



**To the members of the General Assembly**

PROGRAMME MANAGEMENT UNIT

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Dear colleagues,

## **CALL FOR SCIENTIST TO SUPPORT EU-US COLLABORATIVE EXPERIMENTS IN THE PISCES-B FACILITY, UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD)**

In order to meet the deliverables under the roadmap Headline 2.2 "Prepare efficient PFC operation for ITER and DEMO", specific tasks have been defined under the EUROfusion Work Package on Plasma Facing Component (WP PFC - project leader: Sebastijan Brezinsek) and for which the usage of linear facilities able to handle Beryllium, as PISCES-B (University of California, San Diego (UCSD)) is necessary.

In 2015-2016, a series of experiments on "Beryllium Interaction with Helium and Deuterium" and relevant for the WP PFC deliverables will be performed on the PISCES-B facility. A medium-term involvement of an EU scientist is consequently proposed. This will be done within the frame of the Agreement for cooperation between the European Atomic Energy Community represented by the Commission of the European Communities and the Department of Energy of the United States of America in the field of fusion energy research and development (Official Journal of the European Communities L148/80 1.06.2001).

The procedure to select this suitable scientist starts with this letter. Candidatures should be put forward by the Heads of Research Unit to the Programme Manager EUROfusion (Tony.Donne@euro-fusion.org), cc the WP PFC Responsible Officer: Marie-Line Mayoral (Marie-Line.Mayoral@euro-fusion.org). Each candidature shall include an extended CV together with a list of publications. The deadline for sending candidatures is **30 June 2015**.

EUROfusion will support the missions cost (subsistence and travel cost according to the EUROfusion grant agreement rules) of the successful applicant during his/her stay in San Diego.

The applicants should:

- Be a dynamic and enthusiastic plasma physicist with a formation qualification at the Ph.D. level, able to collaborate in the execution of experiments with the PISCES-B team and to carry out her/his own line of research.
- Have expertise in the area of plasma surface interactions and/or spectroscopic diagnosis of plasmas.
- Have a few years working experience (e.g. at the Post-Doc stage).
- Be ready to train as Be-worker and to follow the regulations concerning the handling of Be-contaminated materials as required at the PISCES-B facility in the University of San Diego.





The successful candidate is expected to start his/her  $\approx$  1 year stay in the period October-November 2015. A later start could also be envisaged in case of problems concerning the organisation of the stay. The stay may be divided into 2-3 periods to allow the EU scientist to return to the EU and report on the progress of the experiments to the relevant instances (leadership, WP PFC leader, etc.). The 1 year stay may be extended for a few additional months if deemed adequate by the W and the PISCES-B team responsible officer and may be preceded by a shorter  $\approx$  1 month probation initial stay to make sure that the successful candidate meets the expectations of all parties involved in the collaboration.

The foreseen experimental activities within the EU-US PISCES-B collaborative experiments during this period will concentrate on:

- Be-He interaction: Mechanisms of He retention in bulk Be and Be:D layers. This would include exposure of Be by He and quantification of the content, outgassing, physical description of traps.
- Be-D interaction: Investigation of chemical-assisted physical sputtering of Be as function of surface temperature, impact energy, and ion flux. This includes also the dependence on the deuterium content in Be.

The results obtained will contribute to EUROfusion work programme deliverable H2.2-D02 "Quantify isotope-exchange on ITER and DEMO relevant materials, through the following WP PFC Sub Projects:

- WP PFC SP2: PWI Processes I: erosion, deposition and mixing
- WP PFC SP3: PWI Processes II: fuel retention, fuel removal and material damage
- WP PFC SP5: Post-mortem analysis and material migration

A strong interaction between the candidate and the PFC project leader and sub-project leaders is consequently expected.

We are looking forward your proposals.

Yours sincerely,

Tony Donn   
Programme Manager

cc: Research Unit Administrative and Scientific Contact Person, X. Litaudon (IPH department head), D. Mc Donald (IPH department deputy head), G. Federici (PPPT department head), C. Mrozek Christina (Admin department head), E. Genangeli (Admin. department), S. Brezinsek (WP PFC project leader), M.-L. Mayoral (WP PFC RO), W. Jacob (WP PFC project board chair), D. Borba (RO for international collaborations), R. Doerner (Principal investigator, PISCES research Programme), P. Nieckchen (PR department head)

