

19th Coordinated Working Group Meeting

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This meeting is conducted and supported by

**Max-Planck-Institut für
Plasmaphysik.**



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MAX-PLANCK-GESELLSCHAFT

We are grateful to the our funding agency

Helmholtz-Gemeinschaft

for the provision of the venue and support.

HELMHOLTZ
RESEARCH FOR GRAND CHALLENGES

The CWGM is conducted under auspices of the

International Energy Agency.



We are grateful to all research centers
supporting the participation in this meeting.

This meeting has been organized by

Mrs. Maria Radau
+49 3834 88 2508

The scientific organizers are

Enrique Ascasibar (CIEMAT)
David Gates (PPPL)
Yasuhiro Suzuki (NIFS), A.D.

The scientific content was created by
the session organizers:

Marcin Jakubowski (IPP)
Sam Lazerson (PPPL)
Naoki Tamura (NIFS)
Yasuhiro Suzuki (NIFS)
Golo Fuchert (IPP)
Moto Nakata (NIFS)
Novimir Pablant (PPPL)
Felix Warmer (IPP)

Useful information

Wi-Fi

Network: *HGF-Gastzugang* / password: *Helmholtz.wifi*

Please note:

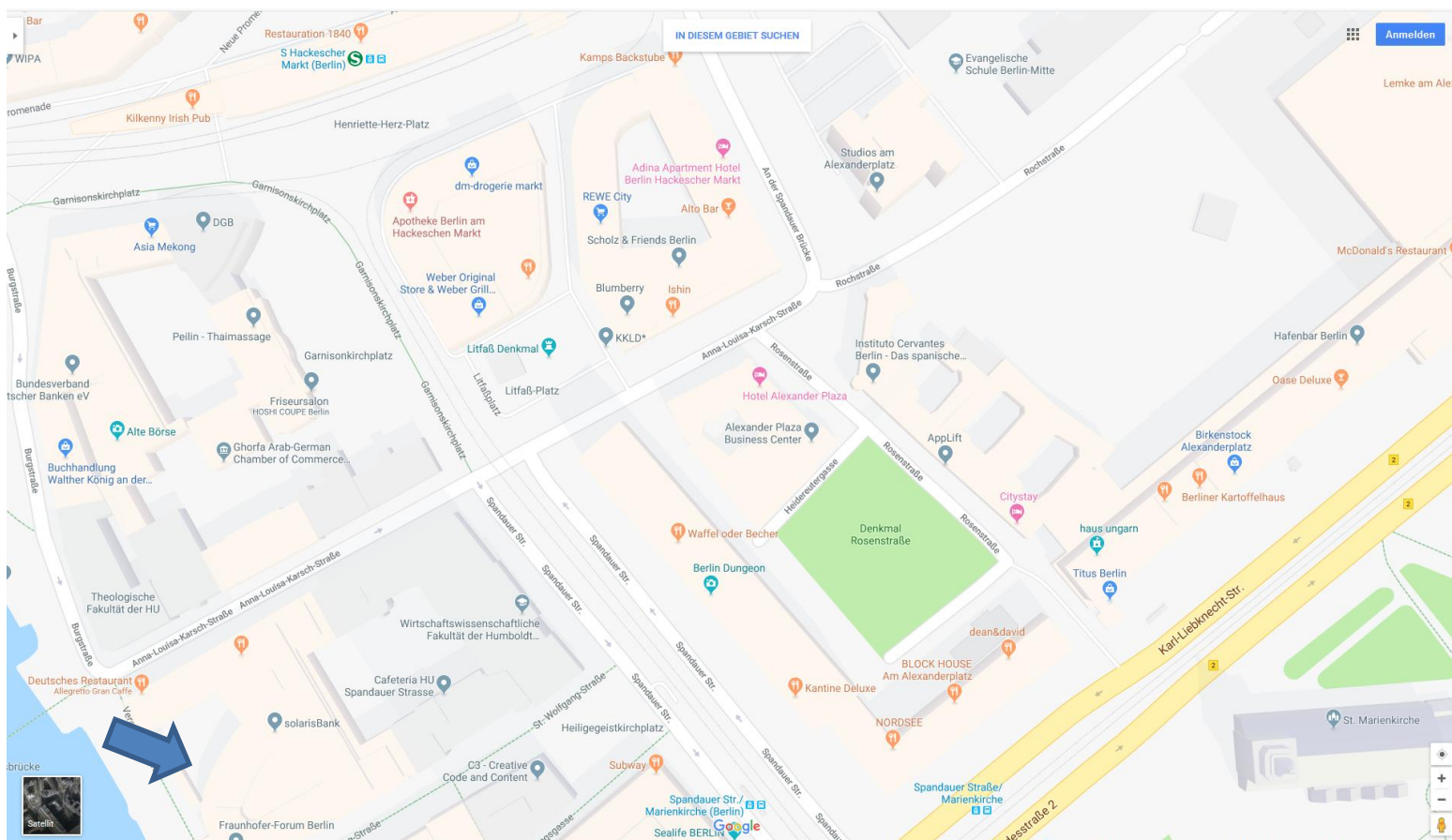
The Helmholtz Headquarter is not a conference venue in a broader sense.

