

TUESDAY 13 OCTOBER

08:20 - 08:50 REGISTRATION

08:50 - 09:00 Opening Statement

09:00 - 10:05 SESSION: CRYOGENICS FOR SPACE

09:20 - 09:20	Invited speaker: Moritz Branco - European Space Agency, Netherlands Cryogenics for Space at ESA - Heritage, Innovation, and Future Exploration
09:20 - 09:35	Niklas Weber - Absolut Lux, Luxembourg Ground Demonstrator Development for In-space cryogenic Refueling
09:20 - 09:35	Sylvain Martin - University Grenoble Alpes, CEA, IRIG, DSBT, France 5-stage ADR cooler for the Athena space mission: toward the demonstration model for X-IFU
09:50 - 10:05	Stefano Matteini - European Space Agency, Netherlands Long-term in-space cryogenic propulsion and ISRU propellants – ESA initiative and European state of the art

10:05 - 10:50 SESSION: PARTICLE PHYSICS/COSMOLOGY

10:05 - 10:20	Michiel Van Limbeek - University of Twente, Netherlands Update on a 3-Stage Sorption JT-Cooler for the Einstein Telescope Pathfinder
10:20 - 10:35	Natalia Koss - CERN, Switzerland Sub-Kelvin cryogenic platform for the quantum initiative at CERN
10:35 - 10:50	Philippe Camus - CNRS, France Cryogenic architecture for the GrAHal axion dark matter experiment

10:50 - 11:05 COMMERCIAL BREAK 1/2. SPONSORS PITCHES

11:05 - 11:35 COFFEE BREAK

11:35 - 12:20 SESSION: TEST BENCH

11:35 - 11:50	Sulayman Shoala - Isae-Supaero, France Heat transfer to supercritical helium in cryogenic piping during accidental loss of insulating vacuum
11:50 - 12:05	Jorge Pinho - Von Karman Institute for Fluid Dynamics, Belgium High-Pressure Cryogenic Test Bench for Valve and Orifice Characterization with Liquid Nitrogen

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12:05 - 12:20

Jean Pierre Monchau - THEMACS Ingénierie, France
Measurement of thermal conductivity and diffusivity at cryogenic temperatures

12:20 - 12:35 COMMERCIAL BREAK 2/2. SPONSORS PITCHES

12:35 - 14:05 LUNCH BREAK

14:05 - 14:35 Tribute session to François Millet

14:35 - 16:05 SESSION: COOLING METHOD

14:35 - 14:50

Carolyn Zoller - Paul Scherrer Institut (PSI), Switzerland
Experimental study of the influence of the inner capillary diameter on the performance of pulsating heat pipes for various cryogenic fluids

14:50 - 15:05

Pierre Crespi - AIR LIQUIDE advanced Technologies, France
Cryogenics: paving the way to cryophotonics

15:05 - 15:20

Francis Bettsworth - Institut Neel/CNRS, France
A continuous nuclear demagnetisation refrigerator for submillikelvin temperatures

15:20 - 15:35

Tisha Dixit - CEA Paris-Saclay, France
Dry cooling of HTS solenoid magnet by helium pulsating heat pipes

15:35 - 15:50

Timofej Chagovets - ELI ERIC, Czechia
Cryogenic Systems for High-Repetition-Rate Laser-Driven Particle Acceleration

15:50 - 16:05

Sahadasan Khute - Applied Thermal Sciences, University of Twente, Netherlands
Characterization of Regenerator Material Under Steady and Oscillating Flow

16:05 - 16:30 POSTER INTRODUCTION 1/2

16:30 - 17:30 COFFEE BREAK AND POSTER SESSION 1

17:30 - 18:30 CSE General Meeting

18:30 - 20:30 WELCOME RECEPTION

WEDNESDAY 14 OCTOBER

08:45 - 09:15 Plenary session: Alain Benoit - CNRS, France
Dilution cryostats for use in non-standard situations

