

Main Experiments during the C30 Campaign

(For detailed information, see Wiki-pages under Task Force E1/E2 of the EFDA-JET users Website; Experiments with an asterisk are those that are new in C30)

S/T	TF	Description	Shifts
C30a			
Ex-1.3.3*	E2	Characterisation of large-regular ELMs	2
Ex-3.1.3	E1/E2	Characterisation of the W divertor in H-mode	2
Ex-2.2.2	E1/E2	W screening, peaking and control	1
Ex-2.2.3	E1/E2	Integration of seeding & ELM control techniques	2
Ex-2.2.5	E1	Type III ELM scenario up to 2.5MA	2
Ex-2.3.1	E1	Hybrid scenario development with ILW	6
Bx-2.2.1	E1	ITER ramp-up/down scenario	2
Ex-2.3.2	E1	Baseline scenario to high Ip	5
Ex-3.3.2	E1/E2	Disruption mitigation	1
Ex-3.3.3*	E1	NTM and sawtooth control	1
<i>Cont_C30a</i>		<i>Contingency</i>	8
C30b			
Ex-1.1.11*	E2	Fuel release after transients: disruptions, large ELMs	2
Ex-1.1.12*	E1/E2	ICW conditioning	2
Ex-1.3.1	E1/E2	Disruption heat loads	1
Ex-2.2.4*	E1/E2	Impurity seeding in preparation for ITER	4
Ex-2.2.6*	E2	Impact of ELM mitigation techniques on H-mode	4
Ex-3.2.1	E1	L-H power threshold study with Be/W vs C	2
Ex-3.2.3*	E2	Pedestal stability	4
Ex-3.2.4*	E1/E2	Pellet fuelling study	2
Ex-3.2.5*	E2	Effect of SOL transport, pedestal & ELMs on impurity transport	4
<i>Cont_C30b</i>		<i>Contingency</i>	5
C30c			
Ex-1.1.3	E2	C & Be migration in all scenarios	1
Ex-1.1.8	E2	Long term evolution of W erosion and migration	1
Ex-1.1.5	E2	Evaluation of fuel retention in all scenarios	2
Ex-1.2.5*	E2	H-modes prior to LTS retrieval with tracer injection	20

Cont_C30c

Contingency

2

Parasitic Experiments during the Campaigns

(For detailed information, see Wiki-pages under Task Force E1/E2 of the EFDA-JET users Website; Experiments with an asterisk are those that are new in C30)

S/T	TF	Parasitic Experiment	Parasitic to	Shifts	Week
Px-1.1.1	E2	Study effect of conditioning cycle, GDC and Be-evaporation on ILW operations	R4		
Px-1.1.4	E2	Monitoring of fuel recycling, retention and outgassing during the ILW start-up phase of ILW	Ex-1.1.3	2	6, 9
Px-1.1.5	E2	W main chamber erosion	Ex-1.1.3	2	6, 9
Px-1.1.6	E2	Investigation of tungsten nitride formation	Ex-1.3.2	3	6, 7
Px-1.1.7*	E2	Be migration measurements with a reciprocating made of Be	Ex-1.2.5	4	25-26
Px-1.1.8*	E2	First mirror plasma facing tests with the reciprocating probe	Ex-1.2.5	4	25-26
Px-1.3.1	E1	Characterisation of heat loads and W sputtering due to beam shine through	R4		
Px-1.3.3	E1	Development of LH arc detection using KL10 visible camera and bolometry signals	R4 Ex-2.1.6	2	2, 4
Px-1.3.4	E2	Pellet induced ELM divertor deposition	Ex-2.2.7	4	9, 11, 14
Px-2.1.1	E1	Document effect of the ILW on breakdown	R4 Ex-2.1.3	2	
Px-2.1.2	E1	Gas and density scan under new wall condition	Ex-2.1.3	2	
Px-2.1.3	E1	Control of impurities accumulation during current rise in diverted plasmas	Ex-2.1.7	2	12, 15
Px-2.1.4	E1	Qualification of LH power up to high power	R4 Ex-2.1.6	2	2, 4
Px-2.1.5	E1	Measurements of LH wave non-linear behaviour using RF probes and reflected power spectra analysis	R4 Ex-2.1.6	2	2, 4

