E-TASC General Meeting #2

Monday, 09 February 2026 - Friday, 13 February 2026

Max Planck IPP

Programme

https://indico.euro-fusion.org/e/E-TASC_GM2

Monday 9 February

13:00

WELCOME

Contribution | **Location:** Max Planck IPP, D2 Conference Room | **Speaker:** Gianfranco Federici

13:20

13:20

INTRODUCTION: Overview of new E-TASC organisation (Objectives, Scope, Interactions of different elements)

Session | **Location:** Max Planck IPP, D2 Conference Room

13:20–13:30 **Goals of the meeting; Introduction to agenda**

Speaker
Frank Jenko

13:30–13:50 **Digital Solutions for fusion Office (DSO) objectives**

Speaker
Frank Jenko

13:50–14:15 **DISCUSSIONS**

14:15–14:35 **Work Package Theory and Modelling (WPTM) Objectives**

Speaker
Xavier Litaudon

14:35–15:00 **DISCUSSIONS**

15:00

15:00

COFFEE BREAK

Break | **Location:** Max Planck IPP, D2 Conference Room

15:30

15:30

Theory and Modelling programme outside EUROfusion

Session | **Location:** Max Planck IPP, D2 Conference Room

15:30–15:50 **Theory and modelling programme in UK**

Speaker
Rob Akers

15:50–16:00 **DISCUSSIONS**

16:00–16:20
Theory and modelling programme in USA: Restructured US Tokamak Research and EU Program Engagement

Speaker
David Humphreys

16:20–16:30 **DISCUSSIONS**

16:30–16:50
Theory and modelling programme in USA: Plans for Simulation and Validation in the US Tokamak Research Program.

Speaker
Nathaniel Ferraro

16:50–17:00 **DISCUSSIONS**

17:00–17:20 **Enabling Data-Driven Fusion Science: Platforms, Federation, and AI-Ready Workflows**

Speaker
Sammuil Brian

17:20–17:30 **DISCUSSIONS**

17:30–18:00 **GENERAL DISCUSSIONS**

18:00

Tuesday 10 February

09:00

POSTERS: Status and plans of actuivities by projects (TSVVs, DTEs, DATA, EnRs)

Session | **Location:** Max Planck IPP, D2 Conference Room

Description

Overview presentation followed by extended poster session

TSVV-A: H-Mode and Small/No-ELM Pedestals

Speaker
Tobias Görler

TSVV-B: Plasma Particle/Heat Exhaust – Fluid Simulations

Speaker
Patrick Tamain

TSVV-C: Plasma Particle/Heat Exhaust – Gyrokinetic Simulations

Speaker
Daniel Told

TSVV-D: Plasma-Wall Interactions with Metallic Plasma-Facing Components

Speaker
Dmitry Matveev

TSVV-E: Impurity Sources, Transport, and Screening

Speaker
Guido Ciraolo

TSVV-F: Tokamak Disruptions and Runaway Electrons

Speaker
Matthias Hölzl

TSVV-G: Physics of Burning Plasmas

Speaker
Oleksiy Mishchenko

TSVV-H: Reliable Prediction of Plasma Performance and Operational Limits in Tokamaks

Speaker
Michele Marin

TSVV-I: Stellarator Optimization

Speaker
Joaquim Loizu

TSVV-J: Stellarator Core Turbulence

Speaker
Jose Manuel Garcia Regana

TSVV-K: Neutral Particle Models

Speaker
Dmitriy Borodin

ACH-CIEMAT: High-Performance Computing

Speaker
Mervi Mantsinen

ACH-EPFL: High-Performance Computing

Speaker
Paolo Ricci

ACH-MPG: High-Performance Computing

Speaker
Roman Hatzky

ACH-IPPLM: Modelling Frameworks and Standardized Workflows

Speaker
Marcin Plociennik

DTE-ENG: A highly scalable and flexible digital twin of fusion power plants

Speaker
Cristian Sommariva

DTE-ENG: TWINTOK-IDA: An Integrated Validation and Benchmarking Framework for the EUROfusion Digital Twin Environment