Therefore we kindly ask you to avoid lingering and discussions in the hallway – please use the meeting rooms or the space outside the office area.

We do hope for your understanding and appreciate your cooperation.

Coffee will be served in front of the seminar room.

For lunch, there are plenty of restaurants, bistros and cafés in walking distance of the Spreepalais.



Wednesday, 19:00

*Restaurant Rotisserie
Weingrün
Gertraudenstr. 10-12
10178 Berlin-Mitte*

*Expenses for beverages
will be collected at the end of the dinner
(as well as your voluntary contribution
to a tip), as single payments will not be
accepted.*

Dinner at



Berlin, 13th March 2019

Menu

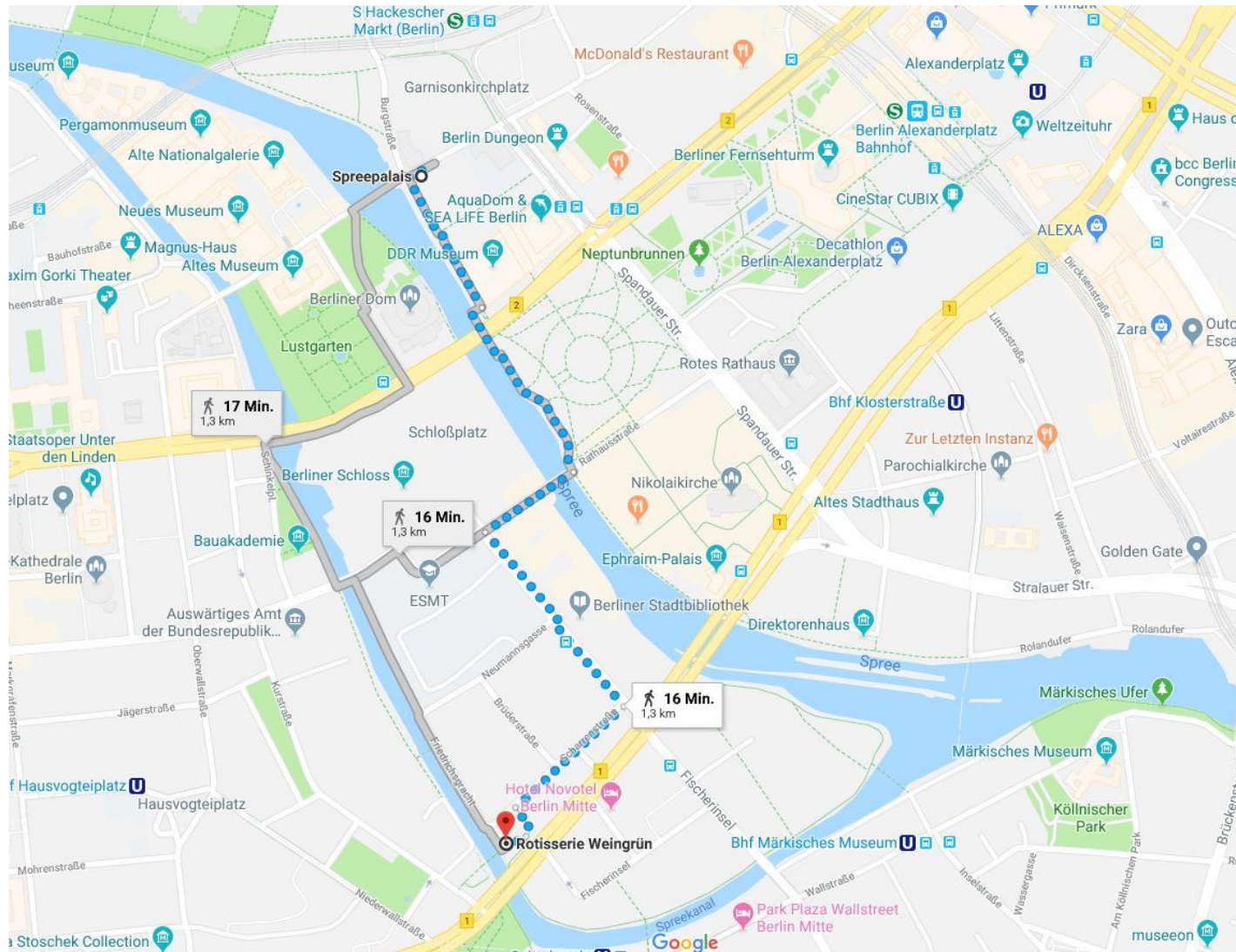
Starter plate in family style:

