

**Room AULA**

SUMMARY for Channel 1 / 17-19 Oct 2018, WPENS 6th Technical Meeting:  
 Presentation: <https://tv.euro-fusion.org/channel1/home>  
 Presentation Password: WPENS

Video-conference nr. (H.323): 004910097920061  
 ISDN: +49-30-20097920061 (ConferenceID = 97920061)

Wednesday, 17 October	<b>WPENS 6th Technical Meeting Welcome &amp; Project Status</b>			<b>9:00</b>	<b>9:45</b>	
		<b>Welcome</b>	<b>M. Ježabek (IFJ PAN)</b>	<b>0:05</b>	<b>9:00</b>	<b>9:05</b>
		<b>Project Status</b>	<b>A. Ibarra (CIEMAT)</b>	<b>0:35</b>	<b>9:10</b>	<b>9:45</b>
	<b>Project Integration session</b>		<b>Chair: A. Ibarra</b>		<b>9:45</b>	<b>12:30</b>
	7.1.0.0	Update on top level project documentation and quality management	W. Królas (IFJ PAN)	0:20	9:45	10:05
	1.0.0.0	Update of design process and configuration management	A. Muñoz (CIEMAT)	0:20	10:05	10:25
	<b>Coffee break</b>			<b>10:30 - 11:00</b>		
	1.1.2.0	Introduction to Systems Engineering approach	A. Muñoz (CIEMAT)	0:15	11:00	11:15
	1.1.2.5	Requirements management plan and traceability matrix	A. Muñoz (CIEMAT)	0:20	11:15	11:35
	1.1.3.0	CAD Configuration Models	E. Suarez (EAI) <b>VC presentation</b>	0:20	11:35	11:55
	1.1.4.0	Boundaries and Interface Management System	A. Zsakai (WIGNER)	0:20	11:55	12:15
	1.3.0.0	Cost evaluation and CODA	A. Ibarra (CIEMAT)	0:15	12:15	12:30
	<b>LUNCH</b>			<b>12:30 - 14:00</b>		
	<b>Test Systems session</b>		<b>Chair: F. Arbeiter</b>		<b>14:00</b>	<b>18:15</b>
	<b>4.0.0.0</b>	<b>Introduction to Test Systems</b>	<b>F. Arbeiter (KIT)</b>	<b>0:15</b>	<b>14:00</b>	<b>14:15</b>
	4.1.1.2	Assessment of Small Samples Technology (SSTT)	M. Serrano (CIEMAT) <b>VC presentation</b>	0:15	14:15	14:30
	4.1.3.0	Hot Cell needs for Modules and other components dismantling 2018	I. Petrenko (NCBJ)	0:15	14:30	14:45
	4.1.4.0	Irradiation experiments at MARIA reactor	F. Arbeiter (KIT)	0:15	14:45	15:00
	4.1.4.0	Irradiation experiments at MARIA reactor	R. Prokopowicz (NCBJ)	0:15	15:00	15:15
	7.2.3.5	Tools and procedures for radiation damage modelling and intercomparison of experiments	F. Mota (CIEMAT)	0:15	15:15	15:30
	4.2.1.3	Contribution to the engineering design of Test Cell	J. Molla (CIEMAT)	0:15	15:30	15:45
	4.2.1.3	Contribution to the engineering design of Test Cell	t.b.d. (KIT)	0:15	15:45	16:00
	<b>Coffee break</b>			<b>16:00 - 16:20</b>		
	4.2.1.3	Contribution to the engineering design of Test Cell	M. Siwek (WUT)	0:15	16:20	16:35
	4.2.1.3	Contribution to the engineering design of Test Cell	T. Dézsi (WIGNER)	0:15	16:35	16:50
	4.2.2.1	Test Cell and Access Cell diagnostics engineering design	t.b.d. (CIEMAT or KIT)	0:15	16:50	17:05
4.2.2.2	Development of innovative sensors for the TC and AC diagnostics	A. Klux (KIT)	0:15	17:05	17:20	
4.3.0.0	Present status of the HFTM design and design alternatives	F. Schwab (KIT)	0:20	17:20	17:40	
4.4.1.3	Upgrade of STUMM engineering design	U. Wiącek (IFJ)	0:20	17:40	18:00	
4.6.2.0	Engineering design of Test Systems Ancillaries	F. Arbeiter (KIT)	0:15	18:00	18:15	

