



Freia Instrument Team

Lead scientist: Hanna Wacklin– Lead engineer Jim Nightingale



Tom Arnold Lead Scientist

# FREIA

## Update

Hanna Wacklin



Integration Engineer: Clara Lopez

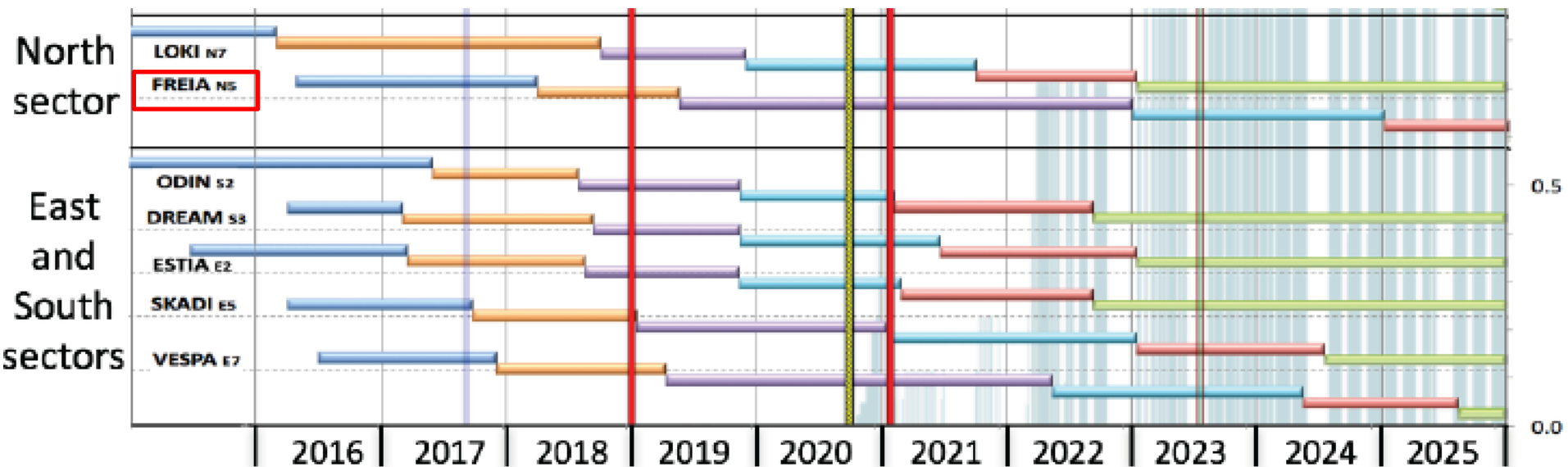


[www.europeanspallationsource.se](http://www.europeanspallationsource.se)

