago - Now

24h messages

42,547

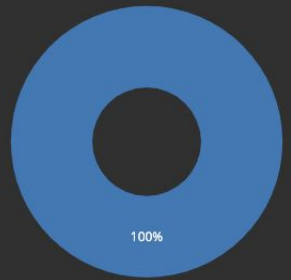
a day ago - Now

24h warnings

811

a day ago - Now

Warnings by beamline



ID21

a day ago - Now

Authentication Logs

timestamp	source	beamlinename
2022-09-15 08:35:38.427 +02:00	lid21nano	ID21
Successful login from with ip		
2022-09-15 02:02:48.558 +02:00	lid21nano	ID21
Successful login from with ip		
2022-09-15 01:57:23.782 +02:00	lid21nano	ID21
Successful login from with ip		
2022-09-15 01:57:14.613 +02:00	lid21nano	ID21
Failed login attempt from with ip		
2022-09-14 23:00:47.903 +02:00	lid21nano	ID21
Successful login from with ip		
2022-09-14 17:24:46.467 +02:00	lid21nano	ID21
Successful login from with ip		

a day ago - Now

7 day > Warning

timestamp	source	beamlinename	facility	level_name
2022-09-15 09:54:55.670 +02:00	lid21nano	ID21	global.controllers.EnergyUndulatorCalcMotor_ecc2519b283e4468156f29bdaff9b2d2.u42c	WARNING
Controller velocity (5.0) is different from set velocity (0.014581818181818135)				
2022-09-15 09:54:24.923 +02:00	lid21nano	ID21	global.controllers.EnergyUndulatorCalcMotor_ecc2519b283e4468156f29bdaff9b2d2.u42c	WARNING
Controller velocity (0.0146) is different from set velocity (5.0)				
2022-09-15 09:53:30.985 +02:00	lid21nano	ID21	global.controllers.EnergyUndulatorCalcMotor_ecc2519b283e4468156f29bdaff9b2d2.u42c	WARNING
Controller velocity (5.0) is different from set velocity (0.014581818181818135)				
2022-09-15 09:53:02.445 +02:00	lid21nano	ID21	global.controllers.EnergyUndulatorCalcMotor_ecc2519b283e4468156f29bdaff9b2d2.u42c	WARNING
Controller velocity (0.0146) is different from set velocity (5.0)				
2022-09-15 09:52:08.828 +02:00	lid21nano	ID21	global.controllers.EnergyUndulatorCalcMotor_ecc2519b283e4468156f29bdaff9b2d2.u42c	WARNING
Controller velocity (5.0) is different from set velocity (0.014581818181818135)				
2022-09-15 09:51:41.374 +02:00	lid21nano	ID21	global.controllers.EnergyUndulatorCalcMotor_ecc2519b283e4468156f29bdaff9b2d2.u42c	WARNING
Controller velocity (0.0146) is different from set velocity (5.0)				
2022-09-15 09:50:48.174 +02:00	lid21nano	ID21	global.controllers.EnergyUndulatorCalcMotor_ecc2519b283e4468156f29bdaff9b2d2.u42c	WARNING

blissdata

bluesky queue -> blissdata

https://gitlab.desy.de/fs-ec/bluesky_blissdata

bluesky connected to tango

- daiquiri launches scans via bluesky queue
- bluesky controls tango devices
- daiquiri monitors scans in real-time via blissdata

device monitoring via tango hardware layer

localhost:8089

Daiquiri UI: bl

Hi,Test TU

Sample: sample1

+ New Scan

Success Failed Children

Id	Start ↑ ↓	Took ↑ ↓	Status ↑ ↓	Scan	#DC	Type ↑ ↓
4	19-05-2024 23:36:59	1 sec	Finished	860209861	1	experiment
3	19-05-2024 23:30:45	2 sec	Finished	467305251	1	experiment
2	19-05-2024 23:17:17	2 sec	Finished	2966017147	1	experiment