Speaker
Anna Glasser

DTE-DDM: TWIN4RTF: A Machine-Agnostic Digital Twin Framework towards Fast Simulation and Real-Time Plasma Prediction and Control

Speaker
Alessandro Pau

10:30

10:30

COFFEE BREAK

Break | **Location:** Max Planck IPP, D2 Conference Room

10:50

10:50

POSTERS: Status and plans of actuivities by projects (TSVVs, DTEs, DATA, EnRs)

Session | **Location:** D2, Library

Description

Overview presentation followed by extended poster session

DTE-ENG: Digital Twin platform for integrated design of tokamak components – case studies on EU DEMO divertor and ITER divertor

Speaker
Domenico Marzullo

DTE-ENG: Integrated Digital Twin Framework for Breeding Blanket Systems: Coupling Plasma, Fuel Cycle, and Thermal-hydraulics dynamic

Speaker
Carlos Moreno

DTE-ENG: IMPACT: a Comprehensive Numerical Platform for Advanced Thermal Protection of Tokamaks

Speaker
Marie-Helene Aumeunier

DTE-PDT: Development of Generic Coupling between Transport and Free-Boundary Equilibrium Codes with Breakdown Modules for Pulse Design Tools

Speaker
Stefano Marchioni

DTE-DDM: A Novel Machine Learning-Based Digital Twin Architecture for Real-Time Monitoring, Integration and Control of the Breeding Blanket

Speaker
Antonio Cammi

DTE-PDT: Simulator-agnostic Digital Twin Environment (DTE) integration - towards a consolidated framework with an ITER relevance

Speaker
Sven Wiesen

DTE-ENG: Development of a Digital Twin Framework for Fusion

Speaker
Andrew Davis

DTE-VIZ: VIVID-DTE — Verification-oriented Interactive VISualisation and Decision support for the Digital Twin Environment

Speaker
Leon Kos

EnR-MOD: Developing reduced turbulence transport models for the tokamak scrape-off layer

Speaker
Maurizio Giacomin

EnR-MOD: Advanced algorithms for uncertainty quantification in plasma edge simulation chains

Speaker
Martine Baelmans

EnR-MOD: Integral kernel approach to modelling wave heating of stellarator plasmas: breaking further ground in theory and numerical implementation

Speaker
Philippe Lamalle

EnR-MOD: Geometric Orbital Spectrum Analysis of Resonant Ion-Mode Interactions and Transport in Tokamaks and Stellarators (GOSARIT)

Speaker
Panagiotis Zestanakis

EnR-MOD: Pedestal Inference Engine (PIE)

Speaker
Aaro Järvinen

EnR-MOD: Massive ASCOT simulations for fast ion tomographic reconstructions and surrogate model training

Speaker
Antti Snicker

DATA-DMP: Data Management Plan

Speaker
Pär Strand

DATA-DB: Multi-Machine Data Bases

Speaker
Alessandro Pau

12:30

12:30 – 13:30

LUNCH BREAK
Break

13:30 – 15:30

Parallel 1: DTE Community (self-organisation)
Session | **Location:** Max Planck IPP, D2 Conference Room | **Convener:** Frank Jenko

13:30 – 15:30

Parallel 2: TSVV Community (self-organisation)
Session | **Location:** D2, Seminar Room (2nd floor) | **Convener:** Xavier Litaudon

13:30 – 15:30

Parallel 3: ACH Community (self-organisation)
Session | **Location:** EUROfusion, R3.054 | **Convener:** Mervi Mantsinen

15:30 – 16:00

COFFEE BREAK
Break | **Location:** Max Planck IPP, D2 Conference Room

16:00

Plenary: Feedback from break-out sessions and cross-activities
Session | **Location:** Max Planck IPP, D2 Conference Room