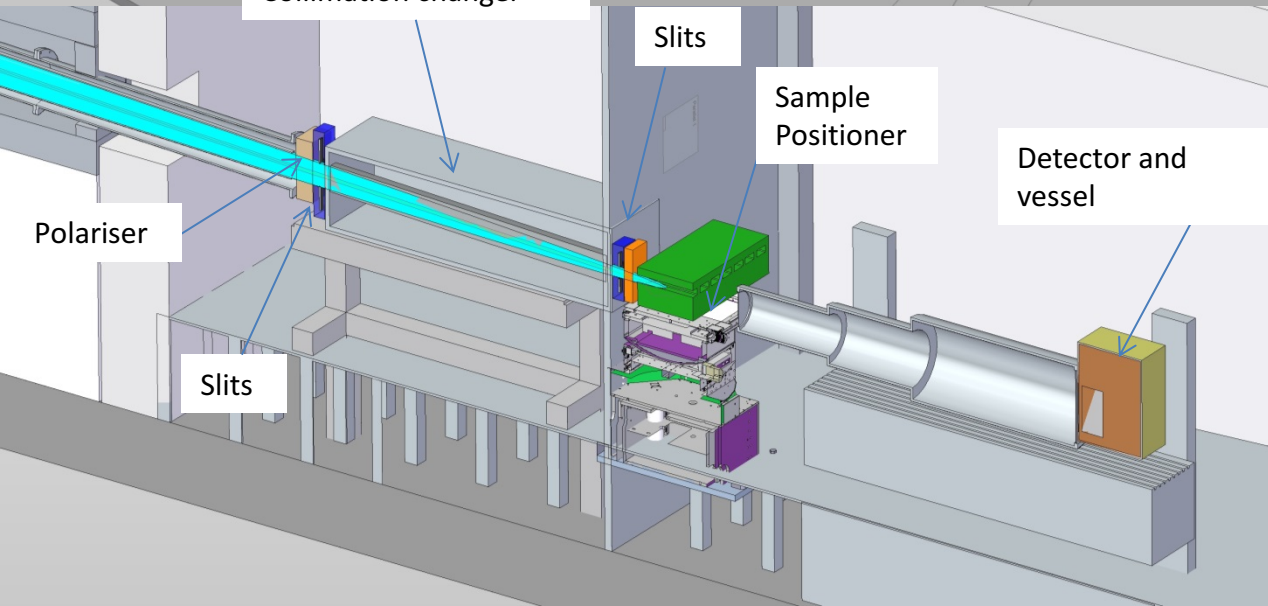
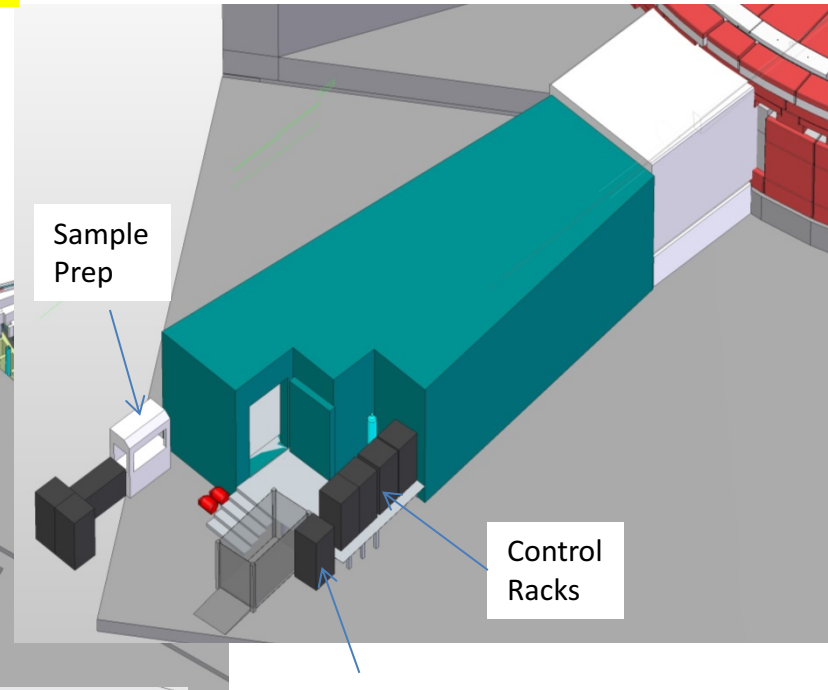
