

# Beneficiaries staff to be seconded to the NBTF & R&D project team in Garching/Germany

## Vacancy 1 (1 position): Mechanical Engineer for Neutral Beam Ion Source

### Job Description

As a member of the Neutral Beam Injection (NBI) team at Max-Planck Institute for Plasma Physics (IPP) Garching, the job holder will participate in the development of the RF-driven negative ion source for ITER NBI. He/she will technically support the NBI test facilities BATMAN Upgrade and ELISE at IPP by implementing test bed upgrades, source modifications and diagnostic improvements. The work will be performed in Garching together with the IPP-NBI team.

### Your Tasks

- Implementation of upgrades at the test beds ELISE and BATMAN Upgrade, such as source modifications, diagnostic improvements or other test bed equipment
- Design of required modifications including structural, thermal and fluid dynamics calculations;
- Procurement of components either by industry or by in house manufacturing including supervision of assembly and installation
- Support commissioning of the components for these devices
- Writing of technical reports and presentations in meetings and conferences
- Collaborate with other European partners working in the same field, in particular in close collaboration with NBTF

### Your Profile

- Master degree (or equivalent) in mechanical engineering
- Experience in engineering projects
- Good knowledge of applying FEM (ANSYS) for performing structural, thermal and fluid dynamics calculations
- Good capability of using CAD software, in particular CATIA V5

### Your Abilities

- Good knowledge of vacuum and cooling technology
- Good knowledge of negative ion source technology is beneficial
- Ability to work independently and effectively within an international team
- High competence in team working and very good communication skills

**Date of vacancy: January 1, 2026**

**Contact: Prof. Ursel Fantz, [ursel.fantz@ipp.mpg.de](mailto:ursel.fantz@ipp.mpg.de)**

# Beneficiaries staff to be seconded to the NBTF & R&D project team in Garching/Germany

## Vacancy 2 (1 position): Physicist for diagnostics of large negative ion beams

### Job Description

As a member of the Neutral Beam Injection (NBI) team at Max-Planck Institute for Plasma Physics (IPP) Garching, the job holder will participate in the development of the RF-driven negative ion source for ITER NBI. He/she will technically support the NBI test facilities BATMAN Upgrade and ELISE at IPP by implementing test bed upgrades, source modifications and diagnostic improvements. The work will be performed in Garching together with the IPP-NBI team.

### Your Tasks

- Support the operation of the test facility ELISE
- Operate and maintain beam diagnostics installed on the test facilities ELISE and BATMAN Upgrade with the focus on beam emission spectroscopy and IR thermography
- Evaluate and interpret data and draw conclusions about physical dependencies
- Support the interpretation of measured data with simulations by using existing particle trajectory codes
- Collaborate with experts from other European partners working in the same field, in particular with the NBTF team
- Present the results in meetings, conferences and reports

### Your Profile

- PhD degree in Physics or equivalent fields
- Experimental experience and modelling capabilities
- Knowledge of ion beam physics is an advantage
- Experience in beam diagnostics is an advantage

### Your Abilities

- Good knowledge of data acquisition systems, data evaluation and visualization
- Knowledge in programming and/or data processing languages (e.g. Python, Fortran, Matlab)
- Ability to work independently and effectively within an international team
- High competence in team working and very good communication skills

**Date of vacancy: January 1, 2026**

**Contact: Prof. Ursel Fantz, [ursel.fantz@ipp.mpg.de](mailto:ursel.fantz@ipp.mpg.de)**

# Beneficiaries staff to be seconded to the NBTF & R&D project team in Garching/Germany

## Vacancy 3 (1 position): Physicist for ion beam diagnostics

### Job Description

As a member of the Neutral Beam Injection (NBI) team at Max-Planck Institute for Plasma Physics (IPP) Garching, the job holder will participate in the development of the RF-driven negative ion source for ITER NBI. He/she will technically support the NBI test facilities BATMAN Upgrade and ELISE at IPP by implementing test bed upgrades, source modifications and diagnostic improvements. The work will be performed in Garching together with the IPP-NBI team.

