26th European Fusion Programme Workshop Draft Programme

Bad Dürkheim, Germany

The breeding blanket –
the link between the plasma, tritium and electricity

Tuesday 20 November 2018		
19:00	Welcome Reception in Kurpark-Hotel Bad Dürkheim, Room “Berlin"	
Wednesday 21 November 2018		
08:15	Welcome and short introduction	William Morris and Duarte Borba
Session 1: Plasma Blanket Relationship		
08:30	Introduction	**Mattia Siccinio (EUROfusion)**
08:40	Design, performance and feasibility of wall protection limiters during plasma transients	Francesco Maviglia (EUROfusion)
09:10	Fusion power fluctuations during DEMO Flat-top	Emiliano Fable (IPP)
09:40	Inhomogeneity of the radiative heat load on the plasma facing components	Fabio Subba (Politecnico di Torino)
10:10	Coffee Break	
10:30	Inhomogeneity of the charged particles heat load on the PFC	Jonathan Gerardin (CEA)
11:00	Possible trajectories of the relevant plasma parameters during ramp-up and down in DEMO	Florian Köchl (CCFE)
11:30	Discussion	
12:30	Lunch Break	
Session 2: Breeding blanket design and strategy		
14:00	Introduction	**Lorenzo Boccaccini (KIT)**
14:15	Challenges in the Breeding Blanket Design	F. Cismondi (EUROfusion)
14:45	Development strategy, TBM and DEMO, time schedule	Lorenzo Boccaccini (KIT)
15:15	Coffee Break	
15:45	The HCPB blanket Concept	F. Hernandez (KIT)
16:15	The WCLL blanket Concept	A. Del Nevo (ENEA)
16:45	Discussion	
17:45	End	

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Thursday 22 November 2018

Session 3: Blanket interaction with the overall tritium fuel cycle		
08:15	Introduction	**Christian Day (KIT)**
08:30	Current DEMO fuel cycle architecture with direct internal recycling	Thomas Giegerich (KIT)
09:00	Tritium extraction - technology choices and options	Ion Cristescu (KIT)
09:20	Impact of the breeding blanket coolant choice on the fuel cycle architecture	Alessia Santucci (ENEA Frascati)
09:50	Coffee Break	
10:20	Tritium plant lay-out	Barry Butler (CCFE)
10:50	Development of a fuel cycle simulator	Yannick Hörstensmeyer (KIT)
11:10	Global DEMO fuel cycle - performance and parameter trade-offs	Matti Coleman (CCFE)
11:30	Discussion	
12:30	Lunch Break	
Session 4: Materials issues for blankets		
14:00	Introduction	**Lorenzo Malerba (CIEMAT)**
14:15	Materials issues and related materials strategy	Eberhard Diegele (EUROfusion)
14:40	Reliability on the available materials properties data “up to 20 dpa” from fission reactors	Micheal Rieth (KIT)
15:15	Advanced RAFM Steels	Athina Puype (Ghent University)
15:45	Coffee Break	
16:15	Corrosion, dissolution, erosion in PbLi, and relevant protection and mitigation through coatings	Marco Utili (ENEA-Brasimone)
16:45	Functional materials in blankets	Regina Knitter (KIT)
17:15	Discussion	
18:15	End	
19:00	Workshop Dinner at Wineyard "Zum Stein" in Bad Dürkheim	

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Friday 23 November 2018

Session 5: Balance of plant and safety relationships to the blanket

08:15	Introduction	**Luciana Barucca (Ansaldo Energia)**
08:30	WCLL BB PHTS&BOP design options status: Indirect/Direct coupling	Emanuela Martelli (ENEA)
09:00	HCPP BB PHTS&BOP design options status: Indirect/Direct coupling	Ivo Moscato (UNIPA)
09:30	Effect of the plasma fusion power fluctuation	Chris Harrington (CCFE)
10:00	Coffee Break	
10:30	Probabilistic evaluation of safety and RAMI concerns for the different blanket models of DEMO reactor	Tonio Pinna (ENEA)
11:00	BB and BOP actual achievements, issues to be solved and future perspectives	Evaldas Bubelis (KIT)
11:30	Discussion	
12:30	Lunch Break	