

2008/9 Work Programme  
Recommendation Proposal

Title: ITER current rise phase

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Category:

<b>Physics</b>			
	Modelling development & support needs	P-Mod	x
	Requests towards EU experimental program	P-Exp	x
<b>Technology</b>			
	Conceptual design study needs	T-Design	
	R&D needs	T-R&D	
	Requests towards/from EU fusion devices	T-Device	

Link(s) with EFDA missions: The ability to access burn conditions at the end of the current rise in ITER needs to be assessed. The ability to access a range of q-profiles at the end of the current rise in ITER advanced modes of operation also deserves specific studies. In the EU we need to build up the know-how (modelling and experiments) to be able address the requirements for successful operation ITER. Simulations of the ITER current rise phase have already been started under the ITM-TF. The H&CD topical group should support this activity in providing the input on the actuators that can be used and more importantly to define the experiments that are required to verify some of the modelling efforts for ITER.

Link(s) with EFDA structure:

**EU-ITM-TF** EU-PWI-TF TG-Diag **TG-MHD** **TG-Transp**

*The liaison with EU-ITM-TF (scenario and IMP5) is mandatory*

Corresponding tasks (baseline support/priority support):

Task description	Duration estimate	Resource estimate	Expected deliverable
Modelling: Together with the ITM-TF, modelling of the ITER current rise phase.	>2 years		Report. Extrapolation to ITER. Code validation.
Experiments: Define experiments that are required to verify some of the results of the modelling of the current rise for ITER. Document in experiments the target q-profiles required to establish the advanced scenarios (hybrid and fully non-inductive).	>2 years	2ppy	database

Comments:

The present task calls for a dedicated working group in charge of modelling, planning and performing relevant experiments.

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