Thursday, 18 October	<b>LUNCH</b>			<b>12:30 - 14:00</b>		
	<b>Remote Handling session</b>		<b>Chair: G. Micciché</b>		<b>14:00</b>	<b>18:15</b>
	<b>3.5.0.0</b>	<b>Introduction to Remote Handling session</b>	<b>G. Micciché (ENEA)</b>	<b>0:15</b>	<b>14:00</b>	<b>14:15</b>
	3.5.1.1	Analysis of components requiring Remote Handling	G. Micciché (ENEA)	0:15	14:15	14:30
	3.5.1.4	Engineering design of electric connector for RH purpose and tooling	G. Micciché (ENEA) or M. Ferre (CIEMAT)	0:15	14:30	14:45
	3.5.1.4	Final report on the Engineering design of the Change Gripper System	S. Papa (CREATE) <b>VC presentation</b>	0:15	14:45	15:00
	3.5.2.1	Maintenance procedures for the replacement of the beam ducts in the TC and definition of RHE	G. Mitchell (RACE)	0:15	15:00	15:15
	3.5.2.1	Development of the preliminary RH procedures for maintenance in the TLIC area	D. Martelli (ENEA)	0:15	15:15	15:30
	3.5.2.1	Maintenance procedures of RHE and tooling for the Li traps systems	I.G. Kiss (FUZIOTECH)	0:15	15:30	15:45
	<b>Coffee break</b>			<b>15:45 - 16:05</b>		
	3.5.3.1	Preliminary definition of RH procedures and tooling for the PCPs replacement	G. Mitchell (RACE)	0:15	16:05	16:20
	3.5.3.2	Engineering design of the Access Cell Mast Crane (ACMC) of the Access Cell of DONES	A. Karap (FUZIOTECH)	0:15	16:20	16:35
	3.5.3.2	Updating maintenance procedures for the replacement of the cooled liner and of shielding walls of the Test Cell and conceptual design of RHE	G. Mitchell (RACE)	0:15	16:35	16:50
	3.5.3.2	Engineering design of the Robotic Arm on Rail (RAR) of the Access Cell of DONES	G. McIntyre (RACE)	0:15	16:50	17:05
	3.5.3.2	Engineering design of the Multipurpose HFTM Positioning System	J. Oellerich (KIT)	0:15	17:05	17:20
	3.5.5.2	Update of the conceptual design of RH control system (HLCS and LCS)	G. Micciché (ENEA)	0:10	17:20	17:30
	3.5.5.3	Development of the engineering design of the HROC of the Access Cell of DONES	A. Batik (INETEC)	0:15	17:30	17:45
	3.5.5.5	Remote Handling equipment and components to be installed during building construction	D. Martelli (ENEA)	0:15	17:45	18:00
	3.5.6.1	Decommissioning of DONES	A. Batik (INETEC)	0:15	18:00	18:15

