

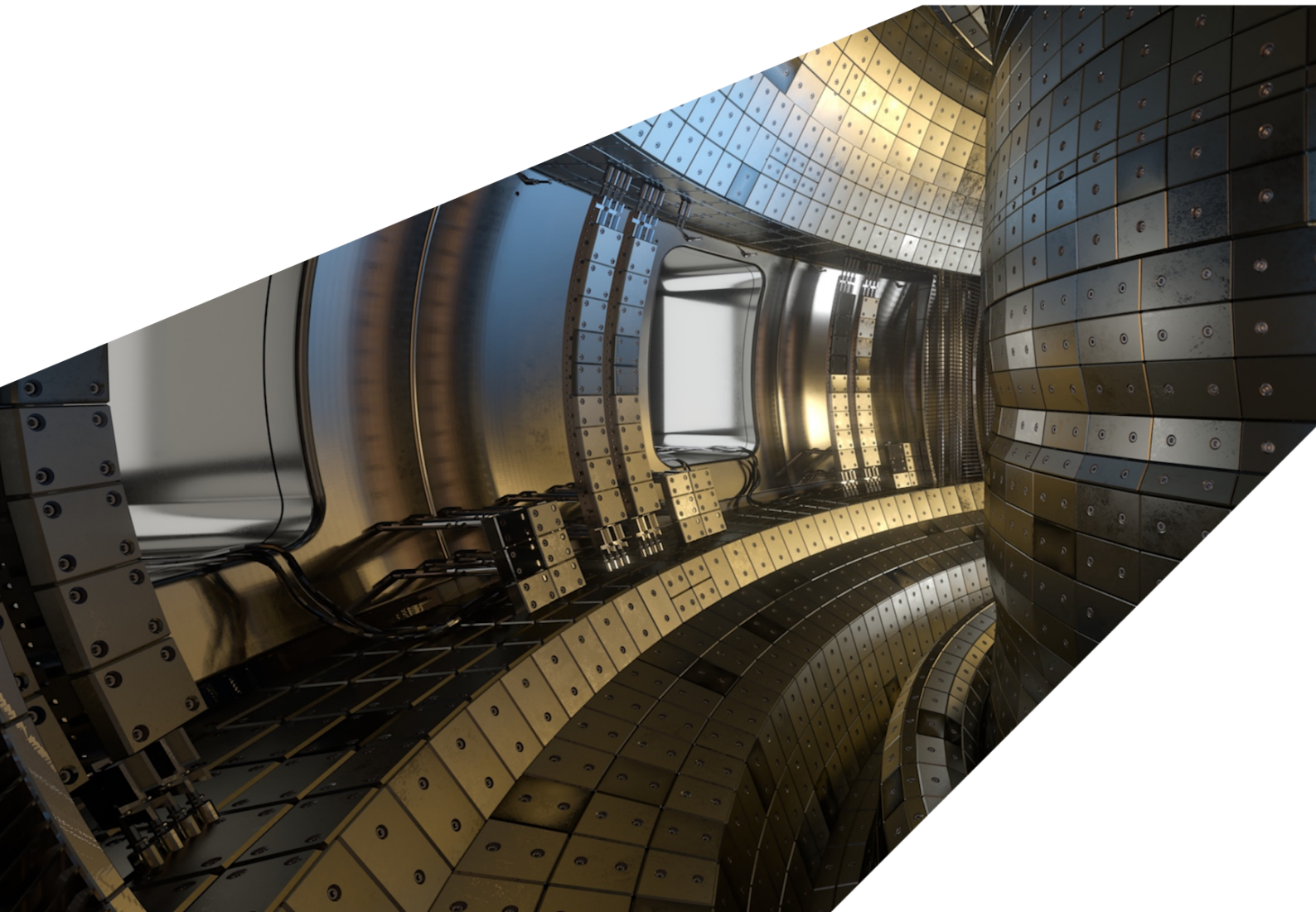
ExCALIBUR

Y4 Workshop Report

M1.12 Version 1.00

Abstract

The report describes work for ExCALIBUR project NEPTUNE at Milestone M1.12. There were two primary objectives of the Y4 workshop: to provide a venue for the project partners to discuss details and build/strengthen links through summarising progress and goals, and to engage with external stakeholders from UKAEA. In particular, following the evolution of related international projects, an initiative to develop an exhaust code had arisen within UKAEA. This proposed code naturally has significant overlap with the physics and numerical approaches relevant to the ExCALIBUR-NEPTUNE project. The workshop provided an opportunity to explore the link between these projects and made clear that close collaboration between these projects will bring many benefits. The report outlines the workshop timetable, which serves as an introduction to the slides and other notes uploaded separately as a .zip file.