09:15 - 10:20 SESSION: LARGE SCALE REFRIGERATION 1/2

09:15 - 09:35	Invited speaker: Vanessa Gahier - CERN, Switzerland Large helium refrigeration at CERN: 30 years of experience and perspectives.
09:35 - 09:50	Daniel Berkowitz Zamora - SCK CEN - Belgian Nuclear Research Centre, Belgium The MINERVA Cryogenic System: From Design Basis to Implementation
09:50 - 10:05	Jianqin Zhang - European Spallation Source ERIC, Sweden Operational status of the Cryogenic system for Superconducting LINAC Accelerator at ESS
10:05 - 10:20	Alexander Perozzi - Linde Kryotechnik AG, Switzerland Cold Compressors, Cold Turbo Blowers and Cold Circulators: Applications across the Linde Kryotechnik Portfolio

10:20 - 10:50 COFFEE BREAK

10:50 - 12:05 SESSION: LARGE SCALE REFRIGERATION 2/2

10:50 - 11:05	Jean-Marc Bernhardt - Air Liquide Advanced Technologies, France The study on energy saving of the KSTAR helium refrigeration system
11:05 - 11:20	Andrea Iaboni - Eni S.p.A., Italy Overview and Design of the DTT Cryogenic System
11:20 - 11:35	Yusra Nadir - Proxima Fusion, Germany Make it Cold: An Overview of Cryogenics for Magnet-Based Fusion Machines
11:35 - 11:50	Ben Conroy - UK Atomic Energy Authority, United Kingdom Preliminary Design of Liquid Helium Buffers for Handling Thermal Transient Loads in the STEP Cryogenic Distribution System
11:50 - 12:05	Hendrie Derking - Cryoworld BV, Netherlands Cryogenic infrastructure for the Mainz Energy-recovering Superconducting Accelerator (MESA)

12:05 - 12:30 POSTER INTRODUCTION 2/2

12:30 - 13:45 LUNCH BREAK

WEDNESDAY 14 OCTOBER

13:45 - 14:45 POSTER SESSION 2

14:45 - 16:25 SESSION: HYDROGEN

14:45 - 15:05

Invited: Francois Peyraud - ArianeGroup, France
Ramp-up, an incredible journey

15:05 - 15:25

Invited: Silvio Giors - ITER Organization, France
Progress and challenges in the development of the ITER disruption mitigation system based on shattered cryogenic pellet injection

15:25 - 15:40

Davide Duri - IRIG - DSBT - CEA - Grenoble University, France
Development of cryogenic test facilities for thermal-hydraulic characterization of plate-and-fin heat exchangers and ortho-para hydrogen catalysts performance: challenges and status

15:40 - 15:55

Thomas Stadlbauer - HyCentA Research GmbH, Germany
Research and development tools for liquid hydrogen storage systems

15:55 - 16:10

Fabien Souris - CEA Grenoble, France
A Cryogenic Purification Device for Tritium Gas Mixtures

16:10 - 16:25

Jordan Berton - CEA GRENOBLE, France
Effect of cryogenic formation parameters on desublimated solid hydrogen for fusion applications

16:25 - 16:55 COFFEE BREAK

16:55 - 17:55 SESSION: SIMULATION

16:55 - 17:10

Shawn Fernandes - University of Nottingham, United Kingdom
Multiple Flow Regime Modelling of Cryogenic Transfer Line Chillover

17:10 - 17:25

Elias Rehayem - Absolut System, France
CRYALIS - Thermofluidic Simulations of a European Cryogenic Storage and Refueling In-Orbit Demonstrator

17:25 - 17:40

Adam Kovacs - University of Twente, Netherlands
3-10 kW Stirling Electricity Generator for Regasification of Cryogenic Liquids

17:40 - 17:55

Rick Spijkers - University of Twente, Netherlands
Multiscale Simulation Framework for Stirling Cryocoolers

19:30 - 22:30 CONFERENCE BANQUET

THURSDAY 15 OCTOBER

08:30 - 09:00 Plenary session: Pascal Tixador - University Grenoble Alpes, France
High Temperature Superconductor opportunities for some large scale application