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Friday, 19 October	<b>Neutronics session</b>		<b>Chair: D. Bernardi</b>		<b>9:00</b>	<b>12:30</b>
	<b>2.2.0.0</b>	<b>Introduction to Neutronics session</b>	<b>U. Fischer (KIT) VC presentation</b>		<b>0:15</b>	<b>9:00</b>
	2.2.1.2	Updated Accelerator Facilities radiation dose maps & activity inventories	F. Ogando (UNED)		0:15	9:15
	2.2.1.2	2018 neutronics reference model of the DONES TTC with surrounding rooms	Y. Qiu (KIT)		0:15	9:30
	2.2.2.2	Updated Accelerator Facilities radiation dose maps & activity inventories	F. Ogando (UNED)		0:15	9:45
	2.2.2.3	Updated radiation dose fields in/around the TTC during operation and maintenance	G. Tracz (IFJ PAN)		0:15	10:00
	2.2.2.4	Dose rate distributions in the Access Cell with activated TTC components at various maintenance stages and conditions	G. Stankunas (LEI)		0:15	10:15
	<b>Coffee break</b>			<b>10:30 - 11:00</b>		
	2.2.2.5	Assessment of radiation dose maps in/around RWTS components	F. Mota (CIEMAT)		0:15	11:00
	2.2.4.1	Nuclear analyses requested for systems design updates and specific evaluations 2018	Y. Qiu (KIT)		0:15	11:15
	2.2.5.1	Nuclear analyses as requested for the design optimisation of STUMM	B. Biełkowska (IPPLM)		0:15	11:30
	2.2.6.3	DONES application tests of MCNP6 for the tracking of all particles	P. Sauvan (UNED) <b>VC presentation</b>		0:15	11:45
	2.2.6.5	Report on the assessment of photonuclear induced activation reactions in DONES	P. Sauvan (UNED) <b>VC presentation</b>		0:15	12:00
	2.2.6.4	Application tests of DONES TTC mesh model for nuclear analyses with integrated coupling system	Y. Qiu (KIT)		0:15	12:15
	<b>LUNCH</b>			<b>12:30 - 13:30</b>		
	<b>Summary session</b>		<b>Chair: A. Ibarra</b>		<b>13:30</b>	<b>15:45</b>
	3.0.0.0	Building and Plant Systems: summary and outlook	A. Muñoz (CIEMAT)		0:15	13:30
	2.1.0.0	Safety: summary and outlook	F. Martín-Fuertes (CIEMAT)		0:15	13:45
	2.3.0.0	RAMI: summary and outlook	T. Pinna (ENEA)		0:15	14:00
	2.4.0.0	Logistics and Maintenance: summary and outlook	G. Micciche (ENEA)		0:15	14:15
	8.0.0.0	Central Instrumentation and Control Systems: summary and outlook	M. Cappelli (ENEA)		0:15	14:30
	3.5.0.0	Remote Handling: summary and outlook	G. Micciche (ENEA)		0:15	14:45
	4.0.0.0	Test Systems: summary and outlook	F. Arbeiter (KIT)		0:20	15:00
5.0.0.0	Lithium Systems: summary and outlook	F.S. Nitti (ENEA)		0:20	15:20	
	<b>Closing of the meeting</b>	<b>W. Królas (IFJ PAN)</b>		<b>0:05</b>	<b>15:40</b>	

**Room RADA**

SUMMARY for Channel 2 / 17-19 Oct 2018, WPENS 6th Technical Meeting:  
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Wednesday, 17 October	<b>Safety session</b>		<b>Chair: F. Martin-Fuertes</b>			<b>14:00</b>	<b>18:05</b>	
	<b>2.1.0.0</b>	<b>Introduction to Safety session</b>	<b>F. Martin-Fuertes (CIEMAT)</b>			<b>0:15</b>	<b>14:00</b>	<b>14:15</b>
	2.1.1.0	Safety Specification Guidelines, codes and standards of nuclear and radiological protection	M.E. García (EAI)		0:15	14:15	14:30	
	2.1.1.0	FORTUM contribution to General Safety Principles and Criteria	A. Rantakaulio (FORTUM)		0:15	14:30	14:45	
	2.1.1.0	Contribution of NCBJ to Safety Principles - Fire Hazard	M. Borysiewicz or S. Potemski (NCBJ)		0:15	14:45	15:00	
	2.1.4.0	ENEA contribution to Occupational Radiation Exposure (ORE)	M.T. Porfiri (ENEA) <b>VC presentation</b>		0:15	15:00	15:15	
	2.1.5.0	Processes and design options for safe radioactive waste management inside DONES facility	I. Petrenko (NCBJ)		0:15	15:15	15:30	
	2.1.5.0	Radiological impact of effluents in normal operation	M. Martínez (EAI) <b>VC presentation</b>		0:15	15:30	15:45	
	2.1.6.0	SIC classification of DONES Lithium and Accelerator Systems	T. Pinna (ENEA)		0:15	15:45	16:00	
	<b>Coffee break</b>			<b>16:00 - 16:20</b>				
	2.1.6.0	SIC classification of DONES SSC's	E. Fernández (EAI)		0:15	16:20	16:35	
	2.1.6.0	FMEA and Postulated Initial Events Assessment	J.C. Marugán (EAI) <b>VC presentation</b>		0:15	16:35	16:50	
	2.1.6.0 2.1.7.0	VTT contribution to FMECA & Accident Analysis Studies	A. Helminen (VTT)		0:15	16:50	17:05	
	2.1.7.0	Contribution to DONES Deterministic Analyses/ LS LOCA Scenarios	G. D'Ovidio (CIEMAT) <b>VC presentation</b>		0:15	17:05	17:20	
	2.1.7.0	Assessment of Accident Analysis for the Test Systems	E. Fernández (EAI)		0:15	17:20	17:35	
2.1.7.0	NCBJ contribution to Accident Analysis Report 2018	M. Borysiewicz (NCBJ)		0:15	17:35	17:50		
2.1.9.0	NCBJ contribution to Non Radiological Safety 2018	M. Borysiewicz (NCBJ)		0:15	17:50	18:05		