Description
o Further development of the TSVV-ACH ecosystem
o Addressing the research gaps and opportunities discussed on Monday
o Expansion towards fusion engineering
o Input from experts from other communities

16:00–16:20 **Summary from DTE discussions**

Speaker
Frank Jenko

16:20–16:40 **Summary from TSVV discussions**

Speaker
Xavier Litaudon

16:40–17:00 **Summary from ACH discussions**

Speaker
Mervi Mantsinen

18:00

17:00–18:00 **GENERAL DISCUSSIONS**

Wednesday 11 February

09:00

Plenary: Community demand for theory and modelling

Session | **Location:** Max Planck IPP, D2 Conference Room

Description

o Further development of the TSVV-ACH ecosystem
o Addressing the research gaps and opportunities discussed on Monday
o Expansion towards fusion engineering
o Input from experts from other communities

09:00–09:10 **Plasma Physics Department**

Speaker
Marco Wischmeier

09:10–09:20 **WP-Tokamak Exploitation**

Speaker
Nicola Vianello

09:20–09:30 **WP-Plasma-Wall Interactions and Exhaust**

Speaker
Sebastijan Brezinsek

09:30–09:40 **WP-Stellarators**

Speaker
Ivan Calvo

09:40–09:45 **WP-JT-60SA Exploitation**

Speaker
Carlo Sozzi

09:45–10:30 **DISCUSSIONS**

10:30

10:30

COFFEE BREAK

Break | **Location:** Max Planck IPP, D2 Conference Room

10:50

10:50

Plenary: Community demand for theory and modelling

Session | **Location:** Max Planck IPP, D2 Conference Room

Description

o Further development of the TSVV-ACH ecosystem
o Addressing the research gaps and opportunities discussed on Monday
o Expansion towards fusion engineering
o Input from experts from other communities

10:50–11:10 **ITER**

Speaker
Simon Pinches

11:10–11:20 **DISCUSSIONS**

11:20–11:40 **Beyond ITER**

Speaker
Clarisse Bourdelle

11:40–11:50 **DISCUSSIONS**

11:50–12:10 **Engineering modelling tools**

Speaker
Ivo Moscato

12:10–12:30 **DISCUSSIONS**

12:30

12:30 **LUNCH BREAK**
Break

13:30

13:30 **Plenary: PPP – Theory and Modelling**
Session | **Location:** Max Planck IPP, D2 Conference Room

Description

o Training
o Building user communities
o Applications
o Resources

13:30–13:50
Proxima Fusion: Strengthening Europe's modelling ecosystem through public-private collaboration

Speaker
Orso Meneghini

13:50–14:00 **DISCUSSIONS**

14:00–14:20
Next Step Fusion: Overview of NSFsim application for plasma simulations and integrated modelling

Speaker
Georgy Subbotin

14:20–14:30 **DISCUSSIONS**

14:30–14:50
Google DeepMind: Fast, differentiable, and scalable tokamak simulation using JAX at Google DeepMind: status, applications, and opportunities.

Speaker
Jonathan Citrin

14:50–15:00 **DISCUSSIONS**

15:30

15:30 **COFFEE BREAK**
Break | **Location:** Max Planck IPP, D2 Conference Room

16:00

16:00

Plenary: Open Discussions

Session | **Location:** Max Planck IPP, D2 Conference Room | **Conveners:** Xavier Litaudon, Frank Jenko

Description

o Training
o Building user communities
o Applications
o Resources

17:30

19:00

DINNER Gasthof Neuwirt

Break | **Location:** Münchener Str. 10, 85748 Garching bei München, https://gasthof-neuwirt.org/

