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To the Members of the General Assembly

Dear colleagues,

Subject: Call for Participation in JET Campaigns C35, C36 and Tasks

The EUROfusion consortium Work Plan foresees that a D-T Campaign will be carried out in 2017 on JET and that the Campaigns in 2015 and 2016 will be devoted to the optimisation of ITER operational regimes with the ITER-like Wall and to the optimal preparation of the D-T Campaign.

After the completion of the 2014 experimental campaign in October, the JET shutdown has started, during which it is planned to remove tile samples (including the tungsten lamella from the melt experiment), to re-instate the ITER-like ICRH antenna to increase the RF power, to optimise the pellet injection track with the aim to deliver pacing pellets reliably to the plasma, to investigate recent failures of the magnetic pick-up coils and to address in-vessel issues identified during an in-vessel survey carried out at the beginning of the present shutdown.

With this shutdown scope and after a restart phase from end of June 2015 until 16 October 2015, the dates for the JET Campaign have been set as follows:

- **Experimental Campaign C35** from 19 October 2015 to 18 December 2015.
- **Experimental Campaign C36** from 07 January 2016 to 04 April 2016.

In the 2015 and 2016 campaigns, operation will focus on ITER scenario development with the ITER like Wall with up to 34 MW of NBI power (deuterium) and 10 MW of ICRH. More detailed information on the operational boundary conditions for JET restart and campaign is provided in Annex 1. The development of operational scenarios based on the conventional and hybrid ELMy H-mode should aim at maximum fusion power in a D-T experiment in stationary conditions (≈5s). Together with the scenario development, there will be a strong focus on addressing urgent ITER needs as highlighted in the ITER research plan, and for developing a sound physics basis for the extrapolation through first principles and integrated modelling of JET results to ITER and DEMO.

Following the General Planning Meeting (Lausanne, 19th–23rd January 2015), organised for the first time jointly for the work packages WP JET1 and MST1, all experiments and tasks have been reviewed by the Task Force Leaders using as a basis the proposals submitted to the JET1 wiki pages and taking into account the input given by the Task Force members at the GPM. A complete list of main, back-up experiments and tasks has now been compiled for campaigns C35 and C36. These experiments and tasks are listed in Annex 2 together with their objectives, number of sessions (for experiments) and contact Task Force Leader. Over

the next few months, the Task Force members will develop the corresponding experiment documents (Wiki pages) to the level needed for the execution of the relevant experiment to be approved.

A detailed experimental schedule for campaigns C35 and C36 has been elaborated on the basis of the agreed main experiments (Annex 3). The experimental time schedule contains about 20% contingency. This contingency will be used to recover lost time due to unforeseen machine or sub-system problems, to continue the main experiments (in particular focusing on D-T campaign preparation) or to execute some back-up experiments.

This call covers participation in JET experiments run in 2015 and early 2016 as well as the associated analysis and modelling activity and tasks until November 2016 (up to FEC-IAEA 2016). With the present letter **I invite you to submit proposals for participation in the experimental campaigns C35 and C36, in the associated analyses/modelling activity and tasks**. Specifically, you are invited to:

- make available, **at the JET-Culham site <u>and</u> at your research unit**, staff with the appropriate competencies (Annex 4) for the implementation of **JET experiments and tasks** (Annex 5),
- provide the relevant costing information for the staff (Annex 6).

Proposals for **Scientific Coordinators are required for the experiments and tasks** of this call (by indicating the relevant experiment or task in the contractual information-Annex 5). **Analysis and modelling activities** (c.f. competencies in Annex 4), for supporting preparation, execution, interpretation and extrapolation (towards JT-60SA, ITER, DEMO) **are an integral part of the experiment**, under the supervision of the scientific coordinators.

In view of an efficient scenarios preparation for the future D-T campaign, the scenario development is implemented in blocks within the two scenario experiments, as follow:

- M15-01: Baseline scenario
    a) Scenario development and analysis
    b) Pellet fuelling and ELM pacing
    c) Seeding
    d) ICRH optimisation for W control and effects on transport

- M15-02: Hybrid scenario
    a) Scenario development and analysis
    b) Pellet fuelling and ELM pacing
    c) Seeding
    d) ICRH optimisation for W control and effects on transport
    e) q profile optimisation and MHD

To create a common team, the overall integration of these two experiments is made at the Task Force Leader level in which the various blocks (the sub-bullets listed above) are coordinated by the nominated Scientific Coordinators. Therefore, I invite you to make proposals for participation in these experiments as a whole and for Scientific Coordinators of the individual blocks, e.g. M15-01b.

Requests for staffing of C35-C36 experiments and tasks will be managed by **Dr Johnny Lönnroth**. Your response to this call (and future change requests) should be submitted by e-mail **no later than Friday, 20 March 2015**, to the following address: JET1-RO@EURO-fusion.org . This will ensure an efficient distribution of your input to the JET Task Force Leaders and to the relevant staff in the Programme Management Unit (PMU) so that the contractual preparations for the JET Campaign can be launched.

Following the evaluation of the response to this call, the dates for missions will be formalised in accordance with EUROfusion consortium rules. It is highly recommended that the minimum duration of visits to JET is at least a full week. In addition, Scientific Coordinators should be on the JET site at least a week prior to and after the execution of the experiments for which they are Scientific Coordinators. Session leaders and Training Session Leaders should offer a minimum participation of six weeks, with individual visits not shorter than two weeks. As usual, participants in the JET work programme are advised not to make commitments on travel or accommodation related to their on-site work until they have received confirmation of their involvement and the final experimental schedule from the PMU (to be sent by June 2015).

Should you have any questions, please contact the persons in the list of contacts (Annex 7).

I look forward to receiving your proposals for participation, which I hope will continue the strong involvement of your research unit in the joint scientific exploitation of the JET Facility.

Yours sincerely,

Tony Donné
EUROfusion Consortium
Programme Manager

Encs.
1) Annex 1: Operational boundary conditions for JET restart and campaign
2) Annex 2: List of main, back-up experiments for C35 - C36, and tasks with their objectives, number of sessions (for experiments) and contact TFL
3) Annex 3: Experimental schedule for JET campaigns C35 and C36
4) Annex 4: List of competencies
5) Annex 5: Contractual information: participation on site and off site with the list of visits and number of days off site
6) Annex 6: Contractual information: costing statement
7) Annex 7: List of contact persons for the JET campaigns C35 and C36

cc: Research Unit Administrative and Scientific Contact Persons, JET and MST Task Force Leaders, D. Campbell, EUROfusion Programme Management Unit, JET Exploitation Unit, T. Jones, A. Kallenbach, S. Coda, IPH Project Leaders