

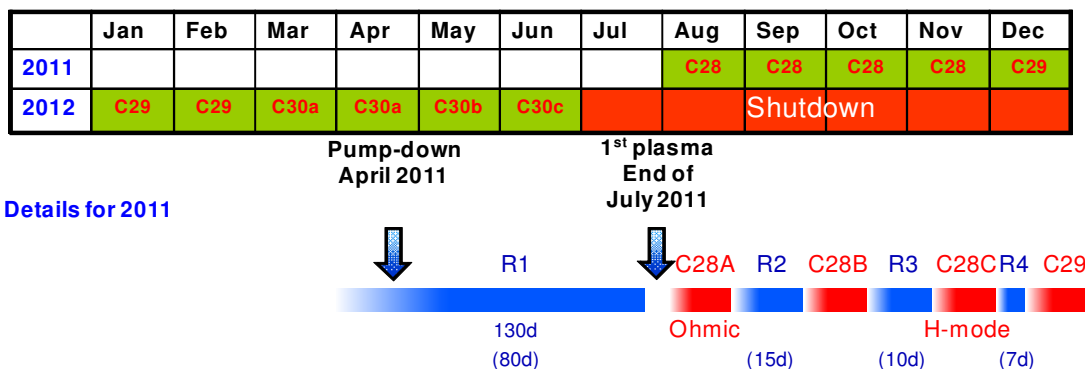
## Background information on the preparation of the 2011-12 Campaigns

### *Preparing proposals for experiments with the ITER-like Wall*

The preparations for the Experimental Campaigns that will exploit the new JET capabilities installed during the Shutdown of 2009-2011, were launched at the 1<sup>st</sup> General Planning Meeting (GPM), held at EFDA-JET, Culham on 1-5 March 2010. This was followed by working meetings during the subsequent months to prepare proposals for the Experimental Campaigns of 2011 and beyond. The Programme Headlines for 2011 were approved at the EFDA-SC meeting in June 2010, the main Headlines being (1) Characterisation of the ITER-like Wall, (2) Exploration of ITER operating scenarios with the ITER-like Wall and (3) Physics issues essential to the efficient exploitation of the ILW and ITER. Following the 1<sup>st</sup> GPM, the approval of the Programme Headlines and the subsequent preparations by the Task Forces and the CSU, the experiment proposals were reviewed and discussed at the 2<sup>nd</sup> GPM, held at EFDA-JET, Culham on 11-15 November 2010. The priorities for science and sequence were established to provide a balanced and focussed programme for the exploitation of JET with the ITER-like Wall, covering all scientific areas as well as providing timely input to ITER and PWI issues. The Association staff participated fully in the General Planning Meetings, Task Force Meetings and preparations of the proposals during 2010. Representatives from F4E and ITER IO, as well as the Association scientific contact persons, were also invited to participate in both GPMs. The outcome of this preparatory phase was presented and discussed at STAC in December 2010 together with a Work Plan for the ITER-like wall exploitation.

### *Campaign strategy with the ITER-like Wall*

The Programme in 2011-2012 is constrained by boundary conditions, that include pump-down after the installation of the ITER-like Wall (with plasma starting at the beginning of August 2011) and the reduced JOC budget. The Experiments' Schedule proposed up to mid-2012 covers Campaigns C28 (which is interleaved with Plasma Restart), C29 and C30, giving a net experimental time of 182 days. An intervention for tile sample removal is scheduled in the second half of 2012. The Programme Strategy is to control the risk of damage to the ITER-like Wall by first investigating material migration and fuel retention at moderate plasma currents and input power. This will be followed by experiments to fully develop all tools for wall protection and to explore higher plasma current at increased input power, together with a final assessment of material migration, fuel retention and recovery before the planned intervention for sample removal.



A detailed timeline has been prepared for Campaigns C28 and C29. For C30 a series of experiments have been identified, and others, including the development of AT scenarios compatible with the ILW together with the use of high power LHCD, the development of high plasma current operation at high triangularity, fuel removal techniques (in case retention is high) and the extension of the H-mode and pedestal physics studies, will be considered at a General Planning Meeting scheduled for November 2011, at which time the final timeline for C30 will be agreed.

Experiments not selected for the 2011-2012 period include specific ITER breakdown studies, pedestal studies at low  $v^*$ , physics studies with the error field correction coils, ICRF heating schemes using  $^3\text{He}$ , real-time current and profile control, experiments using increased TF ripple or reversed B, operation in helium or hydrogen, melting of the bulk tungsten tiles and dedicated studies on plasma rotation or NTM physics. All of these will be re-considered for the Campaigns of 2013 when operation at the highest input powers, lowest collisionality, highest plasma current and toroidal field will be progressively developed to complete the assessment of the ITER-like Wall in deuterium plasmas.

#### *Call for Manning of the Campaigns*

To prepare for the staffing of the Experimental Campaigns in 2011 and early 2012, the Call for Manning for C28 and C29 will be launched in mid-February 2011. The evaluation of the replies from the Associates will be during March-April 2011, with the aim of finalising the Task Agreements, Orders and Notifications by May-June 2011. Secondment Agreements should be ready for signature in June 2011, ready for first plasma and the start of the Campaigns at the beginning of August 2011. A proposal for the JET Work Programme for 2012 will be prepared in the first half of 2011. The Campaigns for 2012 will be reviewed in November 2011, followed by a Call for Manning for 2012.