
Lamino Documentation

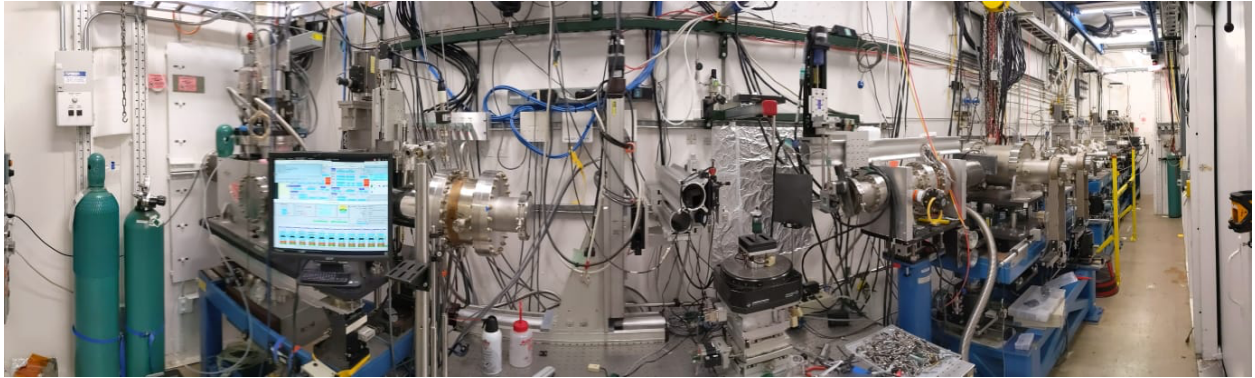
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CONTENTS

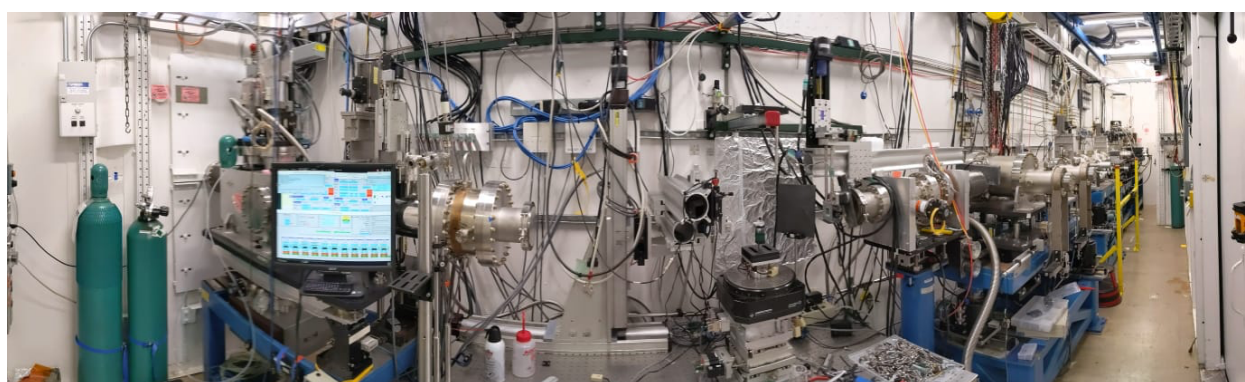
1	Content	3
2	Contribute	7
	Bibliography	9



Manual and troubleshooting information for the laminography project

CONTENT

1.1 About



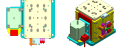
1.2 Hardware

This section contains beamline operation instructions.

1.2.1 Hardware

XRF stack

The XRF sample stack at 2-ID-E consists of:

Description	Model	Image	Driver	Base size (mm)	Links
Top X-Z	Smaract SLS5252S-19		MCS2	52x52x14	stage_0001
Rotary stage	Smaract sr-5714		MCS2	57x57x14	stage_0002
X stage	PI LMS-230		PI Hydra TT	375x230x72	stage_0003
Y stage	Deming		Step pack		

Airbearing stack



Descript- tion	Model	Im- age	Driver	Links
Top X-Z	SLC1780s-151		MCS2 Smaract driver with network	stage_0004 driver_0004
Rotary stage	Pi-Micos UPR-160 AIR		MCS-hydra CM driver (delta star eco)	stage_0005
X-stage	Newport GTS150		Newport ESP301 controller or XPS-8	stage_0006 driver_0006
Y stage	Huber 5103.2-302		Any Bipolar stepper motor driver	stage_0007
Y stage	Deming		Any 5-phase stepper driver (Kohzu)/Oriental motor	

1.3 Publications

1.3.1 Credits

If you use laminography for your experiment please cite [A1]

If you have been using [tomoPy](#) for the 3D reconstructions, please cite [B2]

If using data from [tomobank](#) or [data exchange](#) tools please cite [B3] and [B1]

1.4 TroubleShoot

1.4.1 Bluesky time out error

If you get this time out error:

```
<class 'str': (<class 'TimeoutError'>, TimeoutError('Failed to connect to_
↪mona:StopAcquisition',))
```

at the end of a scan using bluesky verify that the soft IOC providing the PV “mona:StopAcquisition” is up and running with:

```
[user2bmb@lyra,47,startup]$ cd ~/.ipython/profile_2bmb/startup/
[user2bmb@lyra,52,startup]$ caget mona:StopAcquisition
```

if you get:

```
Channel connect timed out: 'mona:StopAcquisition' not found
```

then you need to start the soft IOC with:

```
[user2bmb@lyra,47,startup]$ cd ~/.ipython/profile_2bmb/startup/  
  
screen  
softIoc -d mona.db  
keypresses: [^a] then [d]
```

and you will get:

```
[user2bmb@lyra,46,startup]$ caget mona:StopAcquisition  
mona:StopAcquisition      Ok
```

CONTRIBUTE

- [Documentation](#)
- [Issue Tracker](#)

BIBLIOGRAPHY

- [A1] Viktor Nikitin, Aniket Tekawade, Anton Duchkov, Pavel Shevchenko, and Francesco De Carlo. Real-time streaming tomographic reconstruction with on-demand data capturing and 3D zooming to regions of interest. *Journal of Synchrotron Radiation*, 29(3):, May 2022. URL: <https://doi.org/10.1107/S1600577522003095>, doi:10.1107/S1600577522003095.
- [B3] Francesco De Carlo, Doga Gursoy, Daniel Jackson Ching, Kees Joost Batenburg, Wolfgang Ludwig, Lucia Mancini, Federica Marone, Rajmund Mokso, Daniel M. Pelt, Jan Sijbers, and Mark Rivers. Tomobank: a tomographic data repository for computational x-ray science. *Measurement Science and Technology*, 2017. URL: <https://doi.org/10.1088/1361-6501/aa9c19>.
- [B2] Gürsoy D, De Carlo F, Xiao X, and Jacobsen C. Tomopy: a framework for the analysis of synchrotron tomographic data. *Journal of Synchrotron Radiation*, 21(5):1188–1193, 2014.
- [B1] De Carlo F, Gursoy D, Marone F, Rivers M, Parkinson YD, Khan F, Schwarz N, Vine DJ, Vogt S, Gleber SC, Narayanan S, Newville M, Lanzirotti T, Sun Y, Hong YP, and Jacobsen C. Scientific data exchange: a schema for hdf5-based storage of raw and analyzed data. *Journal of Synchrotron Radiation*, 21(6):1224–1230, 2014.