Smoked Tyrolean ham
with gherkins and fresh horseradish
Octopus salad with tomato, celery,
saffron potatoes & olive lemon vinaigrette
Terrine of salmon trout
on dill cream, pumpernickel
and lamb's lettuce

Triple from the Grill:
Rumpsteak, Spare Ribs and finish salmon
with Sauce Béarnaise and BBQ sauce,
small fried potatoes with rosemary
and caesar salad

Vanilla Crème brûlée
with blueberries and cassis sauce

Address: Restaurant Rotisserie Weingrün, Gertraudenstr. 10-12, 10178 Berlin-Mitte



IPP Max-Planck-Institut
für Plasmaphysik

07.03.2019



Agenda

19th Coordinated Working Group Meeting (SpreePalais am Dom, Berlin, Germany, March 12-14, 2019)

GMT+1	GMT-4	GMT+9			
Local	EDT	JST	Local	EDT	JST

TUESDAY 12.03.2019 - Meeting room K1 A+B

Presentation: <https://tv.euro-fusion.org/channel2/home> (Presentation Password: show)

Video-conference nr. (H.323) : 004910097920062 or Zoom : <https://zoom.us/j/536342660>

[illegible]

TUESDAY 12.03.2019 - Meeting room K2

Presentation: <https://tv.euro-fusion.org/channel6/home> (Presentation Password: show)
Video-conference nr. (H.323): 004910097920066 or Zoom: <https://zoom.us/j/980054336>

09:20	04:20	17:20	09:20	04:30	17:30	Tamura (NIFS)	Fuelling pellets and impurity injection: Goals and Potentials for International Collaborations			
09:20	04:20	17:20	09:40	04:40	17:40	Motojima (NIFS)	High-density experiments with pellet injection and analysis of pellet penetration depth in Heliotron J	15	5	remote (Japan)
09:40	04:40	17:40	09:55	04:55	17:55	McCarthy (CIEMAT)	Plans and progress for the TESPEL preparation laboratory at Ciemat	10	5	remote (Spain)
09:55	04:55	17:55	10:15	05:15	18:15	Panadero (CIEMAT)	Progress on pellet injection analysis and simulations	15	5	remote (Spain)
10:15	05:15	18:15	10:35	05:35	18:35	Tamura (NIFS)	First TESPEL Injection Experiments on W7-X	15	5	on-site
10:35	05:35	18:35	11:05	06:05	19:05		Coffee	30		
11:05	06:05	19:05	11:25	06:25	19:25	Wegner (IPP)	Impurity injection by means of LBO in W7-X	15	5	remote (Germany)
11:25	06:25	19:25	11:45	06:45	19:45	L. Baylor (ORNL)	W7-X Continuous Pellet Fueling Collaboration Status and Plans	15	5	remote (USA)
11:45	06:45	19:45	12:05	07:05	20:05	Tamura (NIFS)	Fuelling pellets and impurity injection: Discussion - Actions and ideas for Future Collaborations	20		
12:05	07:05	20:05	13:15	08:15	21:15		Lunch	70		
13:15	08:15	21:15	13:25	08:25	21:25	Suzuki (NIFS)	Equilibrium: Goals and Potentials for International Collaborations	10		
13:25	08:25	21:25	13:45	08:45	21:45	Moiseenko (KIPT)	U2-M	15	5	on-site
13:45	08:45	21:45	14:05	09:05	22:05	Suzuki (NIFS)	Beta and net toroidal current effects on edge magnetic field in stellarators	15	5	on-site
14:05	09:05	22:05	14:25	09:25	22:25	Loizu (EPFL)	Stability and nonlinear saturation of current sheets using the SPEC code	15	5	remote (Switzerland)
14:25	09:25	22:25	14:45	09:45	22:45	Landreman (U Maryland)	Direct construction of optimized stellarators and comparison to experimental configurations	15	5	remote (USA)
14:45	09:45	22:45	15:05	10:05	23:05	Schmitt (Auburn U)	Status of equilibrium reconstructions with V3FIT for W7-X	15	5	remote (USA)
15:05	10:05	23:05	15:50	10:50	23:50		Coffee	45		
15:50	10:50	23:50	16:10	11:10	00:10	Lazerson (PPPL)	Equilibrium reconstruction in support of energetic particle modeling in stellarators	15	5	on-site
16:10	11:10	00:10	16:20	11:20	00:20	Suzuki (NIFS)	Equilibrium: Discussion - Actions and ideas for Future Collaborations	10		