15 1

Scans

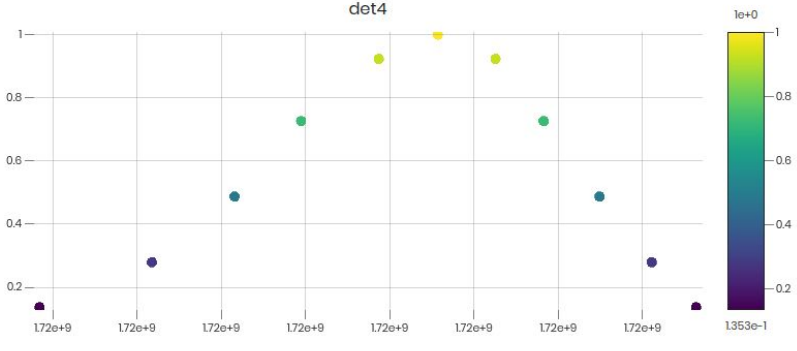
Follow

Title	Start	End	Points	Count Time	Status
scan60	19-05-2024 23:37:00	19-05-2024 23:37:00	11	1	FINISHED
scan59	19-05-2024 23:30:47	19-05-2024 23:30:47	11	1	FINISHED
scan58	19-05-2024 23:17:19	19-05-2024 23:17:19	11	1	FINISHED
scan56	19-05-2024 23:05:02	19-05-2024 23:05:02	11	1	FINISHED
scan55	19-05-2024 22:48:24	19-05-2024 22:48:24	11	1	FINISHED
scan54	19-05-2024 22:43:02	19-05-2024 22:43:02	11	1	FINISHED

10 1

Scalar Plot

Axes Series Points 5 Page 1



Spectra Plot

Point 10

No curve data. Please select a series.

Status

Deployed on:

- id21 - xrf mapping + spectroscopy
- bm29 - biosaxs (custom frontend BSXCuBE3)
- id13 - xrd/xrf mapping
- id26 - spectroscopy
- bm05 - tomography
- id19 - tomography
- bm18 - tomography
- id27 - diffraction, extreme conditions
- cm01 - CryoEM (processing, celery)

Deploying to:

- id01, id11, id16, id24

blissterm

- Web Terminal for bliss
  - Single process for bliss
- Simple UIs
  - daiquiri is complex for simple applications
  - (login, session info, database)
- Consistent UX
  - Easy for scientists and users to “move” between applications
  - Shared UI library “daiquiri-lib”
    - https://www.npmjs.com/package/@esrf/daiquiri-lib
- REST API
  - External control

BLISS: id00

Front End –

PSS Interlock –

Absorber –

omega READY | beamstop READY | m0 READY | m1 READY | m2 READY

100 | IN | Move | 3 | 7.758 | 1

test_session

ACTIVE_MG

34 enabled

```
TEST_SESSION [5]: omega
         Out [5]: AXIS:
                       name (R): omega
                       unit (R): None
                       offset (R): 0.00000
                       backlash (R): 0.00000
                       sign (R): 1
                       steps_per_unit (R): 1000.00
                       tolerance (R) (to check pos. before a move): 0.0001
                       motion_hooks (R): []
                       limits (RW):    Low: -inf High: inf    (config Low: -inf High: inf)
                       dial (RW): 100.00000
                       position (RW): 100.00000
                       state (R): READY (Axis is READY)
                       acceleration (RW): 1000.00000  (config:  300.00000)
                       acctime (RW):         0.10000  (config:    3.33333)
                       velocity (RW):      100.00000  (config: 1000.00000)
                       velocity_low_limit (RW):            inf  (config: inf)
                       velocity_high_limit (RW):            inf  (config: inf)
                  Controller name: Mockup_0c9dfab99e0113453cb519bfc0aef647

                  MOCKUP AXIS:
                      this axis (omega) is a simulation axis

                  ENCODER:
                       None

                  CLOSED LOOP:
                       None


TEST_SESSION [6]:
```

robz READY

1 mm

roby READY

2.5

Config

GET `/api/config` Get current config

Console

POST `/api/console/term_size` Set terminal size

Session

GET `/api/session/{session_name}/active_mg` Get active MG

PATCH `/api/session/{session_name}/active_mg` Update active MG

POST `/api/session/{session_name}/call` Call a function in the session

DELETE `/api/session/{session_name}/call/{call_id}` Kill an asynchronous call to a function in the session

GET `/api/session/{session_name}/call/{call_id}` Get the state and response for an asynchronous call to a function in the session

GET `/api/session/{session_name}/scan_saving` Get SCAN_SAVING

PATCH `/api/session/{session_name}/scan_saving` Update SCAN_SAVING

POST `/api/session/{session_name}/scan_saving` Call a SCAN_SAVING function

Hardware

GET `/api/hardware` Get a list of hardware objects

POST `/api/hardware/register` Register a series of hardware objects to be made available via the API

GET `/api/hardware/{id}` Get a single hardware object

POST `/api/hardware/{id}` Call a function on a hardware object

PUT `/api/hardware/{id}` Update a hardware propery

http://daiquiri-staging:5000/openapi/swagger (https://swagger.io/specification/)

blissclient

openapi-python-generator

takes your openapi.json -> gives you a python client

https://github.com/MarcoMuellner/openapi-python-generator

build a high-level python client for remote access of bliss:

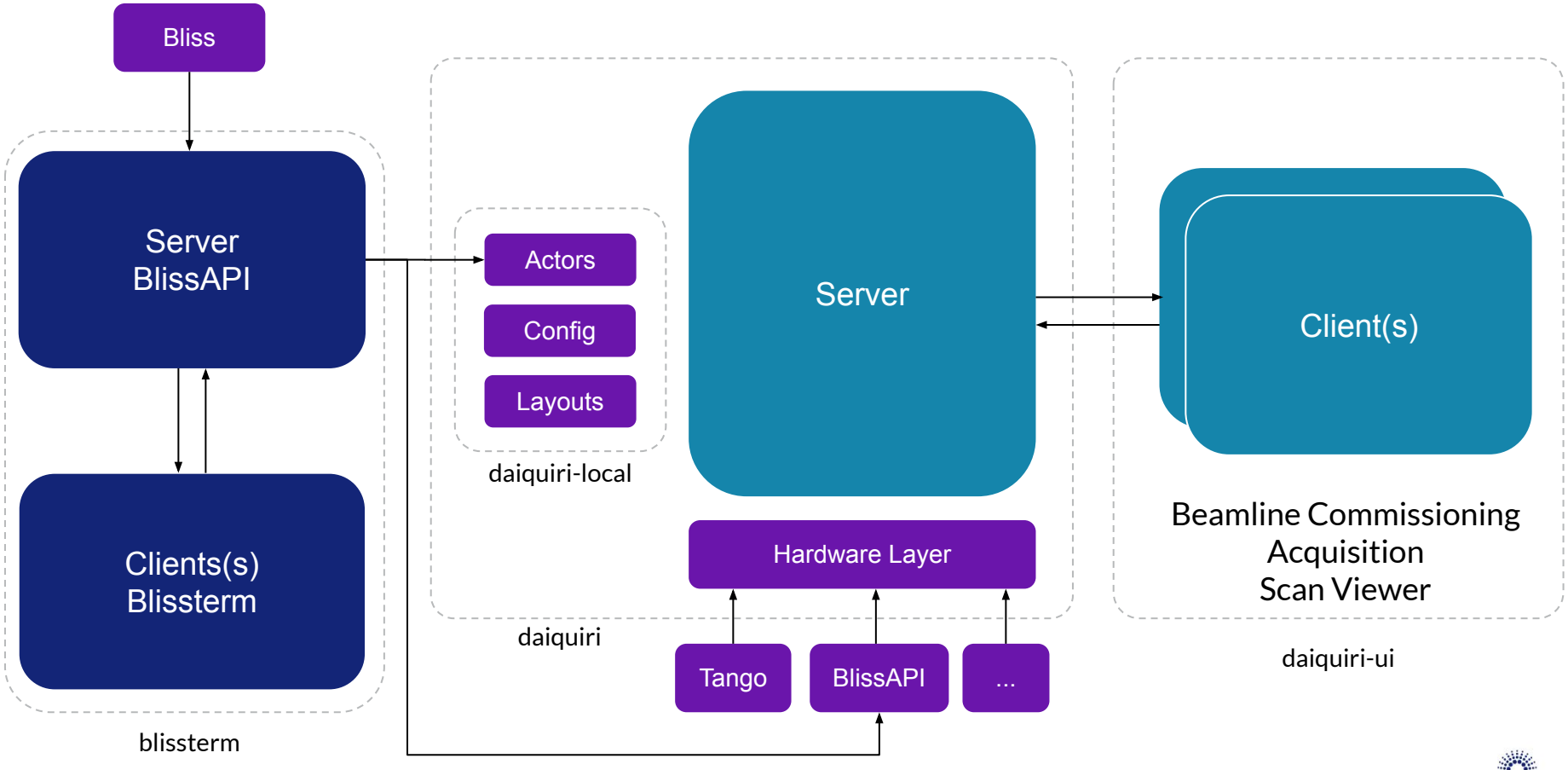
https://gitlab.esrf.fr/bliss/blissclient

on pypi

pip install blissclient

=> Can be used by daiquiri

daiquiri + blissterm



Avenues for Collaboration

Can’t commit to a full framework?

@esrf/daiquiri-lib - shared UI components library

Hardware monitoring layer currently supports:

- bliss and tango
- could be extended to epics

Proof of concept with bluesky queue

Proof of concept with PSI/SLS BEC control system

Summary

Modular web based UI framework

Providing

- **Fully integrated acquisition UIs**
- **Simplified parameterisation**
- **Basic monitoring**

Independant from controls system and scan engine

Extensible to other systems

Links

General Information

- https://ui.gitlab-pages.esrf.fr/daiquiri-landing/about

Source

- https://gitlab.esrf.fr/ui/daiquiri
- https://gitlab.esrf.fr/ui/daiquiri-local
- https://gitlab.esrf.fr/ui/daiquiri-ui

Documentation

- https://ui.gitlab-pages.esrf.fr/daiquiri
- https://ui.gitlab-pages.esrf.fr/daiquiri-ui

Other Projects

- https://gitlab.esrf.fr/ui

Reference: https://doi.org/10.1107/S1600577521009851