Thursday, 18 October	<b>Buildings and Plant Systems session</b>		<b>Chair: A. Muñoz</b>			<b>9:00</b>	<b>12:20</b>	
	<b>3.0.0.0</b>	<b>Introduction to Buildings and Plant Systems</b>	<b>A. Muñoz (CIEMAT)</b>			<b>0:15</b>	<b>9:00</b>	<b>9:15</b>
	3.2.1.0	Present status of the Site Layout and Main Building design	E. Suarez, J. Gutierrez (EAI) <b>VC presentation</b>		0:35	9:15	9:50	
	3.4.0.0	Data Collection Tables and Engineering Design Data for Buildings and Plant Systems	J. Barcena (EAI)		0:35	9:50	10:25	
	<b>Coffee break</b>			<b>10:30 - 11:00</b>				
	3.6 to 3.14	Update of the Plant Systems design with emphasis on recent changes	J. Barcena (EAI)		0:30	11:00	11:30	
	3.6.0.0	Heating, Ventilation and Air Conditioning (HVAC) System design	F. Cruz (EAI) <b>VC presentation</b>		0:10	11:30	11:40	
	3.7.0.0	Electrical Power System (EPS) design	P. Bravo (EAI) <b>VC presentation</b>		0:10	11:40	11:50	
	3.8.0.0	Heat Rejection System (HRS) design	V. Fernandez (EAI) <b>VC presentation</b>		0:10	11:50	12:00	
	3.9.0.0	Service Water System (SWS) design	A. Masgrau (EAI) <b>VC presentation</b>		0:10	12:00	12:10	
	3.10.0.0	Service Gas System (SGS) design	R. Lopez (EAI) <b>VC presentation</b>		0:10	12:10	12:20	
	<b>LUNCH</b>			<b>12:30 - 14:00</b>				
	<b>Buildings and Plant Systems session cont'd</b>		<b>Chair: A. Muñoz</b>			<b>14:00</b>	<b>14:40</b>	
	3.11.0.0	Solid Radioactive Waste Treatment System (S-RWTS) design	E. Marco (EAI) <b>VC presentation</b>		0:10	14:00	14:10	
	3.12.0.0	Liquid Radioactive Waste Treatment System (L-RWTS) design	E. Marco (EAI) <b>VC presentation</b>		0:10	14:10	14:20	
	3.13.0.0	Gas Radioactive Waste Treatment System (G-RWTS) design	J. Barcena (EAI)		0:10	14:20	14:30	
	3.14.0.0	Fire Protection System (FPS) design	V. Amezcua (EAI) <b>VC presentation</b>		0:10	14:30	14:40	
	<b>Accelerator Systems session</b>		<b>Chair: F. Arbeiter</b>			<b>14:40</b>	<b>16:15</b>	
	<b>6.0.0.0</b>	<b>Introduction to Accelerator Systems</b>	<b>R. Heidinger (F4E) VC presentation</b>		<b>0:15</b>	<b>14:40</b>	<b>14:55</b>	
	6.1.1.0	CEA contribution to Beam Dynamics Final Layout	Lei Du (CEA)		0:20	14:55	15:15	
6.1.1.0	CIEMAT contribution to Beam Dynamics Final Layout	C. Oliver (CIEMAT) <b>VC presentation</b>		0:20	15:15	15:35		
6.1.1.0	NCBJ contribution to Beam Dynamics Preliminary Final Layout	W. Grabowski (NCBJ)		0:20	15:35	15:55		
6.1.4.0	Vacuum modelling of the full beam line system	V. Hauer (KIT)		0:20	15:55	16:15		
<b>Coffee break</b>			<b>16:15 - 16:30</b>					

