AC² User Meeting

November, 18 – 20 2025

Cologne / online

Tentative Agenda

GRS Cologne 611/612/614

1st Day (Tuesday, November 18, 2025)		
10:30 – 10:40	Welcome	Florence-Nathalie Sentuc GRS
10:40 – 11:10	AC²-2025: Overview and Future Strategy	Fabian Weyermann GRS
11:10 – 11:40	New Models and Features in ATHLET 2025	Philipp Schöffel GRS
11:40 – 12:00	SAMFOR – Improvements for research reactor simulations	Fabian Weyermann GRS
12:00 – 12:20	Coupling of AC²/ATHLET with Modelica for hybrid energy system	Thorsten Hollands, Sebastian Buchholz GRS
12:20 – 12:40	ATLASneo: last release and upcoming features	Joseph Scheuer GRS
12:40 – 14:00	**Lunch Break**	
14:00 – 14:20	Extensions for Non-Circular Channels and a Revised Laminar–Transitional Friction Factor in ATHLET	Jan Wiesenmüller, Michael Abd El Malek IKE
14:20 – 14:40	Comparison heat transfer correlations between RELAP5 and ATHLET	Niels Palmans Tractabel
14:40 –15:10	Simulations of a heatpipe MMR with ATHLET/FENNECS	Daniel Eckert, Norman Dünne GRS
15:10 – 15:30	Modelling of the Brayton Cycle for Heat-Pipe Cooled Micro Modular Reactor	Matthias Peiretti IKE
15:30 – 16:00	**Coffee Break**	
16:00 – 16:20	A new correlation for predicting dryout-type CHF in high subcritical pressures	Sebastian Leopoldus IKE
16:20 – 16:40	Uncertainty and sensitivity study performed for ATHLET calculations of COSMEA condensation experiments	Matthias Jobst HZDR
16:40 – 17:00	Thermal–Hydraulic Assessment of the MOTEL Experimental Facility by ATHLET	Irem Karaaslan KIT
17:00 – 17:20	VVER-440 LBLOCA calculations	Attila Guba HUN-REN EK
17:20 – 17:40	Recent developments of TESPA-Rod	Jonathan Sappl GRS

2nd Day (Wednesday, November 19, 2025)		
09:00 – 09:20	Newcleo's experience in modelling lead-cooled fast reactor components and system behavior with ATHLET	Giuseppe F. Nallo, Antonio Lombardo newcleo S.p.A
09:20 – 09:40	Modelling of a gas-cooled system in ATHLET	Zsombor Bali, HUN-REN EK
09:40 – 10:00	SFR primary system analysis: exploring of pseudo-3D flow capability in ATHLET	Alexander Ponomarev HZDR
10:00 – 10:20	Summary of Simulation Activities for Advanced Technologies in SURO and CVR	Guido Mazzini SURO
10:20 – 10:40	General Discussion: Future User Needs for ATHLET	All
10:40 – 11:00	**Coffee Break**	
11:00 – 11:20	ADM: input generator for ATHLET	Inés Mateos Canals GRS
11:20 – 11:40	The Numerical Toolkit (NuT) – New Features in AC² 2025	Tim Steinhoff, Volker Jacht GRS
11:40 – 12:15	Validation and Qualification of AC²	Thorsten Hollands GRS
12:15 – 12:40	ATHLET-CD 2025: New Features	Liviusz Lovasz GRS
12:40 – 14:00	**Lunch Break**	
14:00 – 14:20	Recent Developments and Simulations conducted with AC²	Gregor T. Stahlberg RUB
14:20 – 14:45	Development Activities at PSS for the Simulation of Debris Beds in the Lower Reactor Plenum with AC² - ATHLET-CD	Jan Peschel, Negar Najafianpour RUB
14:45 – 15:05	Expansion of the AC² modelling base with machine learning method	Juliane Neuhaus RUB
15:05 – 15:25	Model Development for the Simulation of Fission Product Release from Molten Fuel	Florian Krist RUB
15:25 – 15:50	**Coffee Break**	
15:50 – 16:10	Recent developments related to the late phase model MEWA in ATHLET-CD	Michael Buck IKE
16:10 – 16:30	SSTC NRS Experience in Modeling of SMR Ex-Vessel Cooling using ATHLET-CD	Maksym Vyshemirskyi SSTC NRS
16:30 – 16:50	Phenomenology and modelling of RPV and pressure boundary mechanical failure in severe accident scenarios	Christoph Bläsius, Klaus Heckmann GRS
16:50 – 17:10	Recent applications of AC² in ENPRO Consult	Nadejda Rijova ENPRO
17:10 – 17:40	General Discussion: Future User Needs for ATHLET-CD	All

3rd Day (Thursday, November 20, 2025)		
09:00 – 09:35	COCOSYS – New Features in AC²-2025	Claus Spengler GRS
09:35 – 09:55	THAI facility extension	Martin Freitag Becker technologies
09:55 – 10:15	Advances in COCOSYS for the simulation of water pools	Daniel von der Cron GRS
10:15 – 10:35	Results of the AMICO project	Gert Langrock Framatome
10:35 – 10:55	**Coffee Break**	
10:55 – 11:15	New concept model of CsI aerosol decomposition under irradiation	Chuanhe Lu GRS
11:15 – 11:35	Calculation of pH and influence on iodine chemistry	Holger Nowack GRS
11:35 – 11:55	Fission product release during MCCI with AC²	Maximilian Hoffmann RUB
11:55 – 12:15	Insights into COCOSYS for fusion applications	Ruiyun Ji KIT-INR
12:15 – 13:45	**Lunch Break**	
13:45 – 14:05	Simulation of ENACCEF-2 Flame Propagation Benchmark Exercise with AC² / COCOSYS	Tobias Jankowski RUB
14:05 – 14:30	Simulation of passive safety systems for WWER-1200 with the AC² code system	Ivan Bakalov GRS
14:30 – 14:50	Application of COCOSYS for the VVER1200 containment	Pal Kostka NUBIKI
14:50 – 15:20	General Discussion: Future User Needs for COCOSYS	All
15:20 – 15:40	**Coffee Break**	
15:40 – 16:05	Simulation of an accident sequence in a RBMK-1000 with AC² and calculation of a radioactive source term	Siegfried Arndt GRS
16:05 – 16:25	Latest developments in FENNECS	Armin Seubert GRS
16:25 – 16:45	Recent applications of FENNECS	Armin Seubert GRS
16:45 – 17:15	Summary and Final Remarks	GRS