



System Acceptance Review meeting for LOKI

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

PRESENTED BY ERIK NILSSON

2025-09-17

Status Report

LOKI Chopper System

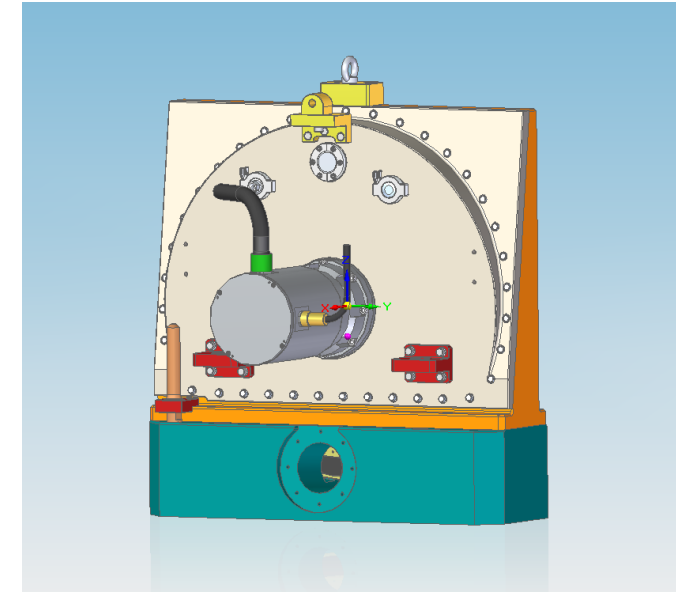
System name	FBS	EPL	CR	Deferred	FAT	Installed	SAT
LOKI chopper system	LOKI.A01.R01		N/A	N/A	ESS-3832163	R01 – ESS-5661744 R03 – ESS-4785832	ESS-3805769

System scope:

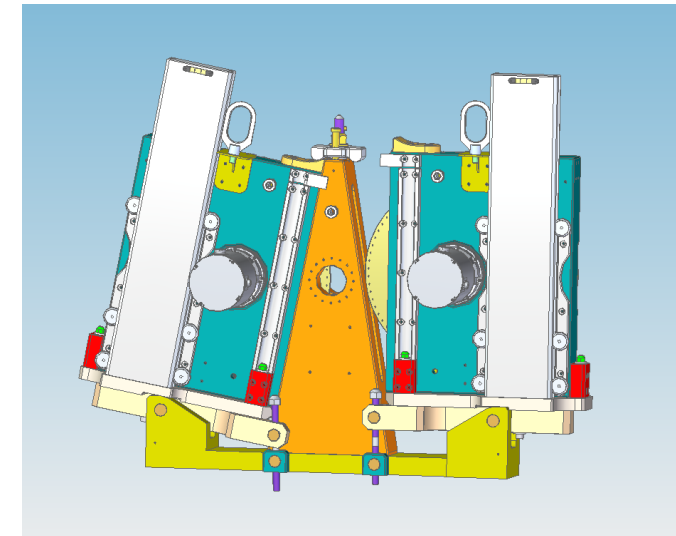
- Two slow double disc chopper assemblies
 - BWC-100 – 7 / 14 Hz
 - SFOC-100 – 14Hz
 - ISIS development, build and delivery
- Standard chopper control rack
 - ESS development, build and delivery

Status:

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



Chopper 1 – BWC-100



Chopper 3 – SFOC-100

Status Report

LOKI Chopper System

- SAT performed and passed
 - ESS-3805769 – SAT protocol
 - ESS-5726996 – User and maintenance instruction
- Systems working as intended
- Systems ready for hot commissioning
- NIT-129 – BWC-100 not isolated
 - System not isolated. It is grounded to instrument ground.
 - Not affecting performance of system.
- NIT-130 – SFOC-100 isolation measurement not possible
 - Isolated by support concrete. Due to installation, confirming measurement not possible. System grounded through the collimator.
 - Not affecting the performance of the system.
- NIT-138 and NIT 139 – Missing vacuum reports
 - No in-situ vacuum leak report was performed on the LOKI choppers.
 - Choppers are operating well within the limits with no issues.
 - Suggestion to accept as is.

Test case		Pass/Fail	Note
1.	Verification of system document completeness	Pass	
2.	Deferred tests from ingoing FATs	N/A	
3.	Verification of installed positions of mechanical assemblies	Pass	
4.	Verification of mechanical chopper interfaces	Pass	
5.	Verification of system remote handling capabilities.	Pass	
6.	Verification of mechanical assembly installation quality	Pass	
7.	Verification of cooling system	N/A	
8.	Verification of system electrical isolation	Fail	NIT-129 and NIT-130
9.	Verification of rack electrical system	Pass	
10.	Verification of CHIC hardware interlocks and values	N/A	
11.	Verification of chopper performances	Pass	
12.	Verification of local control variables	Pass	
13.	Verification of timing system	Pass	
14.	Verification of vacuum levels and leak rates	Fail	NIT-138 and NIT-139

Hot commissioning

LOKI 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

