

ICEC27-ICMC 2018

Report of Contributions

Contribution ID: 1

Type: **not specified**

Multi-Layer Insulation Design and Manufacture, Bryan Shaughnessy, Room 11

Contribution ID: 2

Type: **not specified**

Cryostat Design,Holger Neumann, Room 9

Contribution ID: 3

Type: **not specified**

E-01: 072 - Commissioning of the cryogenic system of the new test facility for large superconducting devices at CERN

Tuesday, 4 September 2018 11:00 (20 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 4

Type: **not specified**

E-01: 110 - SCL3 cryoplant process design for RAON

Tuesday, 4 September 2018 11:20 (20 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 5

Type: **not specified**

E-01: 111 - Simulation on LN 2 -VN 2 flooding phenomenon in inclined pipes using a modified AIAD model

Tuesday, 4 September 2018 11:40 (20 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 6

Type: **not specified**

E-01: 129 - Turbo-Brayton cryogenic systems: latest commissioning and new applications

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 7

Type: **not specified**

M-01: 064 - Manufacture and Characterisation of Bulk MgB₂ Superconductor with High Trapped Field for Biomedical Applications

Tuesday, 4 September 2018 11:00 (20 minutes)

Session Classification: M-01 - Processing and properties NbTi/Nb₃Sn/A15/RE123/BSCCO and MgB₂

Contribution ID: 8

Type: **not specified**

M-01: 224 - Atmospheric oxidation of NbTi superconductors

Tuesday, 4 September 2018 11:20 (20 minutes)

Session Classification: M-01 - Processing and properties NbTi/Nb₃Sn/A15/RE123/BSCCO and MgB₂

Contribution ID: 9

Type: **not specified**

M-01: 262 - Enhanced Jc at both self and high field of MgB₂ superconductor through co-doping route

Tuesday, 4 September 2018 11:40 (20 minutes)

Session Classification: M-01 - Processing and properties NbTi/Nb₃Sn/A15/RE123/BSCCO and MgB₂

Contribution ID: 10

Type: **not specified**

M-01: 331 - CIC cable technologies for high-current windings

Tuesday, 4 September 2018 12:00 (20 minutes)

Session Classification: M-01 - Processing and properties NbTi/Nb₃Sn/A15/RE123/BSCCO and MgB₂

Contribution ID: 11

Type: **not specified**

M-10:005 - Solid methane in radiation: neutron cryo moderators and cometary cryo volcanism

Tuesday, 4 September 2018 11:00 (20 minutes)

Session Classification: M-10: Radiation and other degradation effects

Contribution ID: 12

Type: **not specified**

M-10:16 - Study on irradiation effect of insulating materials for fusion superconducting magnet: change in electric insulation performance by irradiation

Tuesday, 4 September 2018 11:20 (20 minutes)

Session Classification: M-10: Radiation and other degradation effects

Contribution ID: 13

Type: **not specified**

M-10: 346 - Continuum Damage Mechanics analysis of the process pipes at cryogenic conditions

Tuesday, 4 September 2018 11:40 (20 minutes)

Session Classification: M-10: Radiation and other degradation effects

Contribution ID: 14

Type: **not specified**

M-11: 051 - Experimental investigations on bubble rising process of methane and ethane at saturated nucleate pool boiling condition

Tuesday, 4 September 2018 12:00 (20 minutes)

Session Classification: M-11 - Heat transfer, thermodynamic and fluid properties of cryogenic materials

Contribution ID: 15

Type: **not specified**

E-08: 53 - Cryogenic systems for a PrFeB-based cryogenic permanent magnet undulator at TPS

Tuesday, 4 September 2018 11:00 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 16

Type: **not specified**

E-08: 54 - Concept for the cryo distribution system of the Wendelstein 7-X cryo vacuum pumps

Tuesday, 4 September 2018 11:20 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 17

Type: **not specified**

E-08: 59 - Design, construction and commissioning of the proximity cryogenics systems serving two large-scale prototypes of the future DUNE neutrino detector.

Tuesday, 4 September 2018 11:40 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: **18**

Type: **not specified**

E-08: 61 - Engineering conceptual design of the CFETR cryogenic system

Tuesday, 4 September 2018 12:00 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 19

Type: **not specified**

E-03: 133 - Performance testing of the FRIB helium compression system at MSU

Tuesday, 4 September 2018 11:00 (20 minutes)

Session Classification: E-03 - Expanders, cryo-pumps, compressors, regenerators and other components

Contribution ID: 20

Type: **not specified**

E-03: 148 - Study on the cavitation of liquid oxygen flowing through the globe valve

Tuesday, 4 September 2018 11:20 (20 minutes)

Session Classification: E-03 - Expanders, cryo-pumps, compressors, regenerators and other components

Contribution ID: 21

Type: **not specified**

E-03: 281 - Characterization of a scroll-type compressor for driving a JT cryocooler working at liquid helium temperature

Tuesday, 4 September 2018 11:40 (20 minutes)

Session Classification: E-03 - Expanders, cryo-pumps, compressors, regenerators and other components

Contribution ID: 22

Type: **not specified**

E-03: 347 - Characterizing Helium pulsating heat pipes

Tuesday, 4 September 2018 12:00 (20 minutes)

Session Classification: E-03 - Expanders, cryo-pumps, compressors, regenerators and other components