WEDNESDAY 13.03.2019 - Meeting room K1 A+B

Presentation: <https://tv.euro-fusion.org/channel2/home> (Presentation Password: show)

Video-conference nr. (H.323): 004910097920062 or Zoom: <https://zoom.us/j/764997792>

08:45										Arrival		
	09:00	04:00	17:00	09:10	04:10	17:10	Nakata (NIFS)	3D turbulence: Goals and Potentials for International Collaborations	10			
	09:10	04:10	17:10	09:30	04:30	17:30	Grenfell (Consorzio RFX)	On the role of sheared radial electric fields on turbulence spreading in the plasma boundary of fusion devices	15	5	remote (Italy)	
	09:30	04:30	17:30	09:50	04:50	17:50	Gerru (CIEMAT)	On the interplay between turbulent forces and neoclassical particle losses in Zonal Flow dynamics	15	5	remote (Spain)	
	09:50	04:50	17:50	10:10	05:10	18:10	Estrada (CIEMAT)	Turbulence and Er asymmetries measured using Doppler reflectometry in TJ-II	15	5	on-site	
	10:10	05:10	18:10	10:30	05:30	18:30	Koepke (WVU)	WVU contributions to the TJ-II physics program on mechanisms decoupling particle and energy transport.	15	5	on-site	
	10:30	05:30	18:30	11:00	06:00	19:00		Coffee	30			
	11:00	06:00	19:00	11:20	06:20	19:20	Sanchez (CIEMAT)	Comparison of global gyrokinetic simulations and Doppler Reflectometry measurements	15	5	on-site	
	11:20	06:20	19:20	11:40	06:40	19:40	Carralero (CIEMAT)	First V-band Doppler reflectometer results from OP1.2b	15	5	on-site	
	11:40	06:40	19:40	12:00	07:00	20:00	Krämer-Flecken (FZJ)	First investigations on turbulence properties in the SOL and at the last close flux surface	15	5	on-site	
	12:00	07:00	20:00	12:20	07:20	20:20	v. Stechow (IPP)	core and edge turbulence in Wendelstein 7-X	15	5	on-site	
	12:20	07:20	20:20	12:40	07:40	20:40	Zolotnik (WIGNER)	Edge filament dynamics in W7-X	15	5	on-site	
	12:40	07:40	20:40	13:50	08:50	21:50		Lunch	70			
	13:50	08:50	21:50	14:10	09:10	22:10	Smoniewski (U Wisconsin)	Measurement of density fluctuation scaling with driving gradients from reflectometry	15	5	on-site	
	14:10	09:10	22:10	14:30	09:30	22:30	Prohl (TU Eindhoven)	Possible first confinement of TEMs being less unstable in W7-X high mirror	15	5	on-site	
	14:30	09:30	22:30	14:50	09:50	22:50	Cole (PPPL)	ion scale microinstabilities in Wendelstein 7-X with the global gyrokinetic code XGC	15	5	on-site	
	14:50	09:50	22:50	15:10	10:10	23:10	Zocco (IPP)	Theory and simulations of kinetic ballooning modes in tokamaks and stellarators	15	5	on-site	
	15:10	10:10	23:10	15:30	10:30	23:30	Tanaka (NIFS)	Configuration effects and isotope effects on turbulence and transport of ECRH and NBI plasmas in LHD	15	5	remote (Japan)	
	15:30	10:30	23:30	16:00	11:00	00:00		Coffee	30			
	16:00	11:00	00:00	16:20	11:20	00:20	Kobayashi (NIFS)	Frequency and plasma condition dependent spatial structure of zonal flows in TJ-II stellarator	15	5	remote (Japan)	
	16:20	11:20	00:20	16:30	11:30	00:30	Nakata (NIFS)	3D turbulence: Discussion - Actions and ideas for Future Collaborations	10			
	16:30	11:30	00:30	16:50	11:50	00:50	Regana (CIEMAT)	International Stellarator/Heliotron Database: status and plans	15	5	on-site	
	16:50	11:50	00:50	18:00	13:00	02:00	Warner, Dinklage, Pablant	Update on CWGM-JEX and JACs	70			
18:00 Adjourn												
19:00 Banquet (Rotisserie Weingrün - food sponsored by IPP, no beverages and tips included)												