09:00 - 10:10 SESSION: SUPERCONDUCTIVITY

09:00 - 09:20

Invited: Sonja Schlachter - Karlsruhe Institute of Technology, Germany
From 2 A to 200 kA: The Benefit of using Superconductors in Space and Power Applications

09:20 - 09:40

Invited: Luc Ronayette - CNRS - LNCMI, France
Operation of the 1.8 K cryogenic system of the 43 T hybrid magnet at the CNRS - LNCMI Grenoble for the past 3 years: experience gained and lessons learned

09:40 - 09:55

Thierry Trolhier - Absolut System, France
Large capacity Remote Helium Cooling Loop for cooling down HTS superconducting coils at 20K in Tokamak applications

09:55 - 10:10

Thomas Charignon - Renaissance Fusion, France
Establishing the essential technologies for large-width superconducting coils with complex electrical routing

10:10 - 10:40 COFFEE BREAK

10:40 - 11:30 SESSION: QUANTUM COMPUTING

10:40 - 11:00

Invited: Josua Schaer - ETH Zürich, Switzerland
A Modular Cryogenic Microwave Link for Distributed Quantum Information Processing

11:00 - 11:15

Raphaël Couturier - CEA-DRF-IRIG-DSBT, France
Overview and status the CryoNEXT program

11:15 - 11:30

Andrei Gheorghe - Charles Univeristy, Czechia
Nanoresonators and multistability in superfluid helium flow

11:30 - 12:00 CLOSING SESSION

11:30 - 11:50

Aleksandra Onufrena - From Space to HL-LHC Magnet String: 10 years in cryogenics

11:50 - 12:00

Closing remarks

12:00 - 13:30 LUNCH BREAK

13:30 - 18:30 TECHNICAL VISITS - CEA, CNRS, ALAT, ABSOLUT SYSTEM

POSTERS

POSTER SESSION 1 - TUESDAY 13 OCTOBER - 17:00 - 18:00

Sebastian Brad - *National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm. Valcea, Romania*

> Development of a new hydrogen liquefaction system within the Cryogenics Laboratory of ICSI Rm. Valcea

Dawid Chadaj, Nicola Maggini, Daniel Weber - *WEKA AG, , Switzerland*

> Investigation into the optimal solution against thermo-acoustic oscillations in an existing cryogenic plant

Patrik Fröhlich, Fabian Dietmann - *Celeroton AG, Switzerland*

> New developments in cryogenic turbomachinery for a Helium Reverse Turbo-Brayton Cycle

Ander Gabirondo, Leire Colomo - *AMPO, Spain*

> Electric Actuated Cryogenic Valves: Advancing Efficiency, Safety, and Industrial Scalability

Nina Gamaionova, Maksym Tryus, Filip Grepl, Andriy Velyhan, Daniele Margarone, Lorenzo Giuffrida, Timofej Chagovets - *The Extreme Light Infrastructure (ELI ERIC), Czechia*

> Development of Cryogenic Liquid Target Platform for High Repetition Rate Laser-Plasma Experiments

Andrea Iaboni, Morena Angelucci, Larry Baylor, Giuseppe Calabro, Antonio Frattolillo, Erik Gallo, Trey Gebhart, Paolo Innocente, Steven Meitner, Letizia Melaragni, Silvio Migliori - *Eni S.p.A., Italy / DTT S.C.ar.l., Italy / ENEA, Italy / Oak Ridge National Laboratories, USA / University of Tuscia, Italy / ISTP - CNR, Italy*

> Overview of the DTT Cryogenic Pellet Injection System

Yan Pennec, Guillaume Delautre - *Air Liquide, France*

> High-Availability Cryogenic Plant Architecture for Superconducting Power Systems

Gabrielle Perreu, Gilles Authélet, Bertrand Baudouy, Tisha Dixit, Vadim Stepanov - *CEA Paris-Saclay, France*