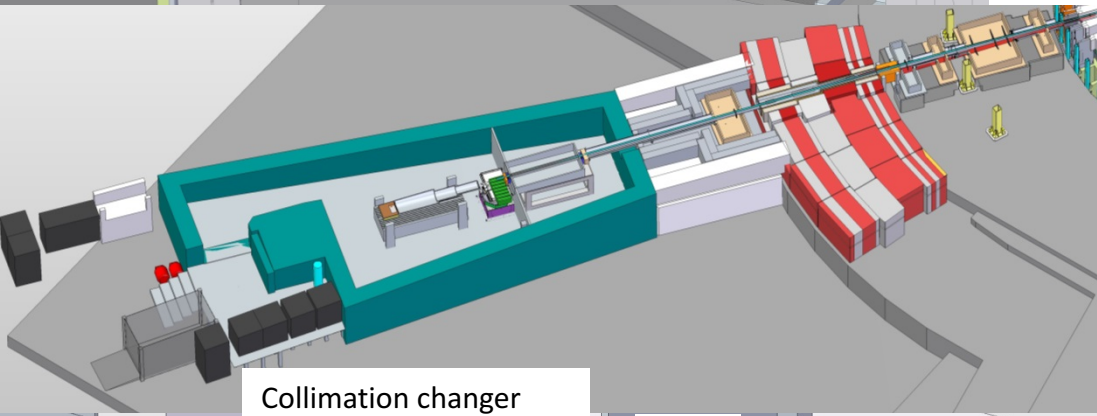
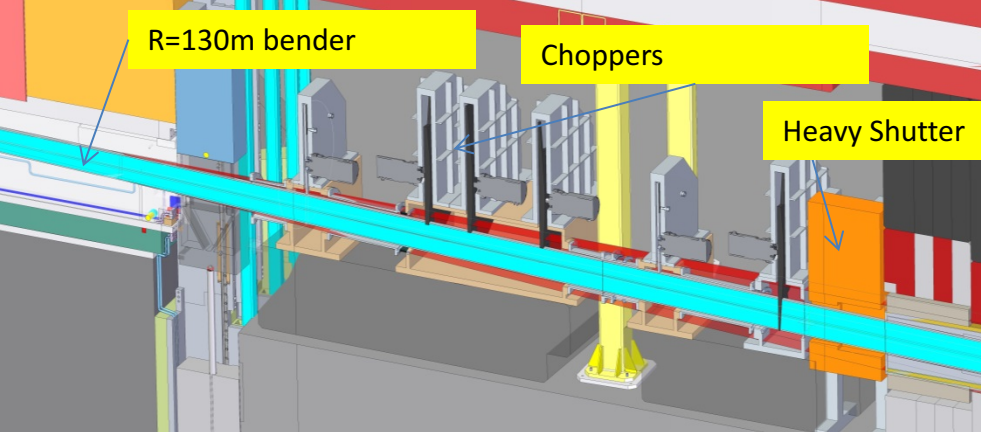
IKON13 26 September 2017