UKAEA REFERENCE AND APPROVAL SHEET

	Client Reference:		
	UKAEA Reference:	CD/EXCALIBUR-FMS/0071	
	Issue:	1.00	
	Date:	31 March 2023	
Project Name: ExCALIBUR Fusion Modelling System			
	Name and Department	Signature	Date
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	Project Technical Lead		

1 Introduction

An in person workshop was held at Coseners house in Abingdon on the 5th and 6th of September 2022. There were approximately forty attendees, with an almost equal divide between externals and UKAEA staff. Generous catering was provided to encourage interaction in the breaks. Many of the grantees chose to stay overnight and a dinner was provided to encourage networking in the evening. A tour of the JET and MAST-U tokamaks was arranged for the grantees during the workshop days.

The after-effects of the COVID-19 pandemic were felt in that there were last-minute drop-outs and substitutions. Moreover the venue was unable to staff the event to their usual level and Authority staff were forced to cover. Nonetheless, the planned agenda was fulfilled in all respects.

Section 2 contains the agenda. The tables serve as an index to the presenters' slides and notes taken in the breakout sessions, which have been uploaded separately as a .zip file `workshop-reporting-Y4.zip`.

2 Agenda

The two tables Table 1 and Table 2 should be self-explanatory. The new acronym NEC corresponds to "New Exhaust Code", the name of the exhaust code initiative promoted from within UKAEA. All the staff named are UKAEA employees.

Table 1: Workshop Timetable - First Day, 5th September 2022

MONDAY	Start time	Venue	Total time allocated
Grantees Work-to-date, Chair W.Arter			
R.Akers - Introduction, fire precautions	10:00	Garden Room	20
By Grant:			
Exeter/KCL	10:20		15
Imperial	10:35		10
York Csci+Plasma	10:45		20
Warwick	11:05		5
UCL	11:10		15
STFC	11:25		15
Oxford	11:40		15
Lunch	12:00	Dining Room	60
Grantees depart for Culham Site	13:15		
UKAEA Only Session, Chair J.Harrison			
W.Arter - UKAEA admin and summary	13:30		30
Tea and coffee	14:00	Garden Room	
Other presentations and discussion, including NEC	14:30		90
Soft drinks	16:00	Garden Room	
Grantees return from Culham site	16:15		
Grantees Proposed Work, Chair E.Threlfall			
By Grant:			
Exeter/KCL	16:30		30
York Csci+Plasma	17:00		20
UCL	17:20		20
STFC	17:40		20
Oxford	18:00		20
Poster Session	18:30	Thames Room	30
Dinner	19:00	Dining Room	180

Table 2: Workshop Timetable - Second Day, 6th September 2022

TUESDAY			
UKAEA Technical Presentations, Chair R.Akers			
W.Arter - Framework	9:30	Garden Room	20
E.Threlfall - VVUQ activities	9:50		15
O.Parry - Nektar++ working	10:05		15
W.Saunders - Particles	10:20		20
J.Cook - Particles and Finite elements	10:40		20
Tea and Coffee	11:00	Garden Room	30
BREAKOUTS across 3 rooms			
Topic - moderator, assistant:			
Nektar++ - E.Threlfall, O.Parry	11:30	Garden Room	90
Particles - J.Cook, W.Saunders	11:30	Royse, Guildhall	90
Physics equations - S.Newton,W.Arter	11:30	Abbey Rm, Guildhall	90
Lunch	13:00		60
UQ - E.Threlfall, O.Parry	14:00	Garden Room	90
Nektar++ - W.Saunders, J.Cook	14:00	Royse, Guildhall	90
Physical data - W.Arter, M.Barton	14:00	Abbey Rm, Guildhall	90
Tea and coffee	15:00	Garden Room	
Plenary	15:30		30
End	16:00		

Acknowledgement

The support of the UK Meteorological Office and Strategic Priorities Fund is acknowledged.