

Update on the CPU/GPU usage



CPU Hours spent (Mh)

	March	April	May	June	July	August	September
stella	2.62	1.79	8.65	7.24	8.43	9.30	4.58
EUTERPE	0.25	0.75	1.95	1.41	0.84	0.41	0.01
GENE3D	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GENE	11.53	8.63	5.63	6.03	12.60	7.66	2.31
Total	14.40	11.18	16.23	14.68	21.87	17.37	6.89

CPUHours Granted (Mh)

204.80

CPUHours Spent (Mh)

102.62

CPUHours Spent (%)

50.11%

GPU Hours spent (Mh)

	March	April	May	June	July	August	September
GX	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GENE	0.81	1.03	0.96	0.32	0.04	0.00	0.04
DESC	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.81	1.03	0.96	0.32	0.04	0.00	0.04

GPUHours Granted (Mh)

21.22

GPUHours Spent (Mh)

3.70

GPUHours Spent (%)

17.44%

To keep track you own **CPU** or **GPU** usage:

```
>saldo -r --dcgp -s 202603 -e 202609 -a FUPA2_STELTURB
```

```
>saldo -b -dcgp
```

```
>saldo -r -s 202603 -e 202609 -a FUPB2_STELTURB
```

```
>saldo -b
```

Update on the CPU/GPU usage



	CPUHours Requested (Mh)	CPUHours Granted (%)	CPUHours Granted (Mh)	CPUHours Spent (Mh)	CPUHours Spent (%)
stella	69.68	29.56%	60.55	42.62	70.39%
EUTERPE	86.41	36.66%	75.08	5.61	7.47%
GENE3D	54.61	23.17%	47.45	0.00	0.00%
GENE	25.00	10.61%	21.72	54.39	250.38%
Total	235.70	100%	204.80	102.62	50.11%

	GPUHours Requested (th)	GPUHours Granted (%)	GPUHours Granted (Mh)	GPUHours Spent (Mh)	GPUHours Spent (%)
GX	42.67	12.87%	2.73	0.00	0.00%
GENE	288.89	87.13%	18.49	3.70	20.02%
DESC	0.01	0.00%	0.00	0.00	0.00%
Total	331.57	100%	21.22	3.70	17.44%

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```
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>saldo -b -dcgp
```