# Current status

- TG2 moved to 31 January 2017 due to new scientist position
- Shielding calculations, shutter design not before end of year
- Moderator view through reflector vessel – work ongoing
- Finish optics design in insert section - guide orientation
- Change request for  $m > 4$  in monolith on-going
- No. 15 with installation in 2023, hot commissioning 2025



# FREIA Layout



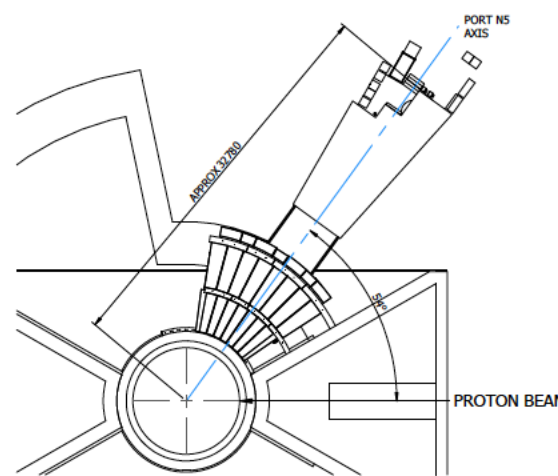
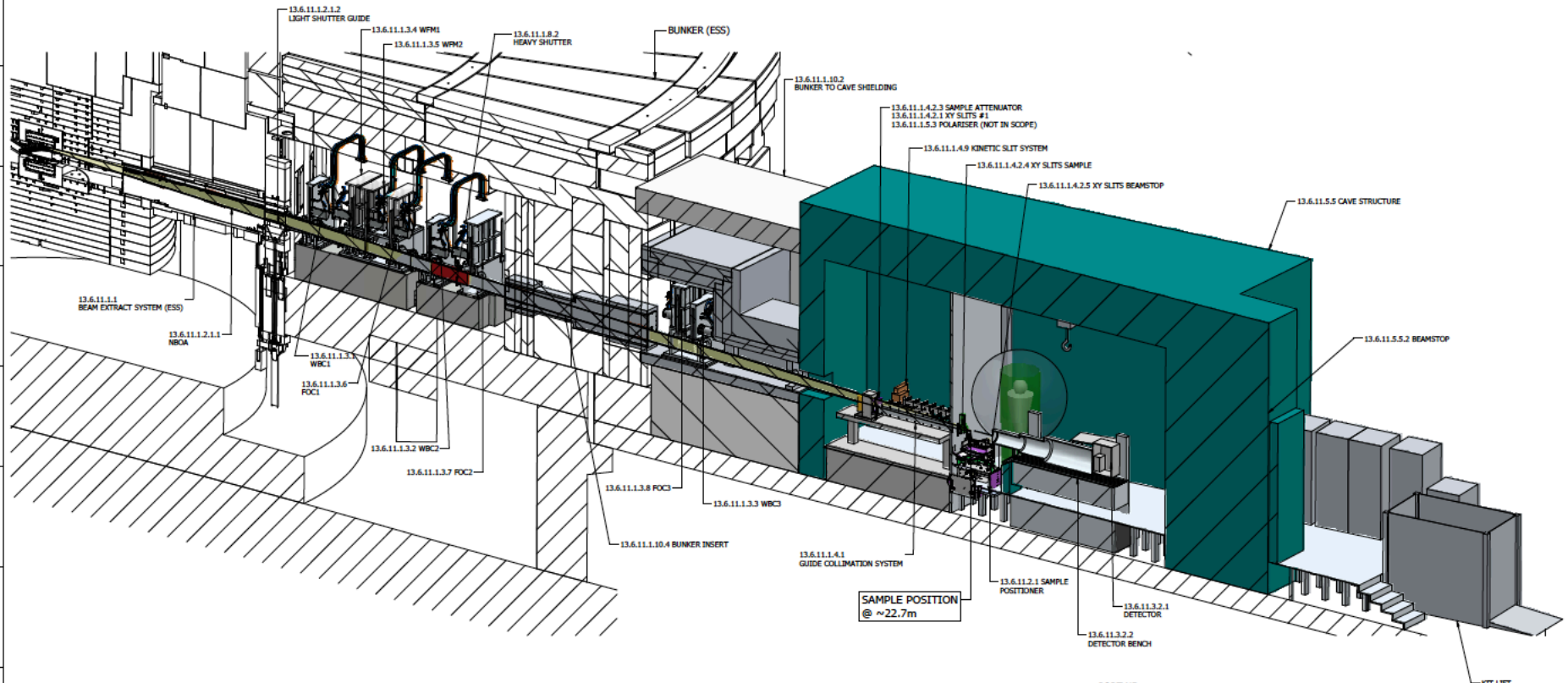
- High flux:  $\sim 10^9$  n/cm<sup>2</sup>/s
- Horizontal sample geometry
- Flexible collimation
- Variable resolution
- Broad simultaneous Q
- No sample movement

