Transport and Confinement ITPA Task Group Annual Report: 2008-2009

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The Transport and Confinement Topical Group is a newly formed group, subsuming the

Previous	Present	Title	Comments
CDB-2	TC-1	Confinement scaling in ELMy discharges: b scaling	NSTX, JET, MAST, DIII-D
CDB-4	Closed	Confinement scaling in ELMy discharges: n* scans at fixed n/nGW	C-mod not yet able to achieve required bN
CDB-6	Closed	Improving condition of database: low aspect ratio	Combine with TP-9 for TC-12
CDB-8	Closed	r* scaling along ITER relevant path at both high and low beta	C-mod unable to match ne; JET expts not planned
CDB-9	Closed	Density profile peaking as a function of collisionality	Completed
CDB-10	TC-2	Hysteresis and access to H-mode with H~1	AUG, JET, MAST, NSTX, TCV
CDB-11	TC-3		

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TP-3.1	TC-5	Determine transport dependence on Te/Ti in hybrids and steady-state	DIII-D, JET
TP-3.2	Closed	Determine transport dependence on Te/Ti in L-modes	No expts planned on TEXTOR, T-10, HL-2A
TP4	TC-6	Effect of rotation on plasma performance	Full session in Spring 2009; Closing out - 2009
TP-5	TC-8	QH/QDB plasmas	AUG, DIII-D; close out in 2009?
TP-6.1	TC-9	Scaling of intrinsic rotation with no external momentum input	C-Mod/TCV similarity expt.
TP-6.2	Closed	JT60U/DIII-D Mach number scan identity experiment	Overlap with PEP-18; see if can combine
TP-6.3	Closed	Momentum transport with NBI input	More specific test of theory proposed in TC-15
TP-7	TC-10	Expt'l identification of ITG, TEM, and ETG turbulence and comparison to codes	Ongoing Joint "Activity"
TP-8.3			

Previous	Present	Title	Comments

There has been also a great deal of theoretical progress towards understanding the source of the peaking, which can put predictions for ITER on a physics basis rather than one that is based on empirical characterizations. Gyrokineti