

PATRICIA

5th Technical Review Meeting

10-11-12 October 2023

Hosted by CEA

Meeting venue: *MediastiAM building of the [Campus Arts et Métiers](#)*

2 Cours des Arts et Métiers, Aix-en-Provence

10/10/2023 9:00-12:30		7 th Technical Coordination Board
WP and Domain Leaders		
Christian Sorel	CEA	DM1
Andreas Geist	UHEI	WP1
Guiseppe Modolo	FZJ	WP2
Laure Ramond	CEA	WP3
Lelio Luzzi	POLIMI	DM2 & WP5
Anna Smith	TU Delft	WP4 (excused, replaced by Lelio Luzzi)
Marc Lainet	CEA	WP6
Rémi Delville	SCK CEN	DM3 & WP7 (excused, replaced by Alessandro Marino)
Vasile Radu	RATEN	WP8
Karsten Litfin	KIT	WP9
Ferry Roelofs	NRG	DM4
Borja González-Prieto	SCK CEN	WP10
Mariano Tarantino	ENEA	WP11 (excused, replaced by Ivan Di Piazza)
Jörg Neuhausen	PSI	WP12
Paul Schuurmans	SCK CEN	Coordinator, DM5, WP13
Philippe Planquart	VKI	WP14

Plenary Session 1

14:00	0:10	Welcome		
14:10	0:20	Status of the project (Management)	Paul Schuurmans	SCK CEN
14:30	0:20	Education training communication data management	Philippe Planquart	VKI
14:50	0:10	The second PATRICIA summer School	Christian Sorel	CEA
15:00	0:35	Fuel blockage experiments at KIT	Karsten Litfin	KIT
15:35	0:15	Coffee Break		
15:50	0:35	Status of calculations on volatile Te/Po molecules	Stefaan Cottenier	UGent
16:25	0:35	Status and perspective of the European reference system for americium separation from HLLW	Andreas Geist	UHEI/KIT
17:00	0:10	Discussion	All	
17:10		End of day 1		

Plenary session 1 Microsoft Teams meeting

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11/10/2023 9:00-12:30			Parallel sessions	
Parallel session Technical review Domain 1				
	Chair	Christian Sorel		
9:00	0:05	Introduction WP1	Andreas Geist	UHEI
		Status and progress of work from each partner		
9:05	0:15	Behaviour of fission products and americium in AmSel process	Cécile Marie	CEA
9:20	0:15	CIEMAT progress report	Pablo Vacas	CIEMAT
9:35	0:15	FZJ progress report	Andreas Wilden	FZJ
9:50	0:15	POLIMI progress report	Elena Macerata	POLIMI
10:05	0:15	UHEI progress report	Giana Baruth	UHEI
10:20	0:15	Discussion WP1	All	
10:35	0:15	Coffee break		
10:50	0:10	Introduction WP2	Giuseppe Modolo	FZJ
10:55	0:20	Technical review WP2 CEA	Vincent Vanel	CEA
11:15	0:20	FZJ Progress report	Giuseppe Modolo	FZJ
11:35	0:15	Discussion WP2	All	
11:50	0:10	Introduction WP3	Laure Ramond	CEA
11:55	0:20	Settle up of co-precipitation methodologies for Zr oxide matrices fabrication	Ana Núñez	CIEMAT
12:15	0:15	Discussion WP3	All	
12:30	1:00	Lunch break		

11/10/2023 13:30-17:45			Parallel sessions	
Parallel session Technical review Domain 2				
	Chair	Lelio Luzzi		
13:30	0:10	Status of WP4: thermo-chemical properties and behaviour of Am-bearing fuels	Anna Smith	TUDELFT
13:40	0:20	Update on atomic scale calculations	Baptiste Labonne	CEA
14:00	0:20	CALPHAD results on Am-compounds	Morgane Rochedy / Christine Guéneau	TU Delft / CEA
14:20	0:20	Update on the destructive examination of MARINE fuel pins	Sander van Til (remotely)	NRG
14:40	0:10	Status of WP5: improvement of modelling and fuel performance codes	Lelio Luzzi	POLIMI
14:50	0:15	Derivation of correlations/databases for fuel performance codes based on new experimental data	Paul Van Uffelen (remotely)	JRC
15:05	0:15	Development of inert gas behaviour models in the SCIANTIX meso-scale module coupled to fuel performance codes	Davide Pizzocri	POLIMI
15:20	0:15	Benchmark/Assessment of the fuel performance codes	Marc Lainet	CEA

