

2023.05.03 Thrust meeting #03 Minutes

Meeting Details

- **Date:** 03/05/2023
- **Time:** 10.00 CEST
- **Location:** Zoom
- Indico page: <https://indico.euro-fusion.org/event/2640/>

Attendees

- N. Vianello (NV)
- D. Keeling (DK)
- T. Görler (TB)
- P. Tamain (PT)
- D. Told (DT)
- E. Serre (ER)
- C. Roch (CR)
- D. Kalupin (DK)
- D. **Tskhakaya** (DTs)

Agenda Items

1. Research Topics and Modelling Needs

- **Presenter:** N. Vianello
- **Duration:** 20 Minutes
- **Objective:** Presentation of recent results from WPTE
- **Comments**
 - TG: Ne seeding to be checked if M. Hamed can tackle also the high current. B. Chapman is a permanent guest they will take care to involve Oleg to embed the TCV cases into the TSVV1. Also other code users are not fully embedded and would be good to have them as

guest. NV to provide the list of users in order to invite them into the pedestal annual meeting. To be embedded as well some american activities

- CR: Would be good to invite WPTE members into TSVV meeting in particular to raise the point of open scientific issues and if these can be tackled in present codes or require improvements
- PT: TSVV mainly focused on development and need to outsource the validation if users would like to do it. They can help in setting up the case and act as consultant. Also would be good to advertise the capabilities at least through up to date wiki-page
- DK: Take advantage of training courses in order to enlarge the user base
- DT: In particular TSVV4 is really focused into development but some of the advancement can be already delivered (at least to TSVV1)
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2. TSVV1 Development and Future Plans

- **Presenter:** T. Görler
- **Duration:** 20 Minutes
- **Objective:** Presentation of recent results from TSVV01
- **Comments**
 - TSV01 workshop scheduled for June 27-29, 2023
 - CR: what do you feel which is the higher priorities? Integration is the key ingredient (flux driven + electron scale channel)
 - CR: Global simulation including MHD scale: which is the timescale for having this deployed?
 - CR and NV: Discussion about the pedestal observation on AUG
 - TG: Mentioned that numerical schemes has progressed and are being used into the hybrid JET case

3. TSVV3 Development and Future Plans

- **Presenter:** P. Tamain
- **Duration:** 20 Minutes
- **Objective:** Presentation of recent results from TSVV03
- **Comments:**

- Gyro-fluid including collisions implemented into FELTOR almost complemented and now gyro-fluid is now compatible with neutrals and multi-species physics
- Boundary conditions: effect of collisions with neutrals and now correction of Bhom boundary conditions.
- RANS models available on SOLPS and SOLEDGE3X. Tuned on a database of 2D turbulence simulations and added parallel transport
- GBS extended to 3D non axisymmetric equilibria. Also GRILLIX is extended to stellarator geometry
- GRILLIX: implemented recycling boundary
- EBC, GRILLIX and SOLEDG3X same implementation of advanced fluid neutrals
- New boundary condition: to be implemented into SOLEDGE3X and GBS (PhD @Compass). Effort as well into SOLPS-ITER implemented but not used but would be important for all the boundary investigation pointing toward sputtering and PWI
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4. TSVV4 Development and Future Plans

- **Presenter:** D. Told
- **Duration:** 20 Minutes
- **Objective:** Presentation of recent results from TSVV04
- **Comments**
 - PT: GENE-X applied to TCVX21. How can you explain the right target heat flux while the midplane temperature upstream is not matched. Maybe coincidence?
 - DTs: inter-ELM SOL BIT1 simulation suggest still the presence of non-Maxwellian collisionless electrons from upstream SOL

Meeting end at 12.15