



# System Acceptance Review meeting for DREAM

DREAM Chopper System  
=ESS.NSS.H01.DREAM.A01.R01

PRESENTED BY ERIK NILSSON

2026-03-12

# Status Report

## DREAM Chopper System

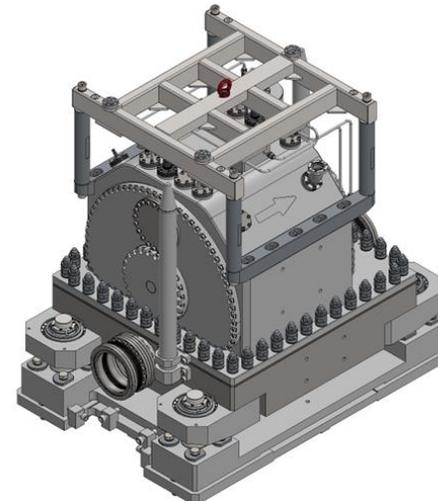
### Status:

- Installed and commissioned
- Integrated and tested in all control layers

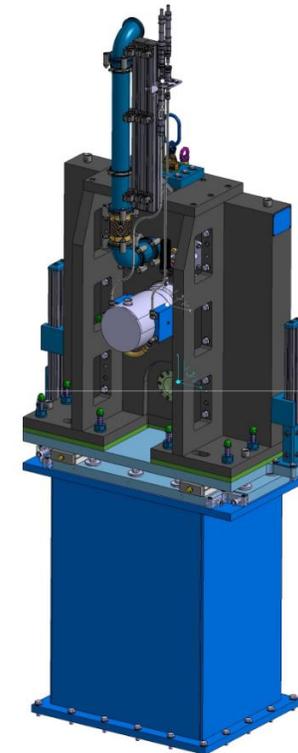


System name	FBS	EPL	CR	Deferred	FAT	SAT	Decl. of Conformity
DREAM chopper system	DREAM.A01.R01	ESS-3759938	No	No	N/A	N/A	N/A
Disc Chopper System	DREAM.A01.R01.R01	ESS-3921276	N/A	N/A	ESS-4969447 ESS-5584698	ESS-5767433	ESS-5767432
T0 Chopper System	DREAM.A01.R01.R02	ESS-2921274	N/A	N/A	ESS-5635463	ESS-5856744	ESS-5879485

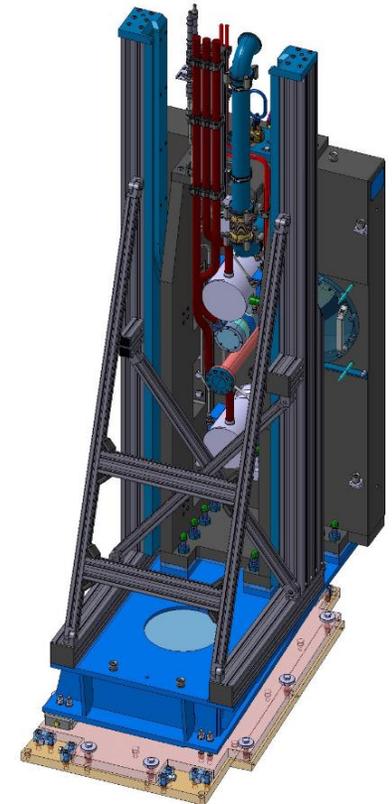
- Disc chopper system supplied by Jülich chopper team. T0 supplied by Mirrotron
- Fast triple axis chopper assembly.
  - PSC-101 – 750mm 308Hz
  - PSC-102 – 750mm 308Hz
  - OC-103 – 342mm 14Hz
- Fast single disc chopper assembly
  - BC-201 – 750mm 112 Hz
- T0 Chopper
  - 350mm 28 Hz (350kg)
- Three chopper racks
  - One standard chopper control rack
  - Two choppers (Drive and control) for T0



T0 Chopper  
R01.R02.R01



BC-200 Disc Chopper  
R01.R01.R02



PSC-OC-100 Disc Chopper  
R01.R01.R01



# Status Report

## DREAM Chopper System

- R01 SAT performed
  - ESS-5767433 – SAT protocol
  - ESS-5767432 – User and maintenance instruction
- R02 SAT performed
  - ESS-5856744 – SAT protocol
  - ESS-5767434 – User and maintenance instruction
- System is working as intended
- Systems ready for hot commissioning
- NIT-587 – Isolation missing
  - Disc chopper system not isolated.
    - It is grounded to instrument ground.
    - Not affecting performance of system.
  - T0 chopper system not isolated.
    - It is grounded to instrument ground.
    - Isolated and measured at the time of installation but grounded through guide system.
    - Not affecting performance of system.
  - Decision to resolve without action.

Test case		R01 Pass/Fail	R02 Pass/Fail	Note
1.	Verification of system document completeness	Pass	Pass	
2.	Deferred tests from ingoing FATs	Pass	N/A	
3.	Verification of installed positions of mechanical assemblies	Pass	Pass	
4.	Verification of mechanical chopper interfaces	Pass	Pass	
5.	Verification of system remote handling capabilities.	Pass	Pass	
6.	Verification of mechanical assembly installation quality	Pass	Pass	
7.	Verification of cooling system	Pass	Pass	
8.	Verification of system electrical isolation and grounding	Fail	Fail	NIT-587
9.	Verification of rack electrical system	Pass	Pass	
10.	Verification of external sensors	Pass	Pass	
11.	Verification of chopper performances	Pass	Pass	
12.	Verification of chopper control via epics	Pass	Pass	
13.	Verification of timing system	Pass	Pass	
14.	Verification of vacuum levels and leak rates	Pass	Pass	



# Hot commissioning

## DREAM Chopper System

- System ready for hot commissioning – SAT passed.
- Chopper group planned activities for hot commissioning:
  - Support instrument team with chopper related issues.
  - Technician support if requested.
  - Engineering support if requested.
  - Scientific support if requested.
- User and maintenance manuals available – ESS-5456760
- Displaced working hours available if required.
- Currently no on-call support available.