Lead Scientist: Hanna Wacklin  
Lead Engineer: Jim Nightingale  
Scientist: John Webster  
Integration Engineer: Clara Lopez

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A

DO NOT SCALE

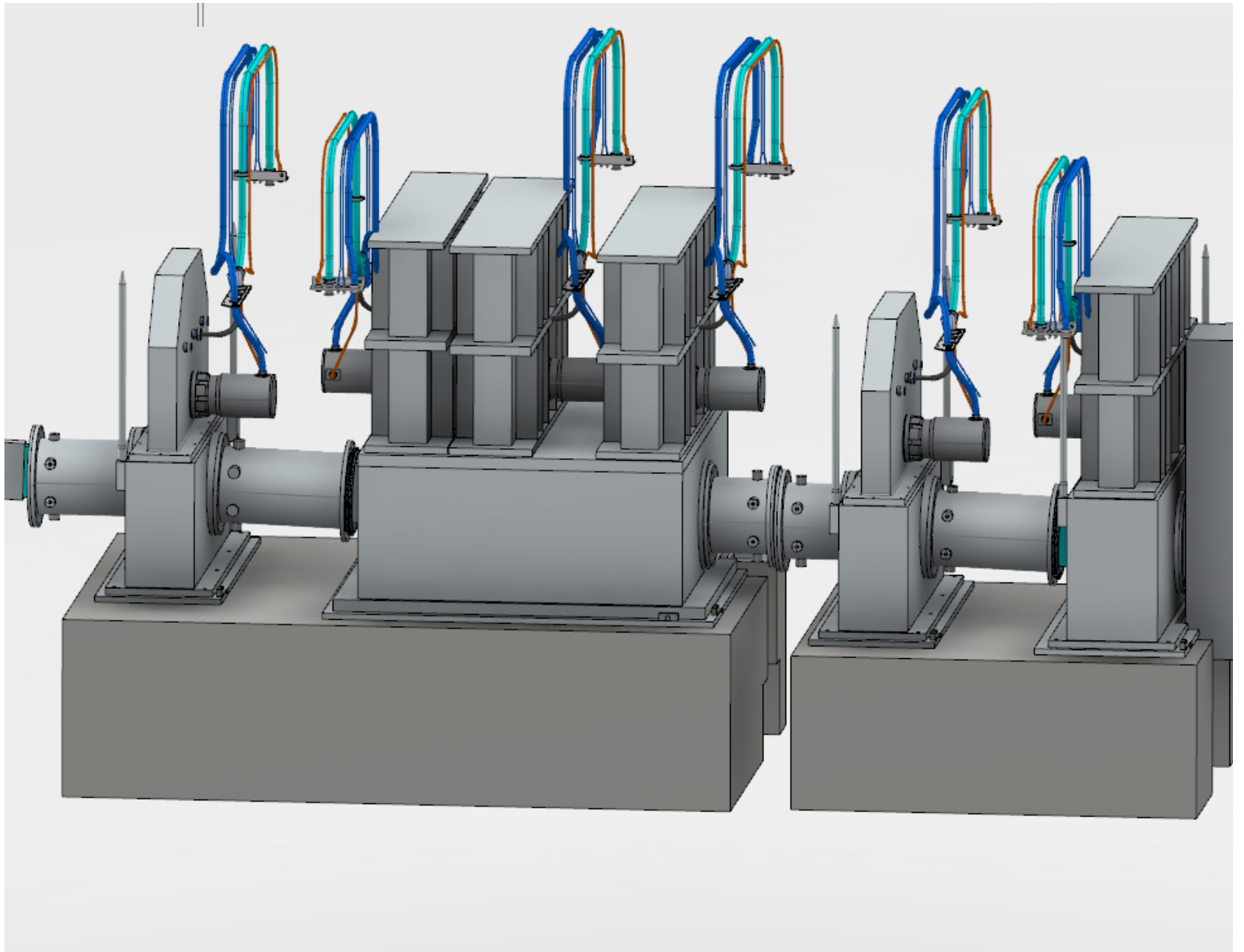


ESS FREIA  
CONCEPT 7 LAYOUT  
AUGUST 2017

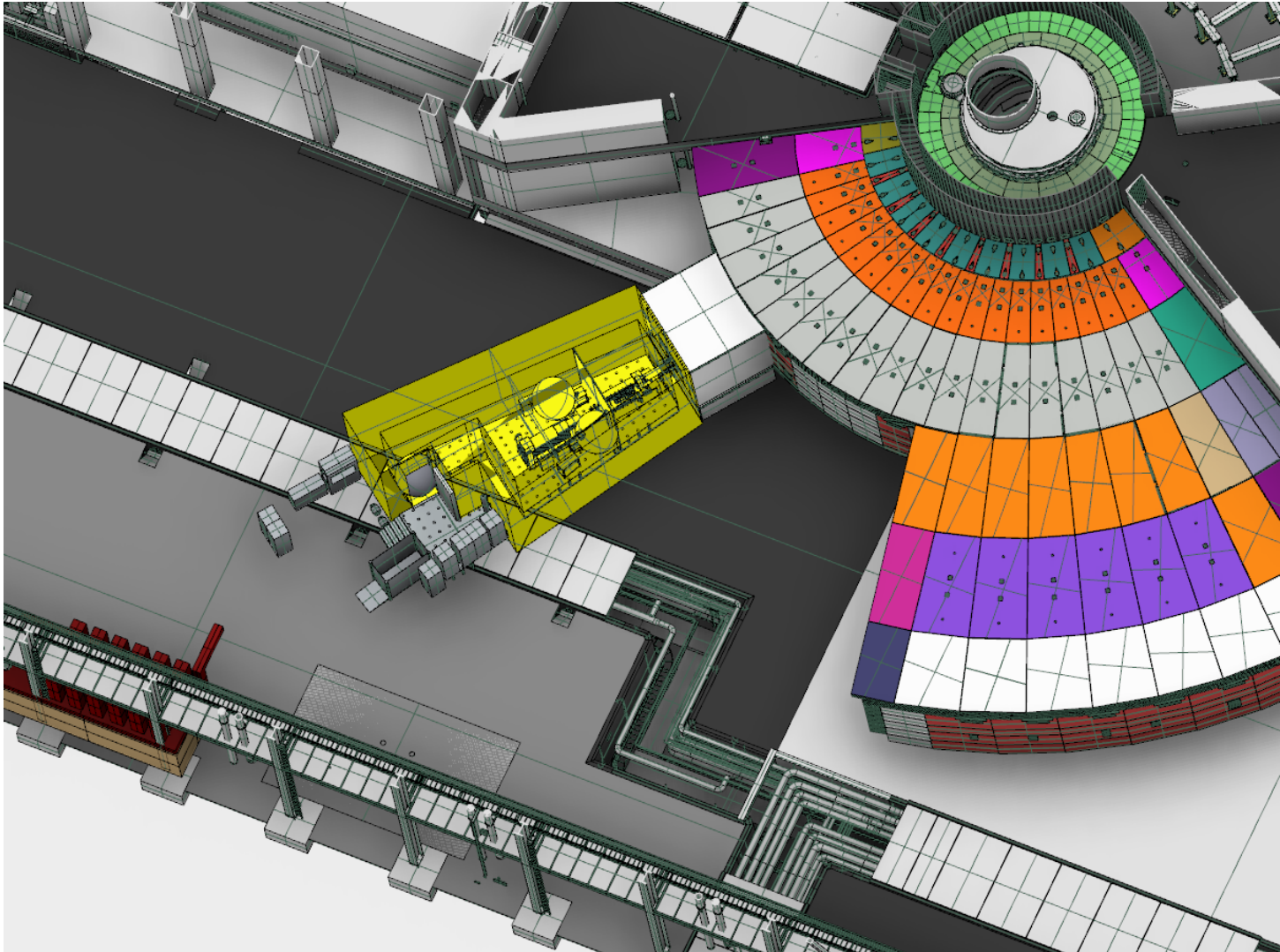
A		25.08.2017		JBN				MANUFACTURE ONLY		<b>IN WORK</b>	
ISSUE	DATE	MOD. No.	DRAWN BY	CHKD BY	APPD BY			WHEN STATUS IS		STATUS	
TOLERANCES UNLESS STATED:				TOLERANCES & SPEC.				SOURCE TOLERANCE UNLESS STATED:		✓ Ra N/A	
X ± 0.5		ANGLE ± 0.2°		SEE ITEMS LIST				70001		CLEAN	
X/X ± 0.3										REMOVE ALL BURRS	
X/XX ± 0.1										?	
DIMENSIONS IN mm UNLESS STATED		DRAWING CONFORMS TO BS 8888 TOLERANCING ISO 8015		DESIGNER						?	
<b>ISIS DESIGN DIVISION</b> <b>RUTHERFORD APPLETON LABORATORY</b> HARWELL CAMPUS, DIDCOT, OXFORDSHIRE, OX11 0QX										?	
TITLE										<b>FREIA LAYOUT V7</b>	
A1		1 OF 1		JBN-005000						A	

