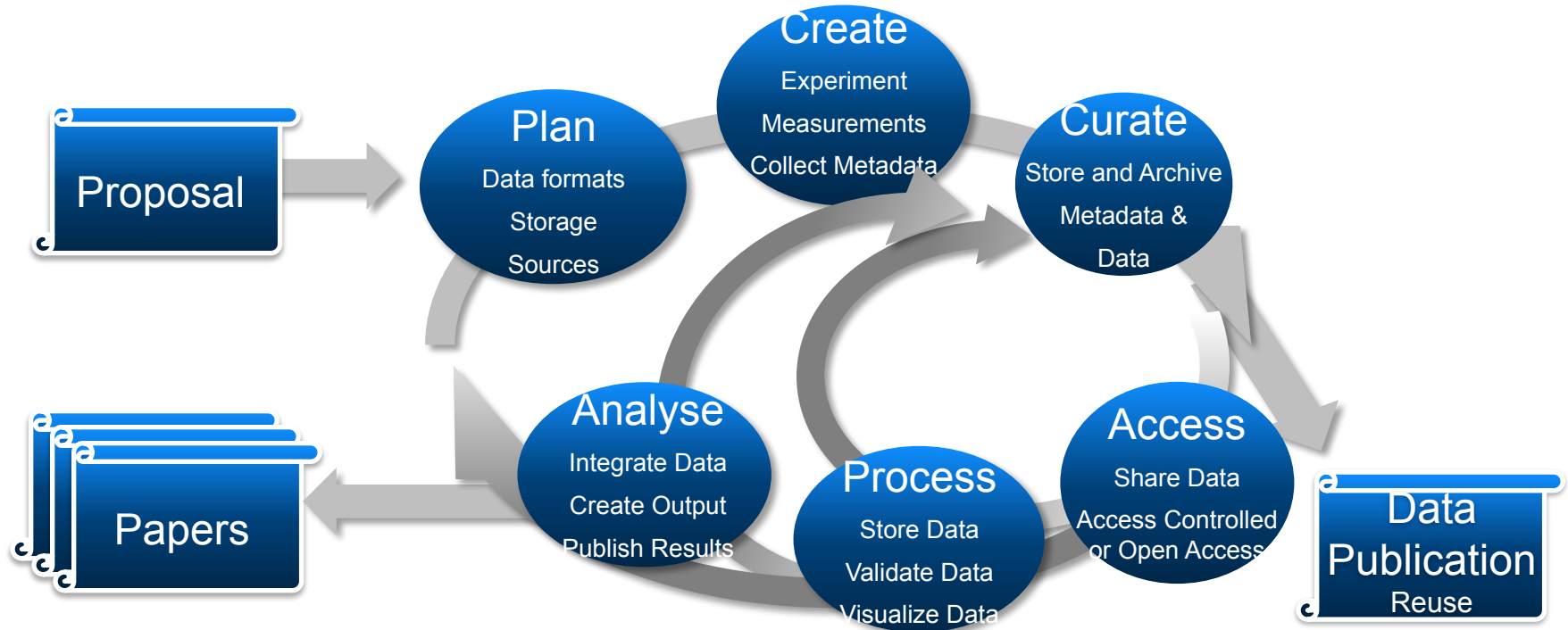


**PSI** Center for Scientific Computing,  
Theory and Data

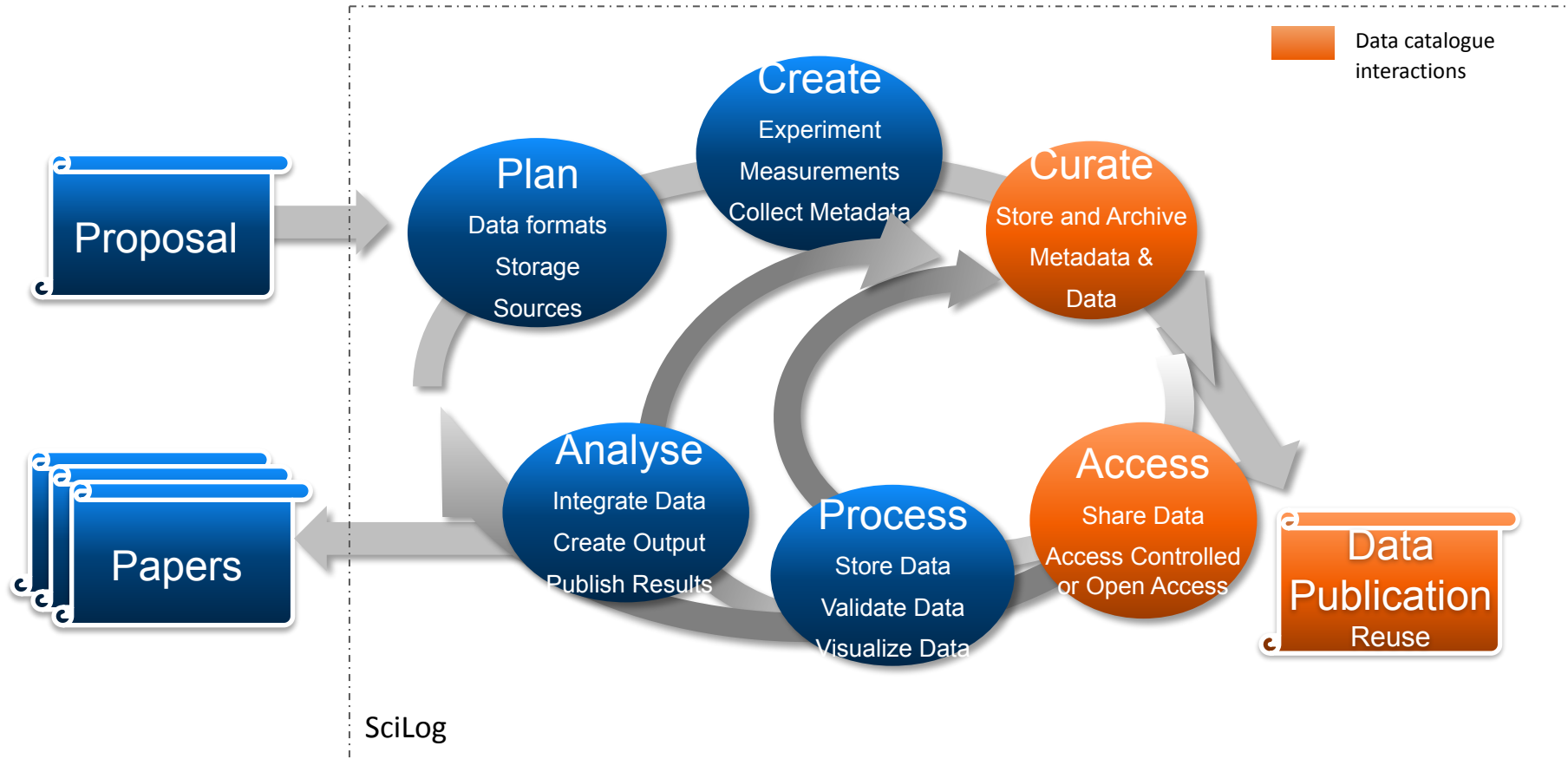
# SciLog – An Electronic Logbook for User Experiments

Grenoble, 2024/09

# A typical user journey



# Interactions with the data curation



## Electronic notebook designed to replace traditional paper notebooks

- Collaborative, real-time **note taking**
- **Permissions** based on experiment-groups
- Supports **upload** of files
- Notes can be **organized**
- Keeps track of **TODOs**
- Content is **searchable**
- All data is **backed up**
- Conversion to **PDFs** and download



PSI account

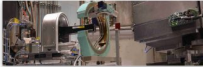
Admin

Login

# Logbooks

Add logbook


**Determination of the Magnetic Structure of Incommensurately Modulated K1-xCrSe2**  
p22168



Delafossite-type ACrX2 (A = Li, Na, K; X = S, Se, Te) compounds are promising candidates for frustrated triangular lattice AFM systems. Using flux synthesis, we obtained large single crystals of the new phase K(1-x)CrSe2 (x ~ 0.13). Its crystal structure is incommensurately modulated due to the K understoichiometry and dominated by undulated [CrSe2] layers. Our anisotropic magnetization measurements indicate FM layers coupled AFM and

Open


**Topological magnons in olivine Mn2SiO4: INS experiment versus symmetry prediction**  
p22103



Topological magnetism is a rapidly developing field generating new theoretical ideas capable to result in innovative information technologies. Theoretical predictions which are based on symmetry considerations anticipate existence of topological crossing of magnons in the olivine family Mn2XO4 (X=Ge, Si). By single crystal inelastic neutron scattering we intend to measure excitation spectrum of Mn2SiO4 system, to use it to determine the