Friday, 19 October	<b>Accelerator Systems session cont'd</b>		<b>Chair: F. Arbeiter</b>			<b>9:00</b>	<b>12:30</b>	
	6.3.1.0	RFQ design report	A. Pisent (INFN) <b>VC presentation</b>		0:20	9:00	9:20	
	6.4.1.0	Preliminary design of the MEBT System	I. Podadera (CIEMAT)		0:20	9:20	9:40	
	6.5.2.2	Design of high beta cavity and preparation of the fabrication	J. Plouin (CEA)		0:20	9:40	10:00	
	6.5.2.1	Short report on the status of the low beta – plunger cavity	K. Romieu (CEA) <b>VC presentation</b>		0:10	10:00	10:10	
	6.5.1.0	Preliminary design of the SRF linac cryomodules	N. Bazin (CEA) <b>VC presentation</b>		0:20	10:10	10:30	
	<b>Coffee break</b>			<b>10:30 - 11:00</b>				
	6.6.1.0	Preliminary design of the HEBT beamline, TIR and Beam Dump	D. Sanchez Herranz (IREC)		0:20	11:00	11:20	
	6.6.6.3	Detailed engineering design of HEBT diagnostics	I. Podadera (CIEMAT)		0:20	11:20	11:40	
	6.7.0.0	Current status of the RF System Design, results of tests on Solid State RF Power System	D. Regidor (BTESA) <b>VC presentation</b>		0:30	11:40	12:10	
6.7.1.0	Conceptual Design of the Timing and Control System Interface for the Accelerator Systems	J. Szewiński (NCBJ)		0:20	12:10	12:30		

**Room STUDIUM**

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Wednesday, 17 October	<b>Central Instrumentation and Control Systems session</b>		<b>Chair: M. Cappelli</b>		<b>14:00</b>	<b>16:00</b>
	<b>8.0.0.0</b>	<b>Introduction to Central Instrumentation and Control Systems</b>	<b>M. Cappelli (ENEA)</b>	<b>0:20</b>	<b>14:00</b>	<b>14:20</b>
	8.1.1.0	CICS Boundaries and Interfaces definition	A. Bagnasco (ANSALDO)	0:20	14:20	14:40
	8.1.3.0	CICS Safety Important Signals Identification	A. Bagnasco (ANSALDO)	0:20	14:40	15:00
	8.2.1.0	Preliminary definition of the monitoring needs in AS areas	I. Podadera (CIEMAT)	0:20	15:00	15:20
	8.2.2.0	Preliminary Definition of the Timing System for the CICS	J. Diaz (UGR)	0:20	15:20	15:40
	8.4.0.0	Preliminary Definition of RAMSES, Personal Protection System and Plant Access Control	S. Sandri (ENEA) <b>VC presentation</b>	0:20	15:40	16:00
<b>Coffee break</b>			<b>16:00 - 16:30</b>			

