



# TSVV3 – Regular advancement meeting

29/06/2022 – Task 5: neutrals physics

*Project news*

**P. Tamain**



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# Today's meeting agenda



**14:00** → 14:15 **Project news and updates**

**Speaker:** Patrick Tamain (CEA)

🕒 15m



**14:15** → 14:35 **Round-table review of progress, difficulties...**

Each contributor makes a flash report (typ. 2mn, with 1 slide if necessary) about what they have been working on since the last meeting, any progress or difficulty

**Speaker:** All

🕒 20m



**14:35** → 15:00 **Validated 3D turbulence simulations across the tokamak edge, SOL and divertor**

A rapid browsing of the PSI talk, with key take-aways for the project

**Speaker:** Wladimir Zholobenko (IPP)

🕒 25m



**15:00** → 15:25 **3D turbulence simulations with self-consistent neutrals in SOLEDGE3X: plan and progress**

**Speaker:** Virginia Quadri

🕒 25m



**15:25** → 15:55 **Recent progress in turbulence modelling with neutrals with GBS and WPTE experiment proposal**

Followed by discussion on WPTE experiment proposal

**Speaker:** Davide Mancini (ENEA)

🕒 30m





## ❖ IMASification:

- did not have time to organize promised meeting concerning IMAS IDs for turbulence codes => will do it soon

## ❖ Git repositories on Gateway:

- EBC, GBS and SOLEDGE3X are there
- Status for GRILLIX and FELTOR? (reminder: request of SB)

# Feedback from thrust 1 meeting



- ❖ Reminder: thrust 1 = forum of coordination between WPTE TFL and TSVV projects 1 (pedestal physics), 3 (edge fluid) and 4 (edge gyrokinetics)
- ❖ Meeting took place last week
- ❖ Main feedbacks concern task 5:
  - TSVV 4 eager to organize **common discussion forum on neutrals** modelling => exact form tbd with them
  - WPTE extremely **supportive of validation initiative** with codes including neutrals at higher density regimes (vs TCVX21) => see Davide's presentation



- ❖ Suspension of meetings across summer
  
- ❖ Suggestion:
  - Hold next meeting on impurities on July 13<sup>th</sup>
  - Resume meeting on August 24<sup>th</sup>



## **AUG simulations with GRILLIX including density scan with fluid neutrals (tasks 4 and 5) – PAPER**

W Zholobenko et al : 13th June 2022 | DocumentID : 32682

[: Filamentary transport in global edge-SOL simulations of ASDEX Upgrade](#)

Journal : Nuclear Materials and Energy, .

Co-authors : J. Pfennig, A. Stegmeir, T. Body, F. Jenko, the ASDEX Upgrade Team

## **Reduced turbulence model applied to C-mod case (task 3) – ORAL**

Wouter Dekeyser et al : 24th November 2021 | DocumentID : 31022

[: SOLPS-ITER simulations of the Alcator C-Mod plasma boundary using a self-consistent interchange model for anomalous transport](#)

Conference : 25th International Conference on Plasma Surface Interaction in Controlled Fusion Devices (PSI-25), Jeju, South Korea, 12th June 2022.

Co-authors : R. Coosemans, S. Carli, R.A. Pitts, B. LaBombard, M. Baelmans

## **Radial electric field in gyro-fluid simulations – POSTER & PAPER**

R. Gerru et al : 1st February 2022 | DocumentID : 31476

[: Investigation of the poloidal asymmetries on the radial electric field](#)

Conference : 48th EPS Conference on Plasma Physics (EPS), Maastricht, Netherlands, 27th June 2022.

Co-authors : M. Wiesenberger, A.H. Nielsen, V. Naulin, J. Juul Rasmusen

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