Open

**Pressure tuning of the thinly veiled spin liquid K2Ni2(SO4)3**  
p22112



The search for quantum spin liquid (QSL) states has primarily focused on quasi-2D antiferromagnetic systems, with 3D systems considered less attractive due to reduced quantum fluctuations. However, the recent discovery of a QSL candidate, K2Ni2(SO4)3, presents a new opportunity to explore spin dynamics in a novel magnetic network with unique spin correlations between independent ex

**Kohn anomalies in metallic strontium titanate**  
p22119



The electron-phonon coupling mechanism in the unconventional superconductor strontium titanate has been the subject of extensive debate. Here we propose to directly determine the electron-phonon coupling strength through measurements of Kohn anomalies in the phonon spectrum of metallic strontium titanate. Highly detailed phonon dispersion measurements

# Logbooks

Add logbook


**Determination of the crystal-electric field in NdBr3**  
p22124



**Investigating the impact of uniaxial pressure on magnetic phases and magnon line broadening in the multiferroic spinel FeV2O4**  
p22118



**Investigation of the magnetic ground state at low temperature in the new pyrochlore compound Yb2-Fe2O7**  
p22111



Pressure-induced magnetic structures near the antiferromagnetic quantum critical point of 4.4%Sn-doped	Electrical transport studies by applying pressure to	p22113	Sep 19, 2024	
Determination of the Magnetic Structure of Incommensurately Modulated K1-xCrSe2	Delafossite-type ACrX2 (A = Li, Na, K; X = S, Se, Te)	p22168	Sep 19, 2024	
Topological magnons in olivine Mn2SiO4: INS experiment versus symmetry prediction	Topological magnetism is a rapidly developing field	p22103	Sep 19, 2024	
Pressure tuning of the thinly veiled spin liquid K2Ni2(SO4)3	The search for quantum spin liquid (QSL) states has	p22112	Sep 19, 2024	
Kohn anomalies in metallic strontium titanate	The electron-phonon coupling mechanism in the	p22119	Sep 19, 2024	
Determination of the crystal-electric field in NdBr3	Studying the effect of a slight distortion of the	p22124	Sep 19, 2024	
Investigating the impact of uniaxial pressure on magnetic phases and magnon line broadening in the	The magnetic spinels, of the formula AB2O4 where	p22118	Sep 19, 2024	
Investigation of the magnetic ground state at low temperature in the new pyrochlore compound Yb2-	This proposal investigates the low-temperature	p22111	Sep 19, 2024	
Study of the CEF scheme of HolnCu4 as function of magnetic field	Materials featuring magnetic frustration are at the	p22102	Sep 19, 2024	
Characterization of spiral and collinear magnetic structures in YBaCuFeO5 single crystals with distinct	YBaCuFeO5 (YBCFO) is a promising oxide for room-	p20241081	Sep 19, 2024	
Water dynamics in PEDOT:PSS/CNF films in dependence of ionic strength followed simultaneously with	PEDOT:PSS is an electrically conductive polymer,	p22127	Sep 19, 2024	
Measurement of thickness and scattering length density of solid electrolyte interphase (SEI) on model Si	We have chemically aged amorphous Si-wafers in	p22097	Sep 19, 2024	
Magnetic crystal structure of natural vermiculite clay - large band gap semiconductor with the magnetic	The goal of the experiment is to determine magnetic	p22110	Sep 19, 2024	

# Logbooks

Add logbook

Instrument Development/Internal beamtime

p22173



No proposal found.

Open

Determination of the Magnetic Structure of Incommensurately Modulated  $K1-xCrSe2$

p22168



Delafossite-type  $ACrX_2$  ( $A = Li, Na, K; X = S, Se, Te$ ) compounds are promising candidates for frustrated triangular lattice  $\Delta FM$  systems. Using flux synthesis, we

## New logbook

Title \*

my notes Exp 123

Location (Beamline or Instrument) \*

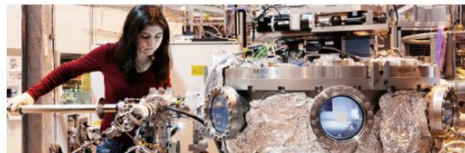
/PSI/SLS/SIM

ownerGroup \*

accessGroups

private

Description



Change thumbnail

Delete

Cancel

OK

Topological magnetism is a rapidly developing field generating new theoretical ideas capable of result in innovative information technologies. Theoretical

