



**EUROPEAN  
SPALLATION  
SOURCE**



# System Acceptance Review (SAR) meeting for DREAM

Experiment Control  
=ESS.NSS.H01.DREAM.K02.K01

Data Collection  
=ESS.NSS.H01.DREAM.K02.K02

PRESENTED BY GEORGE NICOLAS KONTOGIORGOS ON BEHALF OF ECDC GROUP

2026-03-26

# System Definition

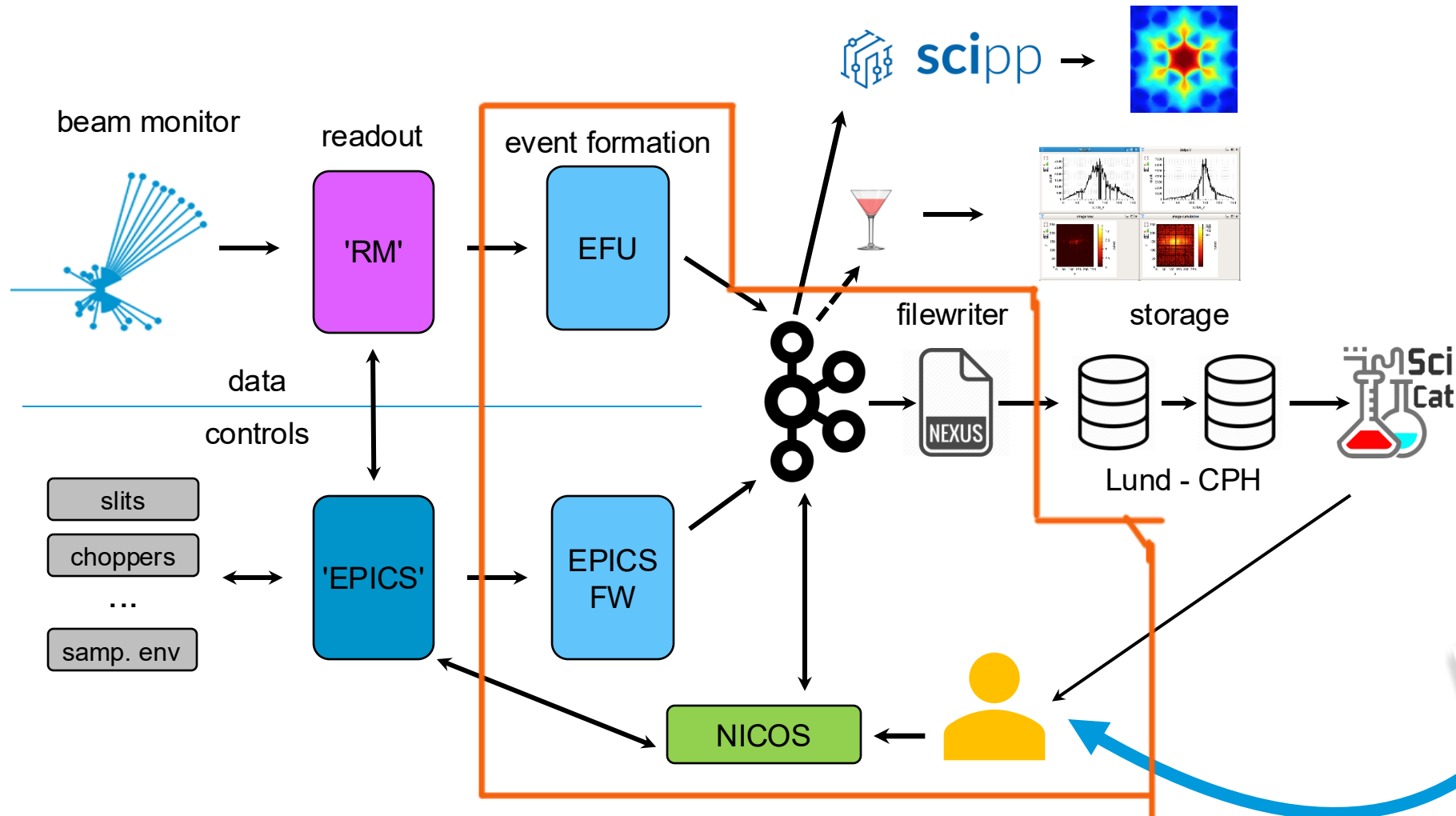


## Complete ECDC delivery package

instrument hardware

site infrastructure

DMSC




# Status Report ECDC



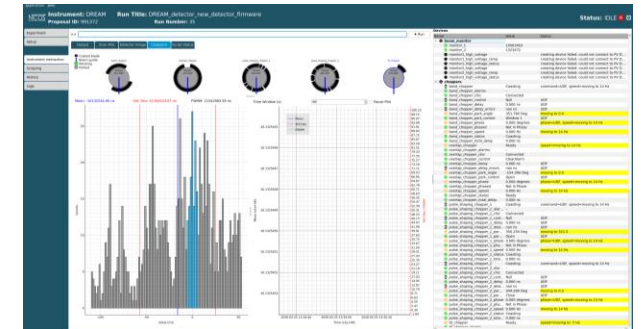
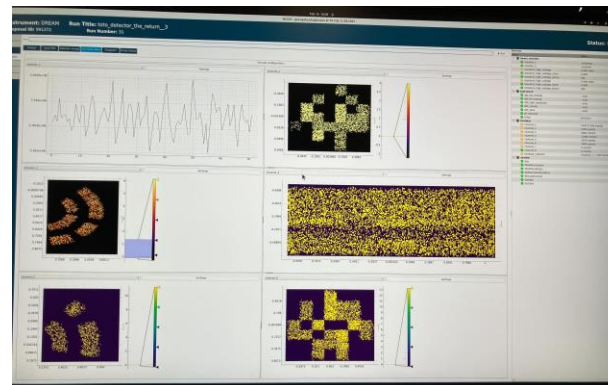
Type: Status report

Perspective: Overview

Principal responsibilities:

=ESS.NSS.H01.DREAM.K02	ECDC		All cases 
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- **NICOS Integration and NeXus Data Recording**
- **Support for Integrated Test with Instrument staff**
- **Support for Local SAT of every Technology Group**



# Status Report ECDC



System	Jira ticket	Notes	Status
<b>Collimation slits</b> <a href="#">ESS-6013997</a>	<b>DREAM visual inspection of slits</b> <a href="#">NIT-668</a>	Although it is not for ECDC, checking NICOS while seeing the slits with naked eyes is an important validation—there is a comment on the NIT about it.	To do
	<b>DREAM: Close-loop to Open-loop control of slits</b> <a href="#">NIT-669</a>	Open/closed loop control will be removed from NICOS restricting access. It does not affect operation.	To do Non-critical
	<b>DREAM: Slits limits are displayed with incorrect accuracy</b> <a href="#">NIT-678</a>	Investigate why limits are displayed with several decimal places—floating point behavior. It does not affect operation.	To do Non-critical
	<b>epics_motor: add tests and improve limit/offset/miss handling</b> <a href="#">ECDC-5509</a>	Not a NIT but relevant. Limits were swapped due to a bug in NICOS. Although it affects operation because it can set senseless limits to the collimation slits, it is not harmful because EPICS limits would block non-safe setpoints.	In review Critical but not harmful
<b>Beam monitors</b> <a href="#">ESS-6018288</a>	<b>DREAM: Setup of the ADC threshold on the CDT beam monitors</b> <a href="#">NIT-670</a>	ADC threshold was thought to be needed to reduce data, but the current data flow already does it.	Closed