```
>saldo -r -s 202603 -e 202609 -a FUPB2_STELTURB  
>saldo -b
```

Where do we stand?



- D and M progress update on **Sept. 14** and **Oct. 19**

J. M. García-Regaña: D.FAST-TURBTRANSP + RM-ZFLOWS

E. Sánchez, J. Riemann: D.EM-GLOBALTURB

A. Zocco: D.RM-EM-ELEC

A. Bañón-Navarro: D.W7X-PART-TRANSP, M.RM-W7XEXP

H. Thienpondt: M-STELLA-RELEASE, M.ITG-WITH-Z, M.IMAS-TURB-DB (Today W7-X meeting)

M. Barnes: M.EM-GLOBALTURB

M.J. Pueschel: D.RM-ESTURB, M.RM-DISP-REL (Today at TSVV-J Meeting)

J. Ball: D.TURB-SELFINTER*

Description of deliverables	
To be accomplished in 2026	
D.FAST-TURBTRANSP Rapid turbulence diagnostic tool based on an initial electrostatic turbulent transport database (see related milestone M.IMAS-TURB-DB). Part: JGR*, HT, CS, ES, ACH support staff, W7-X team.	
D.RM-ZFLOWS Derive linear-simulation quantities that maximize ultra-low-frequency, large-amplitude zonal oscillations in optimized stellarators by correlating nonlinear and linear spectra across configurations from TSVV-I/TSVV. Participants: CS*, JGR, ES, HT.	
D.EM-GLOBALTURB Study of electromagnetic turbulence through global simulations with EUTERPE for specific discharges and experimental profiles from W7-X and TJ-II. Participants: ES*, JGR, JLV, HT, CS, JR, RK.	
D.RM-EM-ELEC Development of reduced electromagnetic electron models to accelerate turbulence optimization by formulating velocity-space spectral representations of the electron distribution function to predict key instabilities—electromagnetic trapped-electron modes and microtearing modes. Participants: AZ*, KA, GA, LP.	
D.W7X-MTM Investigation of the role of Microtearing Modes (MTMs) during high-performance operational phases in W7-X (M) validate or refute the local approximation by comparing local GENE and global GENE-3D simulations. Participants: ABN*, DF, HCC.	
D.W7X-PART-TRANSP Quantify impurity and main ion transport during high-performance phases in W7-X GENE simulations alone and with GENE-KNOSOS-Tango framework. Participants: ABN*, HCC, DF.	
D.RM-ESTURB Study of electrostatic turbulence in arbitrary 3D magnetic geometry by means of reduced models (see milestones M.RM-DISP-REL and M.RM-QL-FLUXES Participants: MM, MJ, AZ, JP.	

Milestones (The superindex “*” denotes the responsible person(s) of each milestone)

No	Title	Description	Expected date
1	M.STELLA-RELEASE	Integration of the different versions of the code into a single one, along with documentation of the source code and its diagnostics and data management suite (GA*, HT*, MB)	June. 26
2	M.FFS-EM-STELLA	Numerical implementation of electromagnetic fluctuations for flux annulus simulations in stella (MB*, DK, GA, HT).	Dec. 26
3	M.IMAS-TURB-DB	Stellarator core turbulence database for W7-X with flux-tube simulations (HT*, JGR*, CS, ACH Support).	Dec. 26
4	M.ITG-WITH-Z	Model and tool for the fast evaluation of the effect or impurities on toroidal ITG stability for arbitrary geometry (HT*, IC, JGR).	Dec. 26
5	M.RM-DISP-REL	Fast geometry-sensitive dispersion relation solver for ITG and TEM leveraging model reduction (MJ*, MM, JP).	Dec. 26

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CFP-FSD-AWP26-TM-07 / TSVV-J: Stellarator Core Turbulence

6	M.RM-W7XEXP	Reduced models and scaling laws for heat and particle fluxes in W7-X using existing validated databases validated against experiments (ABN*, DF, HCC).	Dec. 26
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Where do we stand?



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E. Sánchez, J. Riemann: D.EM-GLOBALTURB

A. Zocco: D.RM-EM-ELEC

A. Bañón-Navarro: D.W7X-PART-TRANSP, M.RM-W7XEXP

H. Thienpondt: M-STELLA-RELEASE, M.ITG-WITH-Z, M.IMAS-TURB-DB (Today W7-X meeting)

M. Barnes: M.EM-GLOBALTURB

M.J. Pueschel: D.RM-ESTURB, M.RM-DISP-REL (Today at TSVV-J Meeting)

J. Ball: D.TURB-SELFINTER

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1	M.STELLA-RELEASE	Integration of the different versions of the code into a single one, along with documentation of the source code and its diagnostics and data management suite (GA*, HT*, MB*)	June. 26

Upcoming presentations:

Date	Time	Speaker	Affiliation	Title	Type
14.09.2026	14:00	Victoria Winters	IPP	Status of EMC3-Eirene modeling comparisons to experiment	status update
14.09.2026	14:30	Hanne Thienpondt	CIEMAT	Nonlinear critical gradients in W7-X: Insights from massive gyrokinetic simulations and experimental measurements of turbulent heat transport	Invited Talk for Joint Varenna-Lausanne Workshop

D.W7X-ITER Investigation of the role of ion-sound modes (W7X) during high-performance operational phases in W7-X (M) validate or refute the local approximation by comparing local GENE and global GENE-3D simulations. Participants: ABN*, DF, HCC.

D.W7X-PART-TRANSP Quantify impurity and main ion transport during high-performance phases in W7-X GENE simulations alone and with GENE-KNOSOS-Tango framework. Participants: ABN*, HCC, DF.

D.RM-ESTURB Study of electrostatic turbulence in arbitrary 3D magnetic geometry by means of reduced models (see milestones M.RM-DISP-REL and M.RM-QL-FLUXES Participants: MM, MJ, AZ, JP.

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CFP-FSD-AWP26-TM-07 / TSVV-J: Stellarator Core Turbulence			
6	M.RM-W7XEXP	Reduced models and scaling laws for heat and particle fluxes in W7-X using existing validated databases validated against experiments (ABN*, DF, HCC).	Dec. 26



TSVV-J Regular Meeting 5

lunes 14 sept 2026, 11:00 → 12:20 Europe/Berlin

<https://us02web.zoom.us/j/86121184639?pwd=gEdRgdM9hZtZ5Bjb42mWrhbdd0kAFR.1> (Zoom)

11:00 → 11:10

TSVV-J updates
Ponente: Jose Manuel Garcia Regana (CIEMAT)

🕒 10m

11:10 → 11:40

Ion-temperature-gradient instability in the asymptotic transit-effect regime
Ponente: Sr. Maikel Morren (DIFFER)
 TSVVJ meeting - ...

🕒 30m

11:40 → 11:55

Update on D.W7X-PART-TRANSP, M.RM-W7XEXP
Ponente: Alejandro Banon Navarro (IPP)

🕒 15m

Next meetings

October 19, November 9