15:35	0:15	Towards multi-physics coupling of fuel performance, neutronics and thermal-hydraulics codes to simulate off-normal conditions	Xue-Nong Chen + Alejandra Pérez + Martina Di Gennaro	KIT + KTH + POLIMI
15:50	0:15	Coffee break		
16:05	0:10	Status of WP6: Simulation of normal and off-normal irradiation conditions	Marc Lainet	CEA
16:15	0:15	Performance of a fuel pin for transmutation in MYRRHA	Simon Billiet	SCK CEN
16:30	0:15	Updates on MYRRHA accidental scenarios for the assessment of the safety margins	Davide Pizzocri	POLIMI
16:45	0:15	Pre-design status of transient irradiation tests in BR2	Simon Billiet	SCK CEN
17:00	0:15	Evaluation of experimental capabilities and needs for code validation for off-normal conditions using in-pile and/or out-of-pile testing facilities	<i>Daniel Freis</i>	JRC
17:15	0:10	Break		
17:25	0:20	Discussion and preparation for overview of domain 2	Lelio Luzzi, Marc Lainet	
17:45		End of meeting		

Parallel session DM1 & DM2 Microsoft Teams meeting

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11/10/2023 9:00-12:30			Parallel sessions	
Parallel session Technical review Domain 3 &4				
	Chair	Rémi Delville		
9:00	0:10	Introduction WP7	Alessandro Marino	SCK CEN
9:10	0:20	Experimental assessment of fuel clad corrosion damage and blockage phenomena in a wire wrapped heated fuel bundle under flowing LBE	Alessandro Marino	SCK CEN
9:30	0:20	Mechanical properties of corroded fuel pins	Stefan Holmström	SCK CEN
9:50	0:15	Discussion	All	
10:05	0:10	Introduction WP8	Vasile Radu	RATEN
10:15	0:20	PIE fuel transient test	Vasile Radu	RATEN
10:35	0:20	Fuel coolant interaction at elevated temperatures	<i>Daniel Freis</i>	JRC
10:55	0:10	Discussion	All	
11:05	0:15	Coffee break		
11:00	0:10	Introduction WP11	Ivan Di Piazza	ENEA
11:10	0:10	Experimental investigation of the transition between natural circulation modes in CIRCE	Daniele Martelli	ENEA
11:30	0:20	Numerical analyses in support of the CIRCE-THETIS experimental campaign	Nicola Forgione	UNIPI
11:50	0:15	Numerical investigation of the transition between natural circulation modes in CIRCE	Vincent Moreau	CRS4
12:10	0:15	Discussion	All	
12:30	1:00	Lunch break		

11/10/2023 13:30-17:50			Parallel sessions	
Parallel session Technical review Domain 3& 4				
	Chair	Ferry Roelofs		
13:30	0:15	E-SCAPE transition experiments	Julio Pacio	SCK CEN
13:45	0:15	Numerical investigation of the transition from forced to natural circulation in E-SCAPE	Lila Koloszar	VKI
13:45	0:15	Numerical investigation of the transition from forced to natural circulation in E-SCAPE	Ferry Roelofs	NRG
14:00	0:15	Heat Transport Modelling in Computational Fluid Dynamics @VKI	Jure Oder	VKI
14:15	0:15	Heat Transport Modelling in Computational Fluid Dynamics @ NRG	Victor Habiyaemye	NRG
14:30	0:05	Introduction WP9	Karsten Litfin	KIT
14:35	0:20	Blockage experiments and simulations using multi-dimensional high fidelity velocity fields	Yassin Hassan <i>(remotely)</i>	TAMUS
14:55	0:10	Discussion	All	

15:05	0:05	Introduction WP10	Borja González Prieto	SCK CEN
15:10	0:20	Beam window failure impact	Kris Rosseel	SCK CEN
15:30	0:10	Discussion	All	
15:40	0:15	Coffee break		
15:55	0:10	Introduction WP12	Jörg Neuhausen	PSI
16:05	0:20	Coolant chemistry modelling	Alessandro Marino	SCK CEN
16:25	0:20	Radionuclide release experiments	Borja González-Prieto	SCK CEN
16:45	0:20	Sample preparation and Radionuclide release experiments	Jörg Neuhausen	PSI
17:05	0:20	Status of LBE-Te KEMS and Matrix isolation of TeOxHy	Ondrej Beneš	JRC
17:25	0:15	Discussion	All	
17:40		End of day 2		

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12/10/2023 9:30-12:00

Technical Meeting Plenary session

Plenary Session 2

9:00	0:05	Welcome		
9:05	0:35	Design of ETNA for future transient tests (Task 6.3)	Elio D'Agata	JRC
9:40	0:35	Experimental work on U-Am-Pu-Np-O at JRC.	Morgane Rochedy	TU Delft/CEA
10:15	0:15	Discussion	All	
10:30	0:20	Coffee break		
10:50	0:15	Overview of Domain 1	Christian Sorel	CEA
11:05	0:15	Overview of Domain 2	Lelio Luzzi	POLIMI
11:20	0:15	Overview of Domain 3	<i>Remi Delville</i>	SCK CEN
11:35	0:15	Overview of Domain 4	Ferry Roelofs	NRG
11:50	0:10	Concluding remarks, next meeting	All	
12:00		End of TRM		

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