

PSD AWP 2025

# Introduction

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# Welcome to AWP 2025

- Day 1: Overviews
- Day 2: AWP by Work Packages + Information on TSVVs
- Day 3: Closed session between PLs/TFLs and PMU: finalize outcome of AWP2025 discussions for written AWP, reporting, Prioritization and extent of PCRs to be brought forward to PSD Project Board



## News from PMU

- Ambrogio Fasoli appointed Provost of EPFL from January 1<sup>st</sup> 2025
- PM considers workload as Provost to be incompatible with requirements of PM
  - >Discussions will begin at upcoming GA 9<sup>th</sup> /10<sup>th</sup> of October



## ITER and ITPAs

- ITER related activities are pivotal to the activities in the PSD
- Require an overview the EF activities in PSD for 2025 across all WPs towards ITER
  - E.g. In 2025 to list all modelling activities across all WPs for ITER
  - Identify which are activities of interest to EF that require modelling towards ITER
  - Identify which areas of interest of EF WPs towards ITER lack activities and/or human and financial resources
  - ...
- Desire of EF is that PSD serves as an entry point for requests of scientific activities by ITER and supports any possible coordinated responses
- Increase the visibility of activities reported at ITPA that received strong support by EUROfusion (human resources / operational time of devices / computation time) inside existing publication rules
- Last 2 bullets cannot be enforced but the WPs leaders are encouraged to promote the role of EUROfusion



## VNS & DEMO

- DEMO related activities remain a central element of EF in 2025 (and beyond) → the DEMO physics gaps document is the reference for DEMO related priorities inside the PSD
- Scheduled PSD-DCT meetings until end of 2024 and activity likely to be continued in 2025 – current status: completed review of gaps and to identify future needs
- H. Zohm will step down as head of the DCT end of 2024 and will remain involved in the activity as expert; a new leadership for the PSD group inside the DCT is being considered
- The DCT activity remains inside the DEMO department led by Joëlle Elbez-Uzan
- Presently a timeline linking a possible ITER, VNS and DEMO construction is being elaborated as well as possible interlinks between ITER, VNS and DEMO
  - The rationale of the links in that timeline, when connected to physics questions, will likely trigger scientific discussions that will need to be led by the PSD and its WPs
- Presently no activity in the PSD is foreseen towards a VNS – however, STAC reviewed the feasibility of a proposed VNS concept and is expected to report to this coming GA; once the outcome has been clarified we expect to organize and prioritize in view of a potentially new situation



## JT-60SA

- On occasion of JIFS end of August/early September A. Fasoli and myself visited JT-60SA
- Outcome: *EUROfusion not satisfied with the level of collaboration of QST* (e.g. no students to be part of Experimental Team, EUROfusion to send supervisors of students to Japan, no prospect of a constructive path forward proposed for operations, limited role of F4E Project Leader, limited ambition for change over to metallic wall)
- EF flagged to the EC the risk of JT-60SA not being successfully exploited by EF
- EC supports proposal by EF to escalate the issue to higher levels of QST or other entry points for discussion and a meeting with I.O. and F4E has been scheduled to explore possible paths
- PSD in 2025: Aim is to provide a clear scientific strategy for change-over to W (priorities in C, priorities in W) as well as to open a path for involvement in scientific operational aspects



# BEST: First draft of a Research Plan that identifies potential value for EF by end of 2025

- Coordinators for the BEST research plan have been nominated
- UKAEA is excluded based on nature of agreement with China (only as individuals subcontracted by a member of EF)
- A kick-off meeting of European team should be held end of October/early November at the latest
- An agenda for the meeting in Hefei from 26<sup>th</sup> to 29<sup>th</sup> of November is to be defined (1 meeting in Hefei per year)
- Awaiting the nomination of the Chinese counterparts
- PLs/TFLs to be involved in European team meetings and to review draft research plan for PSD
- Considering reserving small financial contribution to support activities once identified and which cannot be done by Chinese colleagues

Name	Beneficiary	Topic
<b>Yevgen Kazakov</b>	LPP-ERM-KMS	Overall coordination of the research plan and the strategy for the exploitation of BEST
Emmanuel JOFFRIN	CEA	Plasma scenarios
Julien HILLAIRET	CEA	Physics of heating, current drive and fuelling
Jonathan Graves	EPFL	MHD, disruptions and control
Rui Coelho	IST	Energetic particle physics
Paola Mantica	ENEA	Transport physics and integrated modelling
Ou Pan	MPG	Divertor, SOL physics and plasma-wall interactions
Matteo Valerio Falessi	ENEA	Theory and simulation
Rosaria Villari	ENEA	Fusion technology developments
Richard Kamendje	PMU – contact point with Fusion technology departments in EUROfusion	Fusion technology developments