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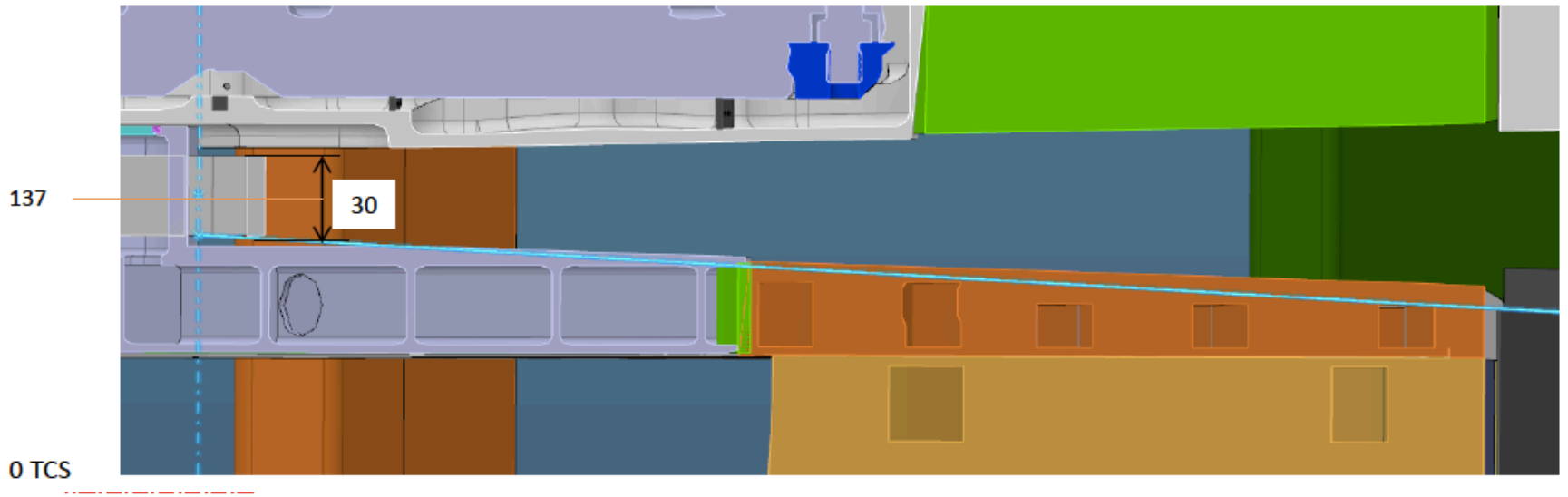
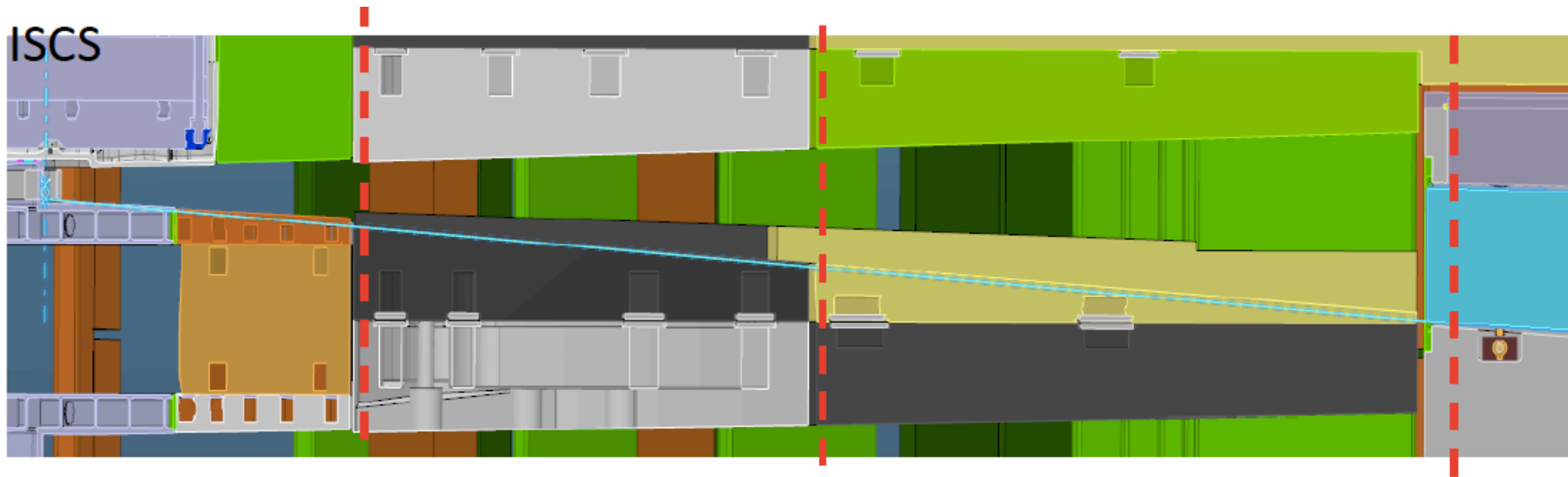