The search for quantum spin liquid (QSL) states has primarily focused on quasi-2D antiferromagnetic systems, with 3D systems considered less attractive due to

The electron-phonon coupling mechanism in the unconventional superconductor strontium titanate has been the subject of extensive debate. Here we propose to



Tasks 15 items left

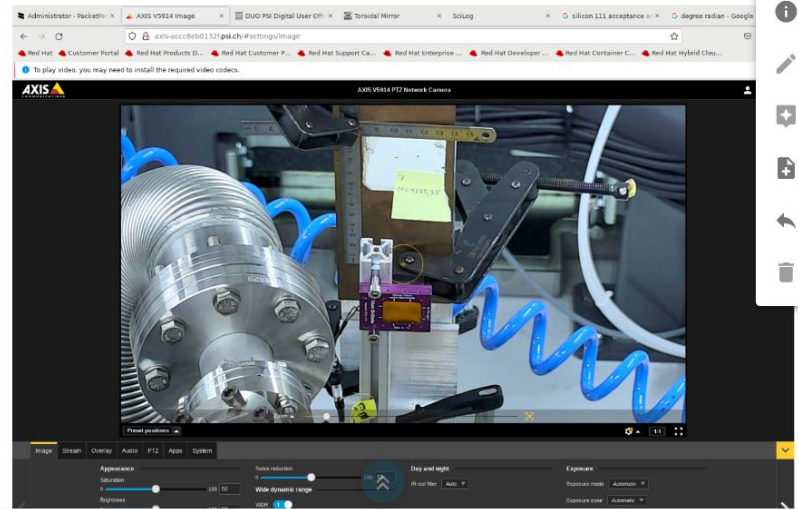
Add task

- fix\_aerotech\_startup\_with\_Xiaoqiang
- Connect\_dry\_N2\_to\_Pilatus\_2M
- rotate\_ss\_camera\_view\_90deg\_counterclockwise
- NoMachine\_at\_x06da\_cons
- something\_cutting\_the\_beam\_at\_the\_bottom\_(not\_the\_camera)\_with\_pitch\_0.3
- Beam focus on SS
- FE M1 alignment with beam
- Measure\_flux\_with\_Hamamatsu\_diodeafter\_SS
- Beam-mark-at-the-entrance-flange-of-KB-chamber
- Readout\_exposure\_box\_BPM
- Start\_aerotech\_and\_PRIGO
- Setup\_channel\_archiver
- Beampipe\_between\_SS\_and\_KB
- magnet

Logbook view

12 / Aug 30, 2023, 2:20:43 PM / vincent.  
20230830\_flux\_measurement

Flux setup



- Info
- Edit
- Dashboard name
- Add comment
- Reply
- Delete

unx-sls\_mx,OU=Groups,OU=psi,DC=d,DC=psi,DC=ch/ unx-sls\_mx,OU=Groups,OU=psi,DC=d,DC=psi,DC=ch/unx-gw,unx-gw\_x06da,OU=Groups,OU=psi,DC=d,DC=psi,DC=ch

Choose heading

$\lambda x: x+1$

post-analysis simulation





Search

BETA



PX-3 Commissioning

Edit dashboard

Tasks

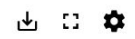


15 items left

Add task

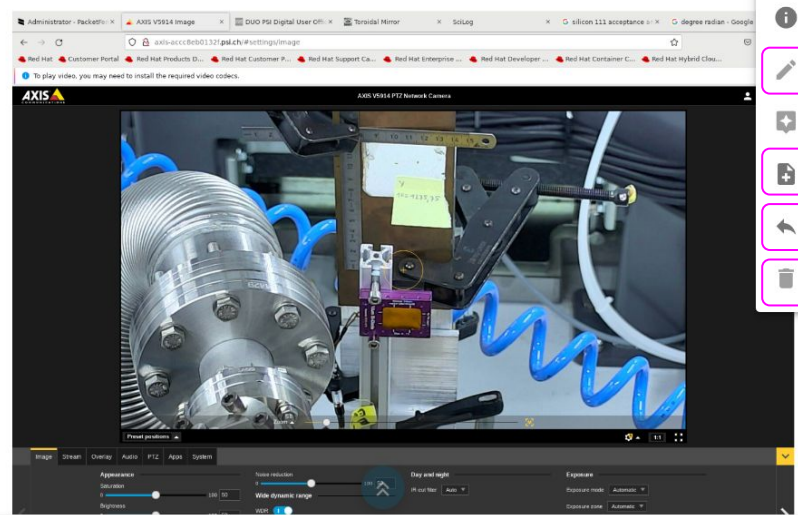
- fix\_aerotech\_startup\_with\_Xiaoqiang
- Connect dry N2 to Pilatus 2M
- rotate ss camera view 90deg counterclockwise
- NoMachine at x06da-cons
- something cutting the beam at the bottom (not the camera) with pitch 0.3
- Beam focus on SS
- FE M1 alignment with beam
- Measure flux with Hamamatsu diode after SS
- Beam mark at the entrance flange of KB chamber
- Readout exposure box BPM
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- magnet

