

# 22nd International Spherical Torus Workshop Programme

	Sunday	Monday	Tuesday	Wednesday	Thursday		
Time							
08:00	Registration opens						
Session Leaders		Jack Berkery	Ken McClements (UKAEA)	Tan Yi	Colin Roach (UKAEA)		
08:30		Introduction	T Yi - The Construction and First Operation of the SUNIST-2 Spherical Tokamak	J Menard - Overview of the physics and engineering design of STAR	S Diem - Solenoid-Free Plasma Initiation in the Pegasus-III Experiment		
08:40	J Harrison - Recent physics results from MAST Upgrade						
08:50							
09:00		O Asunta - Overview of ST40 capabilities, recent results, and future plans	M Garcia Munoz - Physics basis and commissioning of SMART	J Park - Overview of VEST: Status, Progress and Plans	K Hanada - Progresses on long pulse operation in spherical tokamak, QUEST		
09:10							
09:20							
09:30		Y Shi - Overview of the initial EXL-50U experimental results	E Viezzer - Diagnostics overview for the first experimental campaign of SMART	Y Jung - Increased heating efficiency via Neutral beam fraction control in Versatile Experiment Spherical Torus (VEST)	T Ido - Development of a heavy ion beam probe for turbulent transport studies in the QUEST spherical tokamak		
09:40							
09:50							
10:00		A Ejiri - A compact multi-purpose fusion system and the ST2035 device	M Yang - Optical Diagnoses of Plasma in SUNIST-2 Spherical Tokamak	C Michael - Impact of off-axis beam and low-field side gas fuelling on safety factor, rotation and fast ions MAST-U	R Raman - Design Considerations for Optimizing the T-CHI Injector on QUEST		
10:10							
10:20							
10:30		Break	Break	Break	Break		
10:40							
10:50							
Session Leaders		Akira Ejiri	Otto Asunta (TE)	Hendrik Meyer (UKAEA)	Steven McNamara (TE)		
11:00		H Meyer - Overview of the Plasma Scenario for STEP	R Majeski - The core and edge plasmas in LTX - $\beta$	M. Uchida - Recent results of low aspect ration torus experiment (LATE) device	P Ryan - Overview of Exhaust Physics Research on MAST-U		
11:10							
11:20							
11:30		S McNamara - An overview of Tokamak Energy's high-field spherical tokamak fusion pilot plant concept...	S Kaye - NSTX-U Science and Technology Plans Leading Towards a Compact FPP	Y Ono - Overview of ST Mergin Experiments:TS-3U, TS-4U and UTST	L. Zhang- Experimental and modelling results of ST40 edge and divertor plasmas		
11:40							
11:50							
12:00		F Alladio - PROTO-SPHERA: a magnetic confinement experiment which emulates the jet + torus astrophysical plasmas	R Maingi - The NSTX-U program on lithium wall conditioning nad the science and technology of liquid lithium plasma-facing componants	T Ahmadi - Dynamic Reconstruction of magnetic field configuration during merging-compression startup in ST-40 spherical MHD-FIT using MHD-FIT	C Olde - Optimising the STEP current ramp-down phase with JINTRAC		
12:10							
12:20 -13:10		Lunch Break (Lunch Included)					
Session Leaders					Sarah Elmore (UKAEA)		
13:20		Posters 1	Posters 2	Tour of Tokamak Energy and UKAEA. Pre-booking essential.	H Anand - Framework for assessment of magnetic equilibrium controller performance on the MAST Upgrade spherical tokamak		
13:30							
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14:40		Posters/Break	Posters/Break		X Li - Development of plasma burn-through simulation code and validation in SUNIST-2		
14:50					K Shah - Investigating radiated-power asymmetries in low aspect ratio fusion plasmas		
15:00		Paul Thomas (TE)	Eli Viezzer		Jari Varji (TE)		
15:00		3pm - 4:30pm Oxford Walking Tour. Meet outside Rhodes House Pre-booking essential	K Thome - Development of an Integrated modeling framework of NSTX and NSTX-U plasmas to achieve high performance in NSTX-U	K McClements - Confinement of fusion alpha-particles and Alfvén eigenmode stability in the Spherical Tokamak for Energy Production (STEP)	A Jackson - Analysis of Proton Detector data from MAST Upgrade		
15:10							
15:20	J McClenaghan - Enhancing Predictions of Confinement in STs via TGYRO-QLGYRO Coupling					J Rivero-Rodriguez - Observation of fast-ion losses in the Mega Amp Spherical Tokamak Upgrade	M Anastopoulos - Predictive simulations of ST40 hot-ion plasmas using the TGLF model
15:30							
15:40	C Roach - Recent Progress in our Understanding of Electromagnetic Turbulence in a Conceptual Spherical Tokamak FPP (STEP)					J Galdon-Quiroga - Fast-ion losses induced by externally applied magnetic perturbations in the MAST-U tokamak	J-H Lee - Comparing Predictive Modeling between ST40 High TI Discharges and KSTAR FIRE Mode through TRIASSIC-TGLF
15:50							
16:00	M Ono - Efficient ECCD non-inductive start-up and ramp-up and densification to a sustainment phase for an ST fusion reactor					D Rylan - Towards RMP ELM control in Spherical Tokamaks	Y Takase - Preliminary Design of an ST-Based DT Neutron Source for the Japanese Government Moonshot Programme
16:10							
16:20	M Higgins - Optimisation of EBW Power Deposition and Current Drive in Spherical Tokamaks by Numerical Simulation and Resonance Condition Analysis	J Yang - Aspect ratio dependence of fast ion effects on neoclassical tearing mode growth from comparison between DIII-D and NSTX	Concluding Remarks				
16:30							
16:40	Welcome drinks at Rhodes House (inc in reg fee)	C Ham - MAST-U Tearing Modes: Observation and Control					
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18:00			Dinner at Cherwell Boathouse. Pre-booking by 11th October essential				
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