> Tests results for an RDE-418D4 cold head at various frequencies and power levels between 4,2 K and 77 K

Jean-Marc Poncet, Matthias Raba, Davide Duri - *CEA, France*

> Facility design to measure the thermal flux on liquid hydrogen tank during vacuum breaks: commissioning with liquid nitrogen

Quirin Schneider, Kay A. Weidenmann - *Universität Augsburg, Germany*

> Liquid-Free Cryostat for In-Situ Mechanical Material Characterization at Cryogenic Temperatures

Theodoros Vasilopoulos, Hideki Tatsumoto, Iris Haag, Attila Horváth - *European Spallation Source ERIC, Sweden*

> Development status of ESS Cryogenic Moderator System (CMS)

Tristan Vonken, Thomas Fröhlich - *Technische Universität Ilmenau, Germany*

> Cryostat for the calibration of industrial thermometers at temperatures below 77 K

Fernanda Javiera Zapata Bascuñán - *Institute of Technologies in Detection and Astroparticles (ITeDA), Argentina*

> Dynamical Systems Analysis of Dilution Refrigerators: Integrating Symbolic Regression via KANs for Hidden Variable Discovery

POSTER SESSION 2 - WEDNESDAY 14 OCTOBER - 13:45 - 14:45

Jack Acres, Ben Conroy, Michael Jackson, Gareth Wynn, Jayachandran Narayanan - *UK Fusion Energy / UK Atomic Energy Authority, United Kingdom*
> STEP Fusion - Seeking a Cryogenics System Partner

Joseph Law, Johannes Benninghoven - *Leybold GmbH / Atlas Copco Group, Germany*
> Optimization of a Single-Stage GM Cryocooler for Sub-35 K Applications

Cédric Henry Lhomme, Daniel Berkowitz Zamora, Thomas Hendrickx, Giel Vandersteen, Gerkotze Bonthuys - *SCK CEN - Belgian Nuclear Research Centre, Belgium*
> The MINERVA Cryogenic Distribution Backbone: Design, Instrumentation and Operational Strategy

Benoit Gillier, Chen Cao - *Technetics Group Germany GmbH, Germany*
> Operational Reliability of Elastic Metal Sealing in Liquid Hydrogen Logistics: Field Experience from Road Transport to Maritime and Aerospace

Aurélia Charrier - *CEA Saclay, France*
> Study of the thermal conductivity in the mK range for terbium-based compounds – development of a dedicated set up

Ander Gabirondo, Leire Colomo - *AMPO, Spain*
> Reassessing Flow Capacity in Cryogenic Angle Control Valves: Fundamental Limitations of Plug Design

Michael Dicker - *Actuation Lab, United Kingdom*
> Rethinking Cryogenic Ball Valves: A Novel Stemless, Hermetically Sealed, Compact Architecture

Ayoub El Abdi, Philippe Martin Gonthier, Valentin Badefort-Baril - *Institut supérieur de l'aéronautique et de l'espace, France*
> Electrical and Lifetime Model developments for Cryogenics ROIC Design at ISAE-SUPAERO

Stanislav Harašta, Andrei Gheorghe, Petro Danylchenko, David Schmoranzler - *Charles University, Czechia*
> Superfluid Helium Quantum Interference Device (SHeQuID)

Pedro Afonso Marques, Boris Van Praet, Chiara Falsetti - *Delft University of Technology, Faculty of Aerospace Engineering, Propulsion & Power Group, Netherlands*
> Thermo-hydraulic modeling of cryogenic transfer lines for hydrogen-powered aviation

Thibault Romand, Jean-Marc Duval - *CEA-DSBT, France*
> Concept of an innovative cryosorption-based helium circulator

Robert Placzek, Pawel Wojcieszak, Jarosław Polinski, Piotr Grzegory - *KrioSystem, Poland / Wrocław University of Science and Technology, Poland*
> Development and Commissioning of a Cryogenic Test Facility for Experimental Characterization of Thermal Links