



System Acceptance Review meeting for BIFROST

BIFROST Chopper System
=ESS.NSS.H01.BIFRO.A01.R01

PRESENTED BY ERIK NILSSON

2025-08-25



Status Report

BIFROST Chopper System

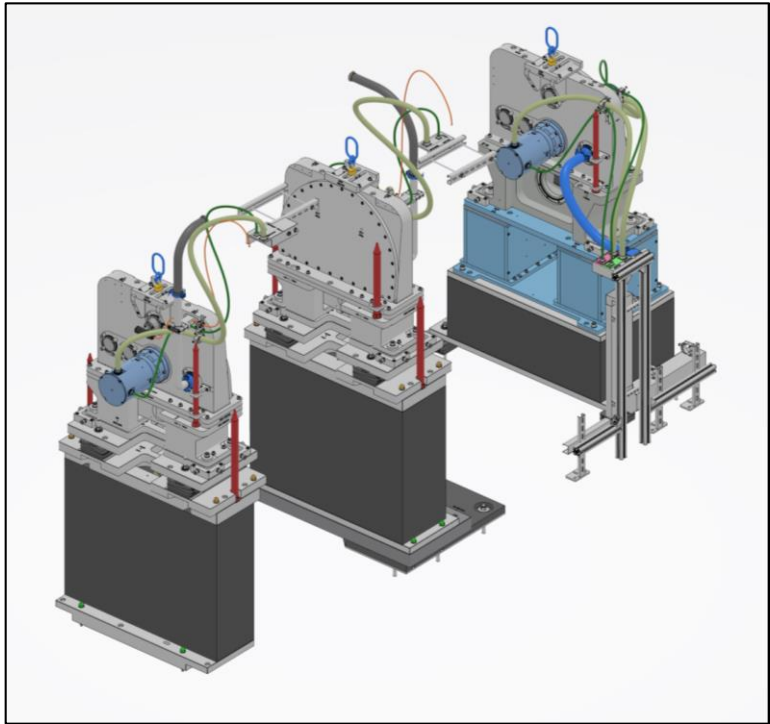
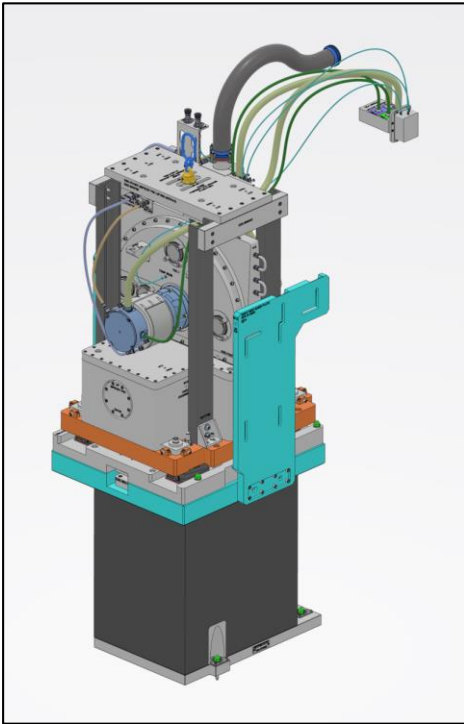
System name	FBS	EPL	CR	Deferred	Delivered	Installed	Commissioned	FAT	SAT	Compliance
BIFROST chopper system	BIFRO.A01.R01	ESS-3820226	CR 13.189	CR 13.189	ESS-4227821 (R01) ESS-4227826 (R02)	ESS-5450567 (R01.R01) ESS-5795898 (R01.R02) ESS-4498840 (R01.R03) ESS-5532612 (R02.R01)	ESS-4227822 (R01) ESS-4227827 (R02)	ESS-4227821 (R01) ESS-4227826 (R02)	ESS-4227822 (R01) ESS-4227827 (R02)	(ESS-4247119)*

System scope:

- Fast double disc chopper 126Hz (210Hz, see CR) [Custom]
- Two single slow speed choppers [Std]
- One double disc slow speed chopper (Std)
- Standard chopper control rack

Status:

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





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Standard Chopper Assemblies and CHIC CE marked

SAT performed and passed

- ESS-4227822 and ESS-4227827
- Cooling loop SAT not completed (NIT 242)
- Electrical isolation fail on bunker choppers.
- PE cables missing - solved since SAT (NIT-241)
- Minor issues on BWC – solved since SAT.

Systems working as intended

Systems ready for hot commissioning

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	N/A	
6.	Verification of mechanical assembly installation quality	Pass	Pass	
7.	Verification of cooling system	Fail	N/A	NIT-242
8.	Verification of system electrical isolation	Fail	Fail*	NIT-243 and NIT-241
9.	Verification of rack electrical system	Pass	Pass	
10.	Verification of CHIC hardware interlocks and values	Pass	N/A	
11.	Verification of chopper performances	Pass	Pass	
12.	Verification of local control variables	Pass	Pass	
13.	Verification of timing system	Pass	Pass	
14.	Verification of vacuum levels and leak rates	Pass	Fail*	Missing report

*Solved since SAT

Hot commissioning

BIFROST Chopper System

Systems 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-5445985 (R01) and ESS-5726997 (R02)

No deplaced working hours or on-call support planned