Thursday, 18 October	<b>Lithium Systems session</b>		<b>Chair: F.S. Nitti</b>		<b>9:00</b>	<b>12:30</b>
	<b>5.0.0.0</b>	<b>Introduction to Lithium Systems</b>	<b>F.S. Nitti (ENEA)</b>	<b>0:20</b>	<b>9:00</b>	<b>9:20</b>
	5.2.1.2	Target Assembly Engineering Design	D. Bernardi (ENEA)	0:20	9:20	9:40
	5.2.1.8	Qualification of TA Components	P. Arena (Univ. Palermo)	0:20	9:40	10:00
	5.2.3.0	Shielding Plug Interface design for Inlet/outlet Li-pipes and deuteron tube	S. Gordeev (KIT)	0:20	10:00	10:20
	<b>Coffee break</b>			<b>10:20 - 11:00</b>		
	5.2.4.1	Numerical analysis of pressure wave distribution in the Lithium target	S. Gordeev (KIT)	0:20	11:00	11:20
	5.2.6.1	Design of the Water Target Experimental Facility and Tests Results of the Laser Probe Diagnostics	W. Hering (KIT) <b>VC presentation</b>	0:20	11:20	11:40
	5.3.1.0	Present status of the Primary Heat Removal System design	L. Barattini (ANSALDO)	0:20	11:40	12:00
	5.3.2.1	Design of the Secondary Heat Removal System	T. Dezsi (WIGNER)	0:15	12:00	12:15
	5.3.2.1	Heating System for the SHRS	T. Dezsi (WIGNER)	0:15	12:15	12:30
	<b>LUNCH</b>			<b>12:30 - 14:00</b>		
	<b>Lithium Systems session cont'd</b>		<b>Chair: F.S. Nitti</b>		<b>14:00</b>	<b>16:40</b>
	5.4.1.1	Updates on the estimation of generation and distribution of impurities in the Lithium Loop	T. Dezsi (WIGNER)	0:20	14:00	14:20
	5.4.2.2	Preliminary design of H trap	J. Molla (CIEMAT)	0:20	14:20	14:40
	5.4.5.1	Results of functional tests of H-sensors	N. Holstein (KIT)	0:20	14:40	15:00
	5.5.0.0	Present status of the LS Ancillaries System design	M. Cappelli (ENEA)	0:20	15:00	15:20
5.5.1.1	Preliminary Design of Vacuum System for the Purification System	L. Barattini (ANSALDO)	0:20	15:20	15:40	
<b>Coffee break</b>			<b>15:40 - 16:00</b>			
5.5.3.1	Redefinition of the Preliminary Design of the Power and Control Systems	P. Zito (ENEA) <b>VC presentation</b>	0:20	16:00	16:20	
5.5.4.1	Preliminary Design of the Gas Supply System	L. Barattini (ANSALDO)	0:20	16:20	16:40	

Friday, 19 October	<b>RAMI session</b>		<b>Chair: T. Pinna</b>		<b>9:00</b>	<b>10:30</b>
	<b>2.3.0.0</b>	<b>Introduction to RAMI session</b>	<b>T. Pinna (ENEA)</b>	<b>0:15</b>	<b>9:00</b>	<b>9:15</b>
	2.3.4.1	RAMI analysis of HVAC, Heat Rejection, Service Water, Service Gas systems	K. Kowal (NCBJ)	0:15	9:15	9:30
	2.3.4.2	RAMI analysis of Radwaste systems	K. Kowal (NCBJ)	0:15	9:30	9:45
	2.3.4.2	RAMI analysis of Test Systems and related Ancillary systems	T. Pinna (ENEA)	0:15	9:45	10:00
	2.3.4.2	RAMI analysis of Lithium Systems	D. Dongiovanni (ENEA) <b>VC presentation</b>	0:15	10:00	10:15
	2.3.4.2	Contribution to DONES design review for RAMI content	T. Pinna (ENEA)	0:15	10:15	10:30
	<b>Coffee break</b>			<b>10:30 - 11:00</b>		
	<b>Logistics and Maintenance session</b>		<b>Chair: G. Micciché</b>		<b>11:00</b>	<b>12:30</b>
	<b>2.4.0.0</b>	<b>Introduction to Logistics and Maintenance</b>	<b>G. Micciché (ENEA)</b>	<b>0:15</b>	<b>11:00</b>	<b>11:15</b>
	2.4.1.0	Flow of materials and components	M. Mittwollen (KIT)	0:20	11:15	11:35
	2.4.2.0	Maintenance management plan for DONES	I.G. Kiss (FUZIOTECH)	0:20	11:35	11:55
2.4.3.0	Simulation in virtual reality environment of the logistics operations in DONES	G. McIntyre (RACE)	0:20	11:55	12:15	
4.1.4.0	Logistics procedures and maintenance for DONES	T. Lehmann (KIT)	0:15	12:15	12:30	