Logbook view



12 / Aug 30, 2023, 2:20:43 PM / vincent.  
20230830\_flux\_measurement

Flux setup



**Info**

- Edit
- Dashboard name
- Add comment
- Reply
- Delete

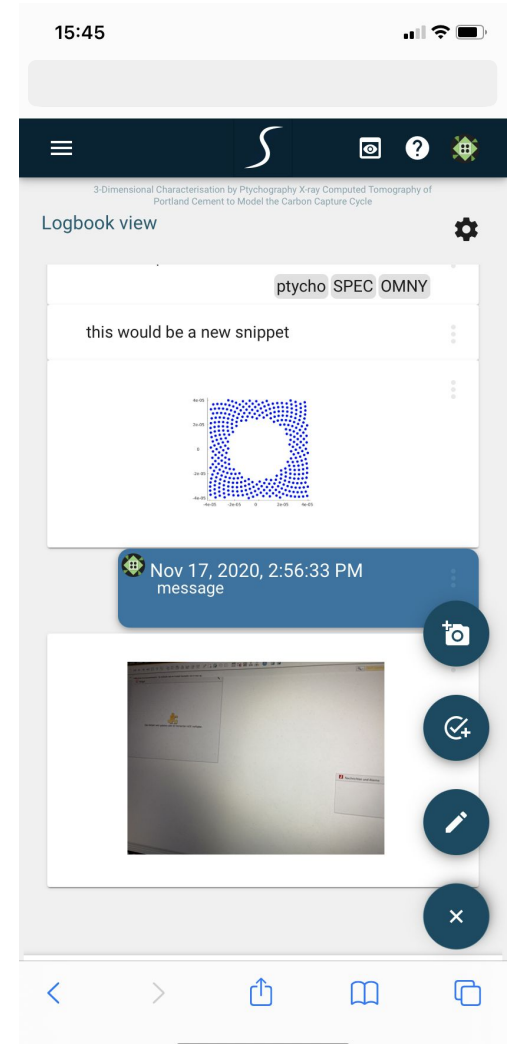
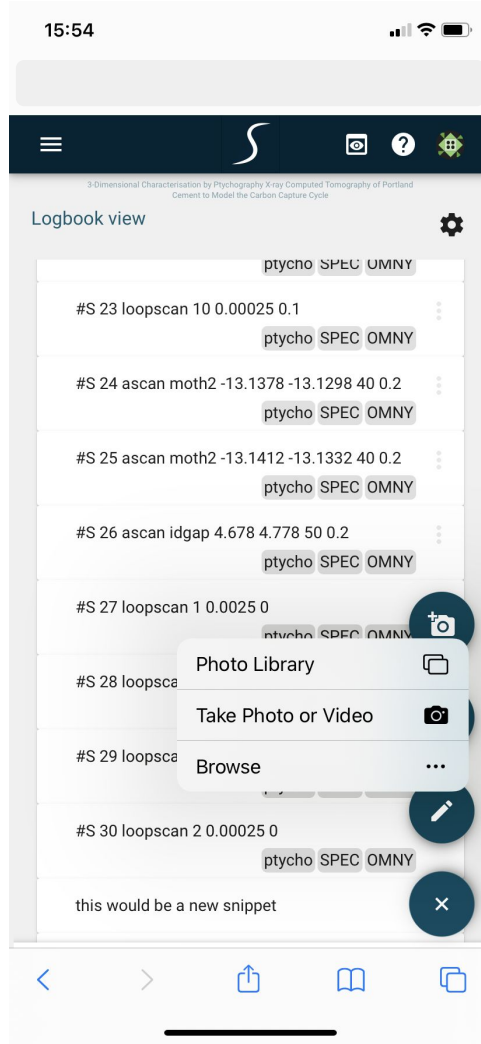
unx-sls\_mx,OU=Groups,OU=psi,DC=d,DC=psi,DC=ch/ unx-sls\_mx,OU=Groups,OU=psi,DC=d,DC=psi,DC=ch/unx-gw,unx-gw\_x06da,OU=Groups,OU=psi,DC=d,DC=psi,DC=ch