22:30

Thursday 12 February

09:00

Plenary: Software and Data standards within E-TASC

Session | **Location:** Max Planck IPP, D2 Conference Room

Description

o Training
o Building user communities
o Applications
o Resources

09:00–09:20 **EUROfusion Standard Software**

Speaker
Frank Jenko

09:20–09:45 **DISCUSSIONS**

09:45–10:05 **Recent IMAS developments**

Speaker
Simon Pinches

10:05–10:30 **DISCUSSIONS**

10:30

10:30

COFFEE BREAK

Break | **Location:** Max Planck IPP, D2 Conference Room

10:50

10:50

Plenary: Data needs and delivery

Session | **Location:** Max Planck IPP, D2 Conference Room

Description

o Training
o Building user communities
o Applications
o Resources

10:50–11:10 **Availability of machine data through DMP**

Speaker
Pär Strand

11:10–11:30 **DISCUSSIONS**

11:30–11:40 **Multi-Machine Data Bases**

Speaker
Alessandro Pau

11:40–11:50 **DISCUSSIONS**

11:50–12:00 **Pedestal Data Base**

Speaker
Lorenzo Frassinetti

12:00–12:10 **DISCUSSIONS**

12:10–12:20 **AMNS data**

Speaker
David Coster

12:20–12:30 **DISCUSSIONS**

12:30

12:30

LUNCH BREAK

Break

13:30

13:30

Parallel 1: Hands on: Tools for code development

Session | **Location:** Max Planck IPP, D2 Conference Room

13:30–14:30

New EUROfusion Gateway (EFGW): how to use tools (e.g. IMAS, IMAS-Python), how to setup environment.

Speaker
Michal Owsiak

14:30–15:30

Opportunity to improve communication between teams by promoting Mattermost, JIRA, Confluence, Gitlab.

Speaker
Michal Owsiak

15:30

13:30

Parallel 2: Hands on: HPC specific tools

Session | **Location:** D2, Seminar room (2nd floor)

13:30–14:30 **Instrumentation and profiling for efficient GPU porting**

Speakers
Gilles Fourestey, Mathieu Peybernes

14:30–15:30 **Towards Continuous Integration (CI): Lessons Learned from GVEC**

Speaker
Tiago Ribeiro

15:30

13:30

Parallel 3: E-TASC SB (Closed Session)

Session | **Location:** EUROfusion, R3.054 **Conveners:** Xavier Litaudon, Frank Jenko

15:30

15:30

COFFEE BREAK

Break | **Location:** Max Planck IPP, D2 Conference Room

16:00

16:00

Parallel 1: Hands on: Available computing resources for code development

Session | **Location:** Max Planck IPP, D2 Conference Room

16:00–17:00 **Demo on Long-Term Data Storage Facility (LTDSF)**

Speakers
Maciej Brzezniak, Norbert Meyer

17:00

17:00

Parallel 1: Training Activities: Experiences and Lessons Learned

Session | **Location:** Max Planck IPP, D2 Conference Room

17:00–18:00 **Lessons learned from the GENE & GENE-X training week**

Speaker
Philipp Ulbl

18:00

16:00

Parallel 2: Hands on: HPC specific tools

Session | **Location:** D2, Seminar room (2nd floor)

16:00–17:00 **Unveiling the performance efficiency of codes using BSC performance tools**

Speaker
Marta Gracia Gasulla

17:00–18:00
Simple and portable methods to extract performance metrics from software running on HPC clusters

Speaker
Federico Cipolletta

18:00

16:00

Parallel 3: E-TASC SB (Closed Session)

Session | **Location:** EUROfusion, R3.054 | **Conveners:** Xavier Litaudon, Frank Jenko

18:00

Friday 13 February

09:00

Plenary: Goals for 2026-2027 and preparation for FP10

Session | **Location:** Max Planck IPP, D2 Conference Room | **Conveners:** Xavier Litaudon, Frank Jenko

10:30

10:30

COFFEE BREAK

Break | **Location:** Max Planck IPP, D2 Conference Room

10:50

10:50

Plenary: SUMMARY and CONCLUSIONS

Session | **Location:** Max Planck IPP, D2 Conference Room

10:50–11:45 • **Meeting memorandum**

Speaker
Frank Jenko

11:45–12:00 **Final remarks and closing the meeting**

Speakers
Frank Jenko, Xavier Litaudon

12:00