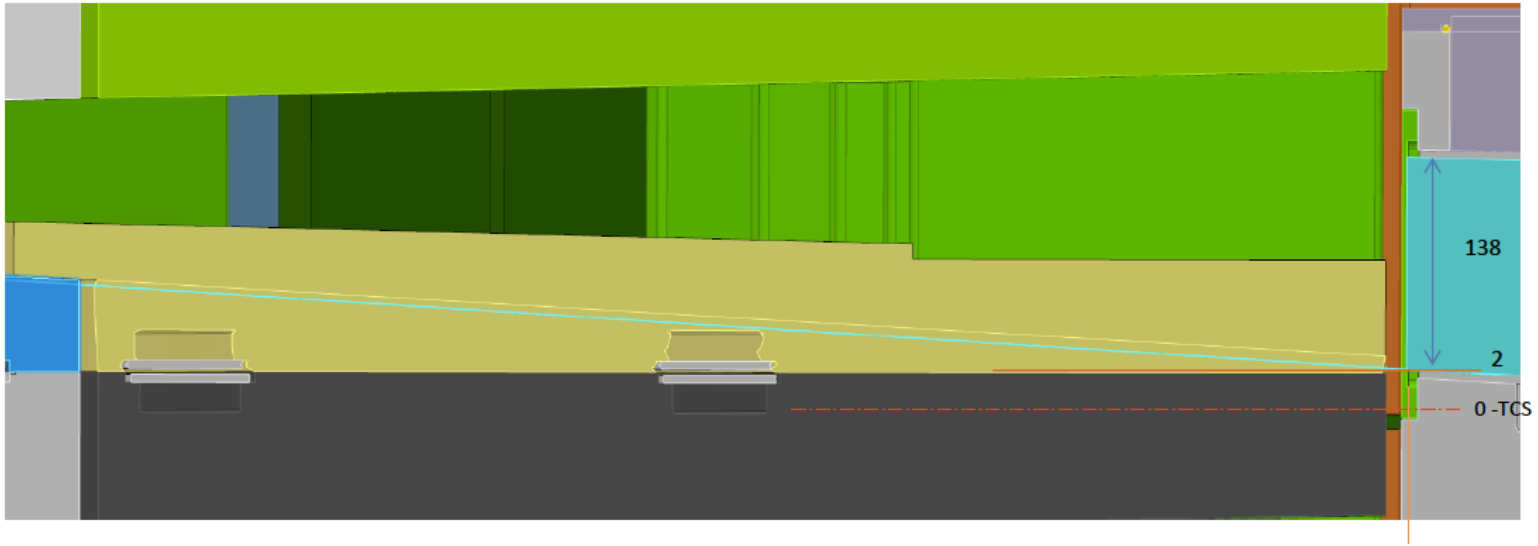


# Freia in Hall D03



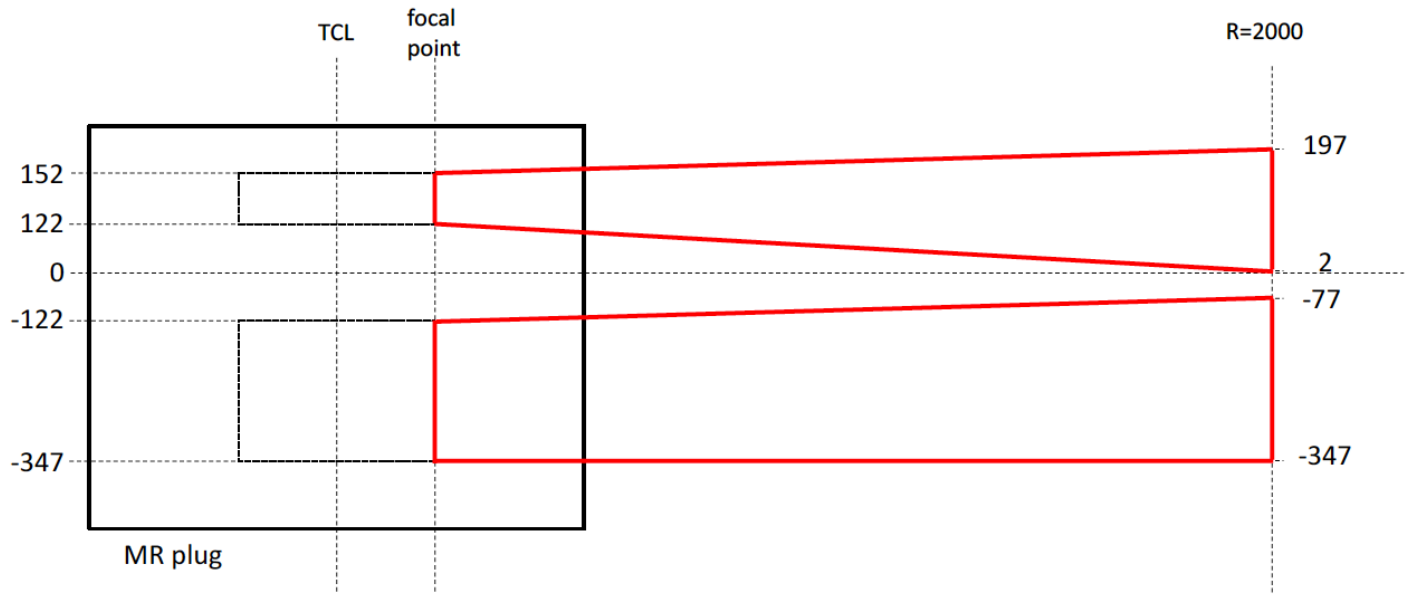
# Change request ESS





**B: Beamport N5 (FREIA)**

derived from ESS-0042326, with latest feedback from FREIA 18/8/2017



all coordinates in TCS

KHA & PMB, 18/8/2017



FRM2