Choose heading **B** *I*  $x_2$   $x^2$

lambda x: x+1 Python

post-analysis simulation





# Python SDK for programmatic ingestion

```
pgroup = "p1234"
```

```
log = SciLog("https://scilog.psi.ch/api/v1", options={"username": "swissfelaramis-bernina@psi.ch"})
```

```
logbooks = log.get_logbooks(where={"ownerGroup": pgroup}, limit=10, skip=0)
```

```
logbook = logbooks[0]
```

```
# make sure that further actions to this logbook
```

```
log.select_logbook(logbook)
```

```
# example of *adding* information (text, images, tags) to this logbook. You can concatenate as much information as you like
```

```
msg = LogbookMessage()
```

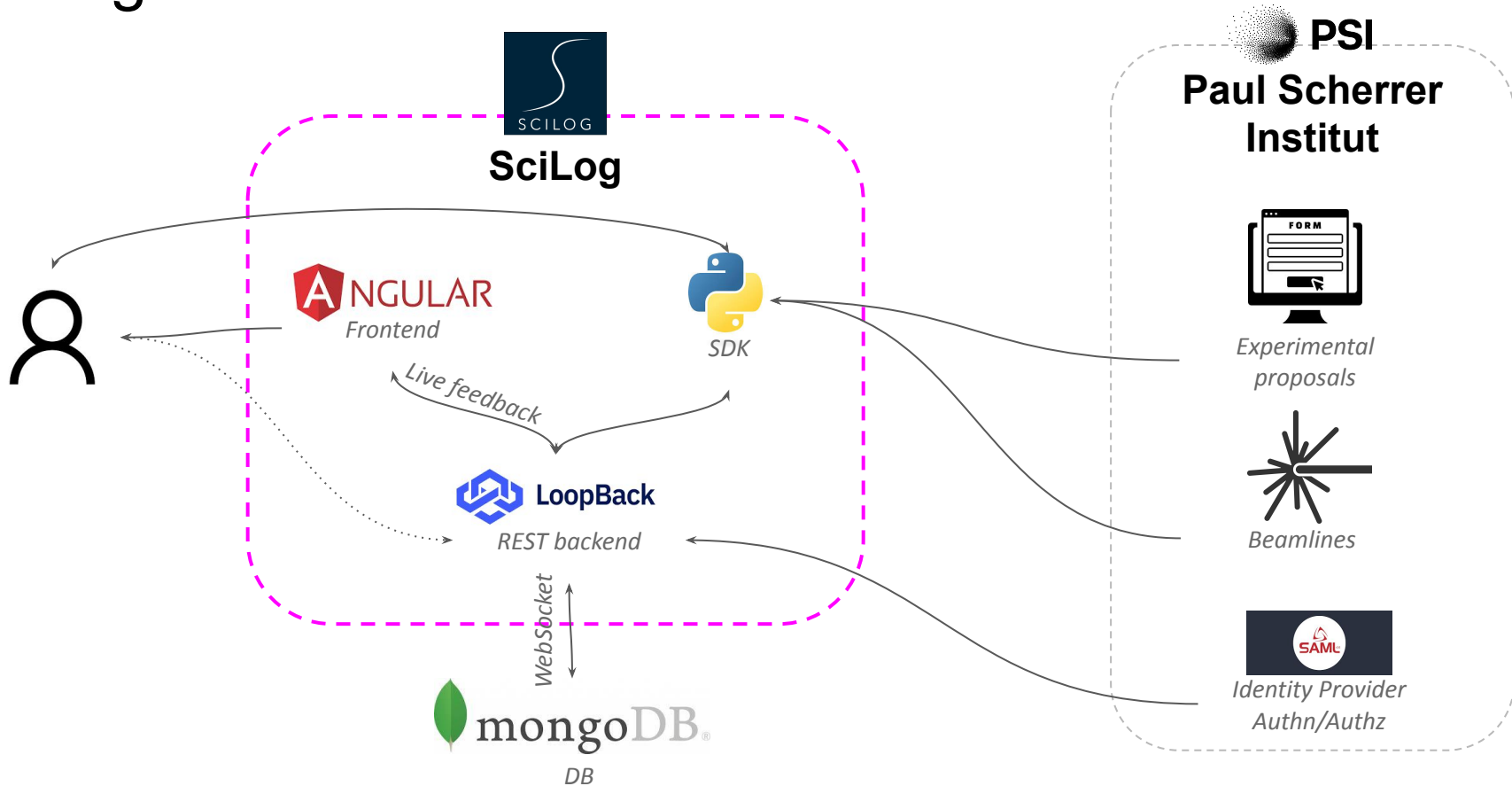
```
msg.add_text("<p>Another example text<p>").add_file("./Image1.png").add_tag(["color"]).add_text(
```