<b>Detectors</b> <a href="#">ESS-6017703</a>	<b>DREAM Ar-CO2 gas pressure at detector and related alarm</b> <a href="#">NIT-672</a>	Although NICOS is mentioned because it is the first layer for the user, alarms and limits need to be set in EPICS, to be solved by ICS.	To do
	<b>DREAM: detector data format is not according to the ICD</b> <a href="#">NIT-629</a>	There is a mismatch between the delivered electronics connections and logical pixel mapping, often leading into incorrect calculation of the pixel value. We are going to change the mapping once we have confirmed the issue.	To do
<b>Choppers</b> <a href="#">ESS-5975057</a>	<b>Verify and fix how the choppers read the frequency PVA</b> <a href="#">ECDC-5388</a>	Mismatch between chopper and Nexus reference frames definitions. Work in progress, new PVs created on chopper IOC, that includes the Nexus convention.	To do

# Status Report ECDC

## Commissioning Status



**Performance with respect to tests** **Pass**

**Main Issues (NCR/NIT)** [ECDC-5509](#)  
[NIT-629](#)

**For outstanding actions** Fix the NICOS motor device limit handling—code changes [under review](#).  
Wait for neutrons to get the current detector setup

**What are the treatments?** Write tests and perform them in gitlab pipelines—ECDC is currently enhancing its testing

**When will they be fixed?**

- Before Site Readiness Review (SRR)
- Before Beam on Target (BoT)
  - NICOS motor limits handling
  - Detector pixel mapping
- Before Operations (Ops)

**Are deferred test integrated into the hot commissioning plan?** N/A

**Is the software<sup>†</sup> ready for hot commissioning?** Yes, ready for all the future improvement

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<sup>†</sup> Hardware is handed to ECDC Group already configured, hence only control and data acquisition software is managed by ECDC Group.

# Hot commissioning ECDC



Supporting activities from instrument Hot Commissioning plan

- **Related to** [ESS-5552102](#)

Operating & Maintenance manuals

- [ESS-5706535](#) - **NICOS Operation Manual**

Challenges ?

- **To discover new feature along the way**

Resources required

- **½ FTE Peak load**

Out of hours

- **As needed**

Source: hot commissioning plan (DREAM)