THURSDAY 14.03.2019 - Meeting room K1 A+B

Presentation: <https://tv.euro-fusion.org/channel2/home> (Presentation Password: show)

Video-conference nr. (H.323): 004910097920062 or Zoom: <https://zoom.us/j/603684392>

08:45										Arrival		
	09:00	04:00	17:00	09:00	04:00	17:00	Pablant (PPPL)	Impurity transport: Goals and Potentials for International Collaborations				
	09:00	04:00	17:00	09:20	04:20	17:20	Buller (Chalmers U)	Electrostatic potential variation on the flux-surface as a means of affecting the transport of impurities?	15	5	remote (Sweden)	
	09:20	04:20	17:20	09:40	04:40	17:40	Regana (CIEMAT)	Neoclassical impurity transport modeling with KNOSES, EUTERPE and SFINCS	15	5	on-site	
	09:40	04:40	17:40	10:00	05:00	18:00	Calvo (CIEMAT)	Impact of main ion pressure anisotropy on stellarator impurity transport	15	5	on-site	
	10:00	05:00	18:00	10:20	05:20	18:20	Nunami (NIFS)	Impurity hole investigation via gyro- and drift-kinetic simulations	15	5	remote (Japan)	
	10:20	05:20	18:20	10:40	05:40	18:40	Alcason (IPP)	GENE capabilities for impurity turbulent transport in stellarators	15	5	remote (Germany)	
	10:40	05:40	18:40	11:10	06:10	19:10		Coffee	30			
	11:10	06:10	19:10	11:30	06:30	19:30	Kumar (U Wisconsin)	Impurity transport in HSX: Recent experimental results and neoclassical calculations	15	5	on-site	
	11:30	06:30	19:30	11:50	06:50	19:50	Kubkowska (IPPLM)	Observation of impurity behavior by the PHA system at W7-X	15	5	on-site	
	11:50	06:50	19:50	12:10	07:10	20:10	Langenberg (IPP)	Z-Dependence, Power and Density Scaling and Profile Effects on Impurity Transport	15	5	on-site	
	12:10	07:10	20:10	12:30	07:30	20:30	Gilson (PPPL)	An impurity Powder Dropper for Wall Conditioning, Power Exhaust, and Transport Studies: Recent Results and F	15	5	remote (USA)	
	12:30	07:30	20:30	12:50	07:50	20:50	Pablant (PPPL)	Impurity transport: Discussion - Actions and ideas for Future Collaborations	20			
	12:50	07:50	20:50	14:00	09:00	22:00		Lunch	70			
	14:00	09:00	22:00	14:20	09:20	22:20	Suzuki (NIFS)	Japanese Stellarator Program	15	5	on-site	
	14:20	09:20	22:20	14:40	09:40	22:40	Xu (SWJTU)	Chinese stellarator program	15	5	on-site	
	14:40	09:40	22:40	15:00	10:00	23:00	Gates (PPPL)	US stellarator program	15	5	on-site	
	15:00	10:00	23:00	15:20	10:20	23:20	Dinklage (IPP)	Stellarators in the EU Roadmap to Fusion Electricity (in FP9)	15	5	on-site	
	15:20	10:20	23:20	15:50	10:50	23:50		Coffee	30			
	15:50	10:50	23:50	17:50	12:50	01:50		Discussion Future Directions in International Collaborative Stellarator-Heliotron Research	120		on-site	
18:00 CLOSING												