EXCALIBUR PROJECT NEPTUNE WORKSHOP

Wayne Arter

Zoom, 16th March 2021

UK Atomic Energy Authority

Workshop

Quarterly Progress Reports – recorded only for minute taking purposes

Wayne Arter, UKAEA	9.05	Introduction
Ben Dudson, York	9.10	Plasma fluid referent model via exploratory Proxyapps
Steven Wright, York	9.35	Investigate DSL and code generation techniques
Dave Moxey, Exeter	9.50-10.05	Performance of Spectral Elements
---Break---		
Felix Parra, Oxford	10.25	Referent model for plasma edge region
Peter Coveney, UCL	10.45	Study of Uncertainty Quantification (UQ) techniques
Sue Thorne, STFC	11.00	Investigate matrix-preconditioning techniques
Ben McMillan, Warwick	11.15-11.30	Optimal Use of Particles
---Short break---		
Discussion	11.40	
Marta Barrabino	12.00-12.15	Your admin/financial questions answered
----Lunch break---		

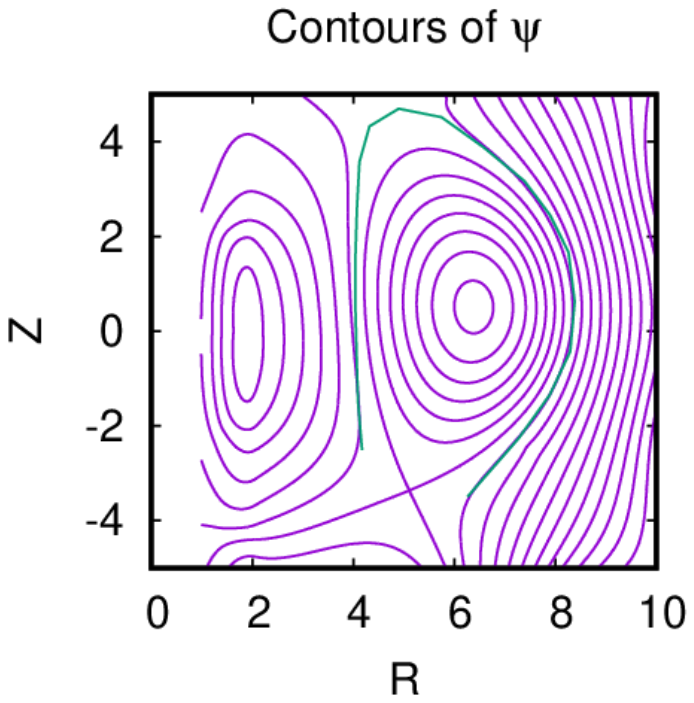
Workshop – Afternoon Session

Recorded only for minute taking purposes

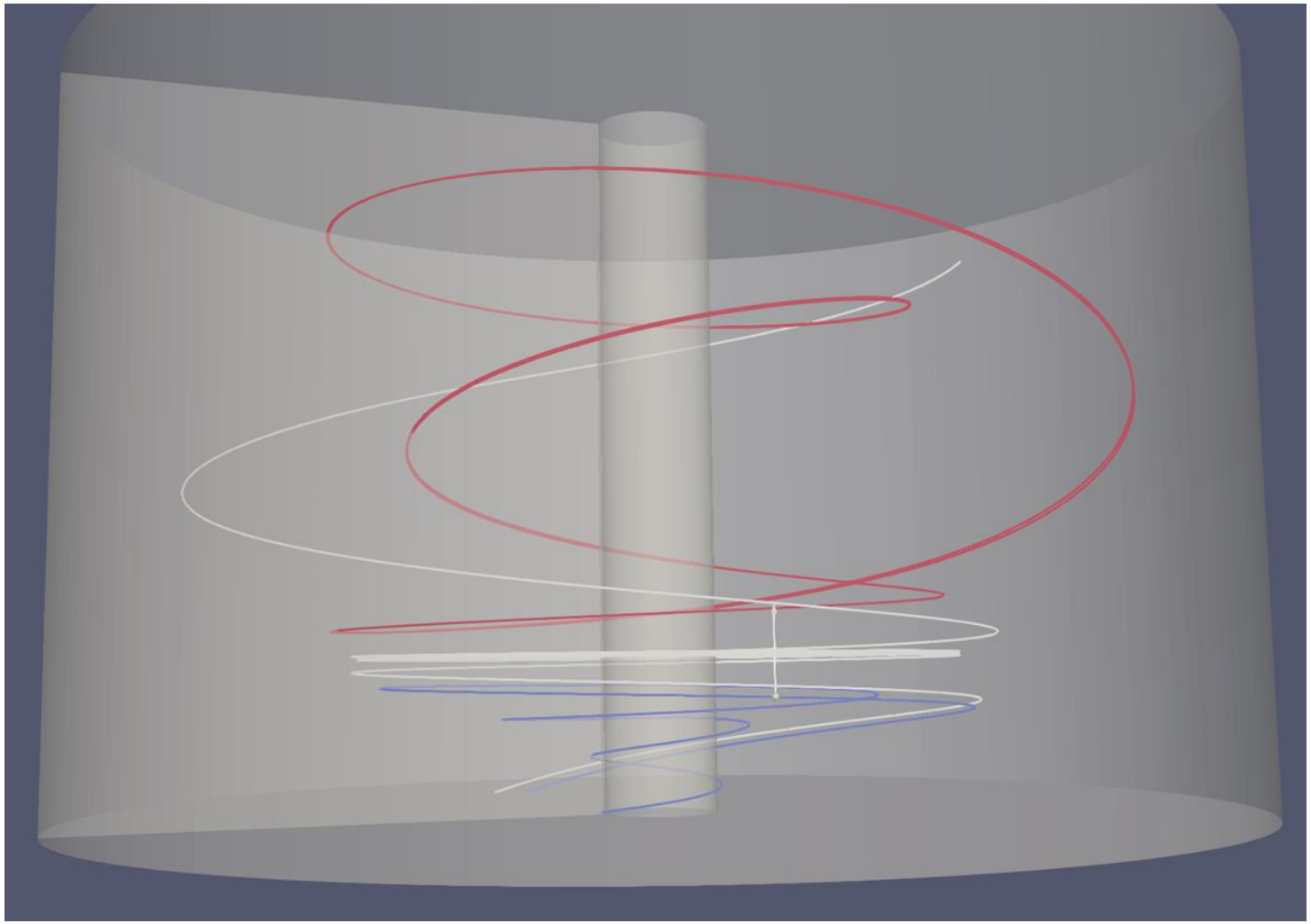
13.30 Anisotropic transport/elliptic solvers.
Patrick Farrell, Oxford
Chris Cantwell/Spencer Sherwin, Imperial
14.30 Surrogate models for data compression/turbulence
Ed Threlfall, UKAEA
Tim Dodwell, Exeter
Ben McMillan, Warwick
15.30 Discussion and Close

Minutes will form the core of M1.4.1 Report CD/EXCALIBUR-FMS/0030

Fieldline sensitive meshing - ITER



Flux surfaces above,
3 fieldlines at right



Hanging nodes or tetrahedra/prisms

Meshing sensitive to field diection in a device with magnetic shear.

Make at gap at 330^{o} and put tets in, and smooth…