# KSTAR & Agreement on small ELMs with USA

## KSTAR:

- The EC desires a collaboration with KSTAR
- Activities should be essential to the European programme
- Only very limited number of beneficial activities may be identified
- However, an involvement in the exploitation of KSTAR shall only involve activities that do not drain essential participation from European devices (these have priority)

## Small ELMS with USA:

- Understanding is that the PMP is finalized during the APS, and will be shared with PSD
- Milestones for each year are non-binding but motivating target and can be delayed when not achieved
- Possible priorities of that document do not override EF prioritizations





## Stellarators

- Continue undertaking an effort to increase the involvement of EUROfusion scientists outside MPG to the exploitation of W7X
- Engage in supporting a conceptual design of a HELIAS, this should clarify potential physics gaps → a meeting with Felix Warmer (MPG) has been scheduled to coordinate their activities with EF
- Using an updated HELIAS concept, derive a prioritization of the physics aspects inside the EUROfusion stellarator programme



## Subjective Scientific Readiness Levels

- SSRs defined towards ITER and DEMO
- Since 2021 in use inside WP TE to track progress towards scientific objectives and updated through annual reports
- Attempt to **extend the concept of SSRs to PWIE** (for elements towards ITER/DEMO)
- For WPW7X once the physics gaps towards HELIAS have been identified and listed – like for the DEMO physics gaps document
- Identify SSRs for scientific objectives inside JT-60SA experimental team (EF component)



## Extension of CWP to 2026 & 2027

- No action started as yet
- PSD aims to convene the WP leaders as soon as possible once we have an indication regarding the extension towards 2026 and 2027 to discuss prioritizations and activities as well as to interact with beneficiaries and STAC
- Aiming at mid-December/early January 2025 for discussion with PLs/TFLs
- First define objectives and derive activities



## DTT & EUROfusion

- A. Fasoli and M. Wischmeier to visit Frascati early November to identify possible area of participation of DTT in EUROfusion





## EUROfusion and UKAEA

- Scheduled meeting in Garching on October 22nd with UKAEA representatives
- Collecting input of issues to be raised as well as desired intensified collaboration --> please contact MW or COs to provide input



# Status report on APS publication rules – *once finalized will find its way into publication rules*

## Recent meeting on APS publication rules related to the usage of teams

- Teams can continue to be included in the author lists of APS publications i.e. (JET Contributors, ASDEX-Upgrade Team, ...) as before but the composition of the respective teams needs to be submitted together with the submission of each paper by the main authors as Supplemental Material together with a short (few lines) descriptions of the role/contributions of the respective Teams.
- This Supplemental Material can be a unique file e.g. PDF format to be prepared by the experiments / teams contact persons in advance with a reference to the source e.g. Nuclear Fusion Journal, to be used uniformly and in a standard way across all APS publications referring to the respective Teams. This Supplemental Material will be updated following the usual practice of preparing a new list every 2 years during the IAEA Fusion Energy Conference.
- The fact that the same author might appear in different lists was deemed not to be a problem by APS.
- Action on **EUROfusion, experiments / teams contact persons**: to prepare the Supplemental Material containing the composition of the respective teams with a short (few lines) description of the role/contributions of the respective Teams for submission by the main authors of papers to APS journals.



# Agenda of Monday 7<sup>th</sup> of October

MONDAY, 7 OCTOBER		
13:00 → 13:20	<b>Welcome and objectives</b> 15'+5' Speaker: Marco Wischmeier (EUROfusion PMU)	🕒 20m ✎
13:20 → 14:20	<b>Latest on Training and Education</b> Speaker: Dr Eva Belonohy (EUROfusion)	🕒 1h ✎
14:20 → 14:50	<b>Financial Overview</b> ¶ 20'+10' Speaker: Emilia Genangeli	🕒 30m ✎
14:50 → 15:30	<b>Brief update on the ITER re-baselining</b> 20'+20' Speaker: Alberto Loarte (ITER Organization)	🕒 40m ✎
15:30 → 15:45	<b>Coffee break</b>	🕒 15m
15:45 → 16:05	<b>DSD: goals and structure</b> Speaker: Volker Naulin (EUROfusion)	🕒 20m ✎
16:05 → 16:35	<b>International Collaboration overview</b> Speaker: Richard Kamendje (EUROfusion)	🕒 30m ✎
16:35 → 17:00	<b>Discussion</b>	🕒 25m ✎
18:00 → 20:00	<b>Bowling and dinner</b> 18:00-19:00 Olympia Bowling, Klopstockstraße 4, 80804 München (reservation name: EUROfusion) 20:00- Restaurant "Dhaba Muenchner Freiheit", Herzogstraße 1b, 80803 München (reservation name: EUROfusion)	🕒 2h ✎