### Your Tasks

- Responsible for operation of the beam diagnostics at the test facilities and data analysis with focus on IR thermography
- Support the interpretation of measured data with simulations by using existing particle trajectory codes
- Active contribution to the experimental program to obtain beam properties
- Collaborate with experts from other European partners working in the same field, in particular with the NBTF team
- Present the results in meetings, conferences and reports

### Your Profile

- PhD degree in Physics or equivalent fields
- Experimental experience and modelling capabilities
- Knowledge of ion beam physics is an advantage
- Experience in beam diagnostics is an advantage

### Your Abilities

- Good knowledge of data acquisition systems, data evaluation and visualization
- Knowledge in programming and/or data processing languages (e.g. Python, Fortran, Matlab)
- Ability to work independently and effectively within an international team
- High competence in team working and very good communication skills

**Date of vacancy: January 1, 2026**

**Contact: Prof. Ursel Fantz, [ursel.fantz@ipp.mpg.de](mailto:ursel.fantz@ipp.mpg.de)**

# Beneficiaries staff to be seconded to the NBTF & R&D project team in Garching/Germany

## Vacancy 4 (1 position): Physicist for low temperature plasma diagnostics

### Job Description

As a member of the Neutral Beam Injection (NBI) team at Max-Planck Institute for Plasma Physics (IPP) Garching, the job holder will participate in the development of the RF-driven negative ion source for ITER NBI. He/she will technically support the NBI test facilities BATMAN Upgrade and ELISE at IPP by implementing test bed upgrades, source modifications and diagnostic improvements. The work will be performed in Garching together with the IPP-NBI team.

### Your Tasks

- Responsible for various Langmuir probe systems at the test facilities
- Analysis of the obtained data
- Present the results in meetings, conferences and reports
- Active contribution to the experimental program to obtain ion source properties
- Strong collaboration with NBTF and other partner institutes

### Your Profile

- PhD degree in Physics or equivalent fields
- Experience in Langmuir probes
- Knowledge of low temperature plasma physics
- Experience with ion sources is an advantage
- 

### Your Abilities

- Very good knowledge of plasma physics
- Operation and interpretation of plasma diagnostic methods
- Good knowledge of data acquisition systems, data evaluation and visualization
- Ability to work independently and effectively within an international team
- High competence in team working and very good communication skills

**Date of vacancy: January 1, 2026**

**Contact: Prof. Ursel Fantz, [ursel.fantz@ipp.mpg.de](mailto:ursel.fantz@ipp.mpg.de)**

# Beneficiaries staff to be seconded to the NBTF & R&D project team in Garching/Germany

## Vacancy 5 (1 position): Physicist for low temperature plasma diagnostics

### Job Description

As a member of the Neutral Beam Injection (NBI) team at Max-Planck Institute for Plasma Physics (IPP) Garching, the job holder will participate in the development of the RF-driven negative ion source for ITER NBI. He/she will technically support the NBI test facilities BATMAN Upgrade and ELISE at IPP by implementing test bed upgrades, source modifications and diagnostic improvements. The work will be performed in Garching together with the IPP-NBI team.

### Your Tasks

- Responsible for various optical emission spectrometers at the test facilities
- Analysis and interpretation of the obtained data with collisional radiative models
- Present the results in meetings, conferences and reports
- Active contribution to the experimental program to obtain ion source properties
- Strong collaboration with NBTF and other partner institutes

### Your Profile

- PhD degree in Physics or equivalent fields
- Experience in optical emission spectroscopy
- Experience in the development and application of collisional radiative models
- Knowledge of low temperature plasma physics
- Experience with ion sources is an advantage

### Your Abilities

- Very good knowledge of plasma physics
- Operation and interpretation of plasma diagnostic methods
- Good knowledge of data processing, evaluation and visualization
- Ability to work independently and effectively within an international team
- High competence in team working and very good communication skills

**Date of vacancy: January 1, 2026**

**Contact: Prof. Ursel Fantz, [ursel.fantz@ipp.mpg.de](mailto:ursel.fantz@ipp.mpg.de)**