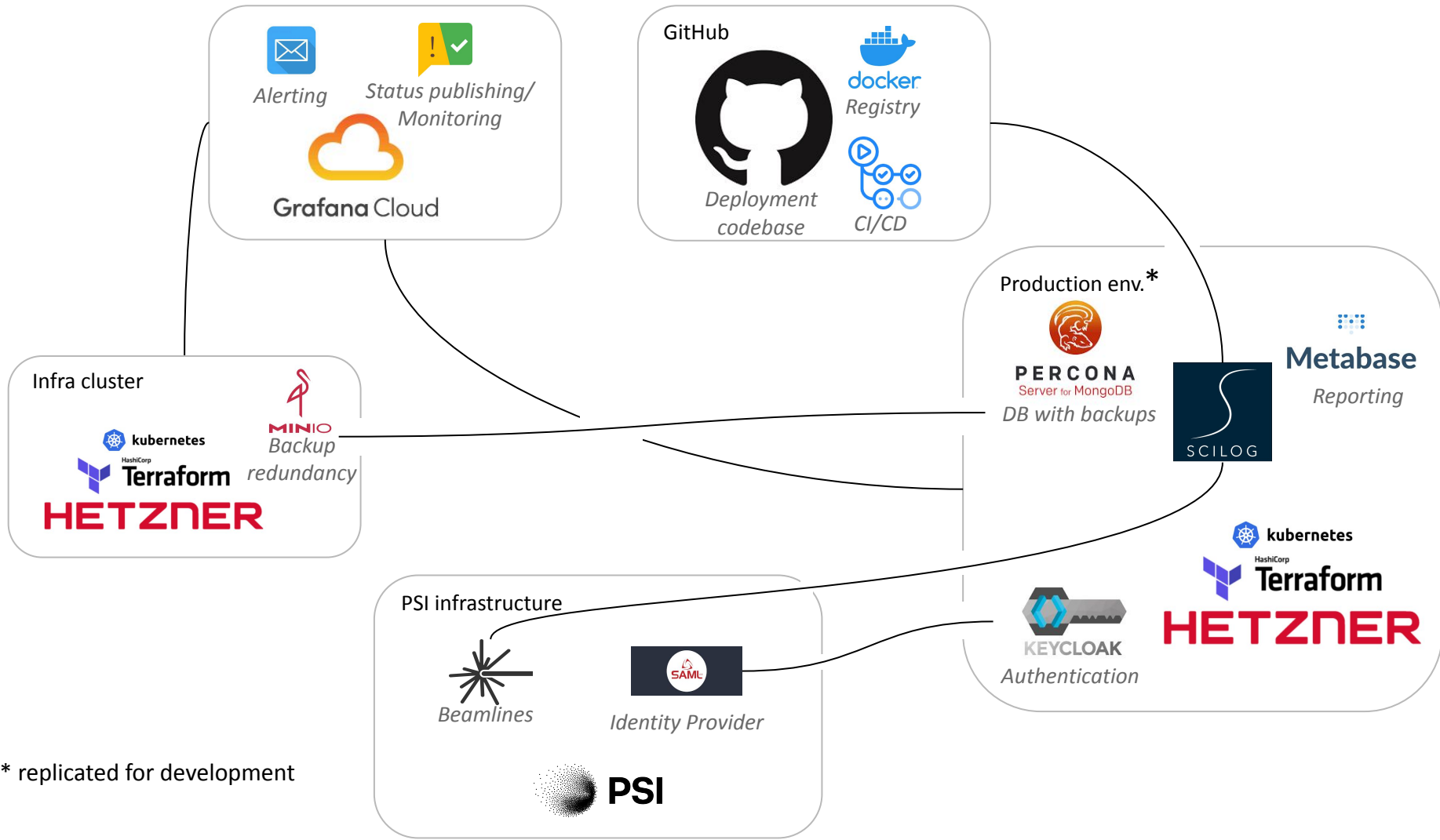
```
    "<p>After the image<p>")
```

```
).add_file("./Image2.png").add_tag(["test_tag"])
```

```
log.send_logbook_message(msg)
```

