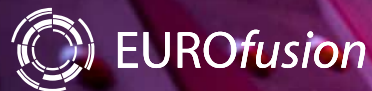
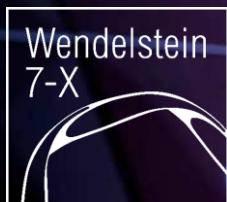




Update on W7-X towards OP 2.3

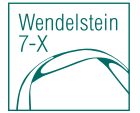


O. Grulke



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New developments



- **W7-X systems**

- gas inlet feedback control on radiation (long pulse detachment/divertor heat load mitigation)
- NBI preparation for He injection expected for April '25
- max. control coil currents increased to 3.5kA for a max. period of 10s
- increase of new gyrotron power to 1.2MW, allowing max. ECRH heating power of ~8.5MW
- technical work on pellet injector (prevention of catastrophic failure) and new position control of a single Thomson laser
- interlock of heating systems to avoid main transformer overload

- **update of procedure for extension of ECRH and NBI heating power/energy**

- released energy/heating levels from OP 2.2 will be transferred to OP 2.3
- except for a single comparison discharge, released energy/heating levels are being transferred to reversed field operation
- combination of ECRH and NBI procedures: NBI fast ion loads separate, otherwise total heating power and energy will be considered (update of formal procedure in preparation)

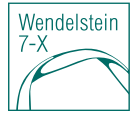
New developments



- **amenities**

- new coffee machine in control room kitchen area (already installed)
- new snack dispenser in control room (delivery this week)
- **both machines accept card payment only (no cash)**

Schedule



February '25						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

March '25						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April '25						
M	Tu	W	Th	F	Sa	Su
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May '25						
M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

- first week of OP 2.3 operation foreseen as SO-I
 - tests of divertor heat load mitigation strategies
 - assessment of new magnetic configurations
 - commissioning of new control capabilities
- last two weeks serve as contingency
 - leave some room for important aspects emerging from operation
 - it is appreciated that analysis from OP 2.2 takes some time; prio-I post-deadline proposals should go into contingency
- in order to keep the 2-weeks forecast, accompanying meetings (session detailing, program planning) will start in **cw 7 (13./14. Feb)**

Initial session plan on logbook



	NPC	PC (A/B)
cw 8-9	reversed	(-/-)
cw 10-13	reversed	(+/+)
cw 14-15	forward	(+/+)
cw 16	forward	(-/+)
cw 17-21	forward	(-/-)

6 weeks reversed field

remarks:

- tentative one boronization foreseen during OP 2.3 (however, one prior to OP 2.3 plasma operation planned)
- 2GJ detachment program requires gas feedback on radiation
- SO: a number of insufficiently addressed proposals from OP 2.2 are planned to finalize in OP 2.3 – please restrict requirements to open aspects
- a number of “backup” sessions are defined in case of technical problems (e.g. critical magnetic field configurations cannot be released)