Px-2.1.7	E1	Application of the Current Limit Avoidance (CLA) in condition of low disruption probability and low forces at disruption (NP1)	R4		
Px-2.2.1	E2	Fuelling and seeding scans for exhaust moderation and detachment in the ILW	Ex-2.1.5	2	2-4
Px-2.2.3	E2	Study of density pump-out due to ELM mitigation techniques	Ex-2.2.9	4	14, 15
Px-2.2.4	E2	ELM triggering by vertical kicks: how do vertical kicks work	Ex-2.2.9	4	14, 15
Px-2.2.5	E1	Assessment of upgraded HFPI performances	R4		
Px-3.2.1	E2	Neutral density profiles studies	Ex-2.1.4	2	3, 4
Px-3.2.2	E2	Investigation of the stability of the first ELM	Ex-2.1.5	1	2-4
Px-3.2.3	E1	Mitigation of the 1st ELM	Ex-2.2.9	2	14, 15
Px-3.2.4	E2	Response of edge Er to parameters affecting the L-H transition	Ex-3.2.1	2	3, 21
Px-3.2.6	E2	Pedestal evolution characterisation in between and during ELMs; evaluation of the dynamics of peeling ballooning limits.	Ex-2.1.5 Ex-3.2.2 Ex-3.2.3	8	2-4, 11, 16, 21
Px-3.2.7	E2	Impact of the ILW on the edge rotation	Ex-2.1.5	4	2-4
Px-3.2.8	E2	Determine possible presence of a convective component in gas fuelling through the pedestal	Ex-3.2.2	2	15, 16
Px-3.2.9	E2	Ion threshold and stiffness in low rotation plasmas with varying impurity content	Ex-2.1.6	2	2, 4
Px-3.2.10	E2	Study intrinsic rotation with NBI steps in full metal wall plasmas	Ex-2.3.1	2	16, 17
Px-3.2.11*	E2	Controllability of pedestal and ELM characteristics by edge MHD	Ex-3.2.2	4	11, 16
Px-3.3.1	E1	Disruption causes, detection and prevention strategies	Ex-2.1.5	4	2-4
Px-3.3.3	E2	Runaway studies with gamma-ray and neutron diagnostics	Ex-1.3.1	2	5, 22

Px-3.3.4	E1	Validation of the response of the metallic wall to magnetic perturbation	R4		
Px-3.3.5	E1	NTM stability study with rotation and q profile in ILW scenario	Ex-2.1.7 Ex-1.3.2 Ex-2.1.5	8	2-4, 6-7, 12, 15
Px-3.3.6	E1	Diagnose confine and lost fast-ions	Ex-2.1.6 Ex-3.3.3 Ex-2.2.8	4	4, 9, 13, 19
Px-3.3.7	E1	Neutron spectroscopy	Ex-2.3.2	3	13, 15
Px-3.3.8	E2	Neutron calibration cross-check	R4		
Px-3.3.9	E2	High resolution Gamma Ray spectroscopy	Ex-2.1.6	2	2, 4
Px-3.4.1	E2	Dust detection after disruption with the HRTS in the ILW	Ex-3.3.1 Ex-1.3.1 Ex-3.3.2	4	4, 5, 12, 13
Px-3.4.2	E1	Q-profile determination by consistency between MSE and MHD markers	Ex-2.1.7	4	6, 8
Px-3.4.3	E1	Data acquisition for ITER toroidal field Coil Protection System	Ex-3.3.1 Ex-2.1.2	2	2, 3

Back-up Experiments during the Campaigns
(Experiments with an asterisk are those that are new in C30)

S/T task	TF	Description
Bx-1.1.1	E1	Conditioning by using multiple breakdowns
Bx-1.1.2	E2	Gas balance calibration
Bx-1.1.3	E2	Gas balance analysis in plasmas with ELM mitigation techniques
Bx-1.1.4	E2	Impurity migration study using Be evaporation
Bx-1.1.5	E2	Background measurements of LN2 panel in case of occasional warm-up
Bx-1.2.1	E2	Study of accidental Be melt events
Bx-1.2.2	E2	Accidental Bulk W melting
Bx-1.3.1*	E2	Seeded L-mode Studies
Bx-2.1.1	E1	ITER ramp-up/down scenario
Bx-2.1.2	E1	Test ITER-like breakdown with ILW
Bx-2.1.3	E1	Poloidal mapping of DC potential in front of the ICRF antenna using RCP measurements
Bx-2.1.4	E1	Characterisation of the ICRF coupling variations with gas injection from different machine locations and related SOL modelling
Bx-2.2.1	E1	Development of high Te pedestal ELM-free scenario
Bx-3.2.1	E2	Study intrinsic rotation, mode conversion flow drive and momentum transport with full metal wall
Bx-3.2.2	E2	Study of plasma transport in L-mode, at the H-mode threshold
Bx-3.2.3	E1	H=1 access physics studies in dynamically evolving plasmas
Bx-3.2.4	E2	Shape dependence of L-H transition with Be/W wall
Bx-3.2.5*	E1	Investigation of the M-mode
Bx-3.4.1	E1	Diagnosing the deuterium energy distribution function below 1 MeV