# High-level architecture/interactions



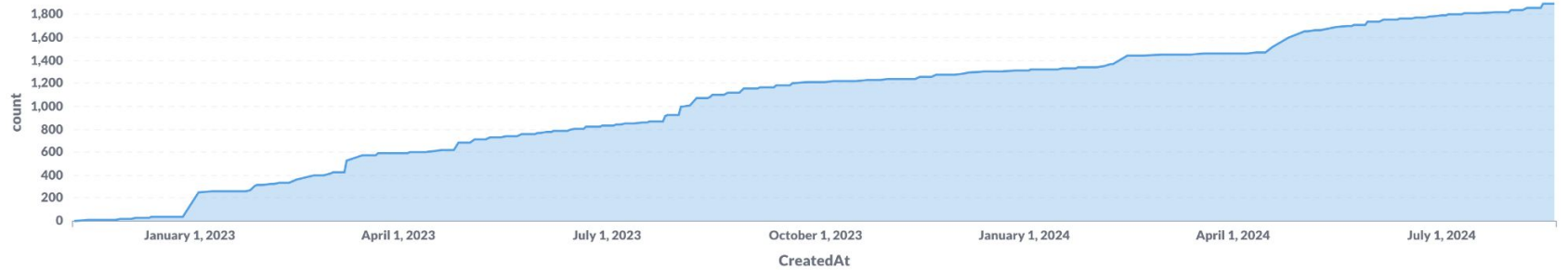


\* replicated for development

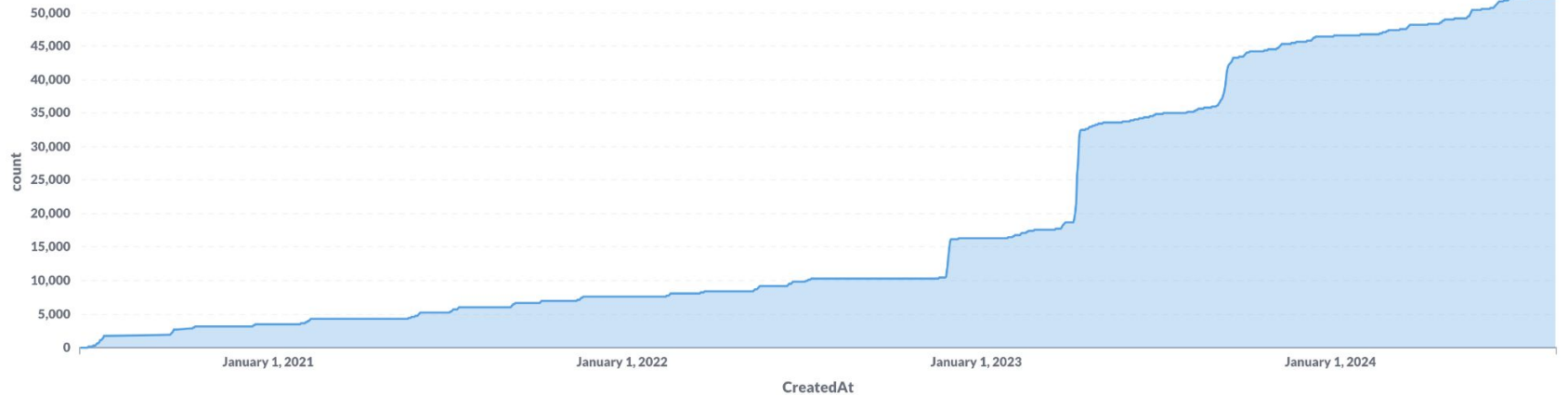
# SciLog usage



SciLog logbook count



SciLog paragraphs count



# Docs

- SciLog UI: <https://scilog.psi.ch> (QA: <https://scilog.qa.psi.ch>)
- SciLog API: <https://scilog.psi.ch/api/v1> (QA: <https://scilog.qa.psi.ch/api/v1>)
- SciLog paper: <https://doi.org/10.18429/JACoW-ICALEPCS2023-THPDP073>
- SciLog GitHub: <https://github.com/paulscherrerinstitute/scilog>
- SciLog deploy GitHub: <https://github.com/paulscherrerinstitute/scilog-ci>

**Thank you!**