Contribution ID: 23

Type: **not specified**

E-17: 15 - Study on the heat transfer of helium cryostats following loss of insulating vacuum

Tuesday, 4 September 2018 14:30 (20 minutes)

Session Classification: E-17: Safety, reliability and standards

Contribution ID: 24

Type: **not specified**

E-17: 118 - Status of a European standard for the protection of helium cryostats against excessive pressure

Tuesday, 4 September 2018 14:50 (20 minutes)

Session Classification: E-17: Safety, reliability and standards

Contribution ID: 25

Type: **not specified**

E-17: 344 - Test stand for determination of the heat flux to the cold elements of cryogenic systems in case of the vacuum vessel failure

Tuesday, 4 September 2018 15:10 (20 minutes)

Session Classification: E-17: Safety, reliability and standards

Contribution ID: 26

Type: **not specified**

E-17: 368 - Review of failure rate input parameters to risk analysis of cryogenic complex systems

Tuesday, 4 September 2018 15:30 (20 minutes)

Session Classification: E-17: Safety, reliability and standards

Contribution ID: 27

Type: **not specified**

E-01: 149 - Helium market: applications, strategies and logistics issues

Tuesday, 4 September 2018 14:30 (20 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 28

Type: **not specified**

E-01: 152 - Study on an energy saving method by the utilization of compression heat in a cryogenic air separation unit

Tuesday, 4 September 2018 14:50 (20 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 29

Type: **not specified**

E-01: 153 - Visualization study on nitrogen condensation with non-condensable gas in wavy laminar flow region

Tuesday, 4 September 2018 15:10 (20 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 30

Type: **not specified**

E-01: 256 - Transient modelling of large scale integrated refrigeration and storage systems

Tuesday, 4 September 2018 15:30 (20 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: 31

Type: **not specified**

M-03: 078 - Cold test and analysis AC losses in compact 2G HTS power cables

Tuesday, 4 September 2018 14:30 (20 minutes)

Session Classification: M-03: Superconductor stability, AC losses and electromagnetic properties

Contribution ID: 33

Type: **not specified**

M-03: 178 - Optimum rate of charging and discharging cycles of HTS-SMES magnets

Tuesday, 4 September 2018 15:10 (20 minutes)

Session Classification: M-03: Superconductor stability, AC losses and electromagnetic properties

Contribution ID: 34

Type: **not specified**

E-07: 139 - Cooling large HTS magnet coils using a gas free-convection cooling loop connected to coolers

Tuesday, 4 September 2018 15:15 (15 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: 35

Type: **not specified**

E-07: 180 - Design of 1MJ SMES unit

Tuesday, 4 September 2018 14:30 (15 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: 36

Type: **not specified**

E-07: 202 - Thermohydraulic behaviour of the cryogenic system during protected quenching of the superconducting magnet of a hybrid magnet

Tuesday, 4 September 2018 15:30 (15 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: 37

Type: **not specified**

E-07: 213 - Long term operation of the superconducting triplet quadrupoles with cryocoolers for BigRIPS in-flight separator at RIKEN

Tuesday, 4 September 2018 14:45 (15 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: **38**

Type: **not specified**

E-07: 323 - Superconducting detector magnets at the Future Circular Collider

Tuesday, 4 September 2018 15:00 (15 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: 39

Type: **not specified**

E-08: 81 - Hydraulic adjustment of the two-phase helium forced flow cooled superconducting magnets of the SIS100 heavy ion synchrotron for FAIR

Tuesday, 4 September 2018 14:30 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 40

Type: **not specified**

E-08: 109 - Conceptual design of cryogenic system for comprehensive research facility for key fusion reactor core systems

Tuesday, 4 September 2018 14:50 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 41

Type: **not specified**

E-08: 154 - Refrigerator and liquefaction system supplied by Linde Kryotechnik for IHEP's PAPS SRF Facility

Tuesday, 4 September 2018 15:10 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 42

Type: **not specified**

E-08: 155 - 4.5 K Refrigerator Cold Box System for the Facility for Rare Isotope Beams (FRIB) at Michigan State University (MSU)

Tuesday, 4 September 2018 15:30 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 43

Type: **not specified**

E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics

Tuesday, 4 September 2018 16:20 (1 hour)

Session Classification: Tuesday Poster Session

Contribution ID: 44

Type: **not specified**

E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Tuesday, 4 September 2018 16:20 (1 hour)

Session Classification: Tuesday Poster Session

Contribution ID: 45

Type: **not specified**

E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Tuesday, 4 September 2018 16:20 (1 hour)

Session Classification: Tuesday Poster Session

Contribution ID: 46

Type: **not specified**

E-03: Expanders, cryo-pumps, compressors, regenerators and other component

Tuesday, 4 September 2018 16:20 (1 hour)

Session Classification: Tuesday Poster Session

Contribution ID: 47

Type: **not specified**

E-04: Space cryogenic applications

Tuesday, 4 September 2018 16:20 (1 hour)

Session Classification: Tuesday Poster Session

Contribution ID: 48

Type: **not specified**

E-01:389 - Development of Commissioning and operation of CSNS Cryogenic System

Tuesday, 4 September 2018 16:20 (1 hour)

Session Classification: Tuesday Poster Session

Contribution ID: 49

Type: **not specified**

E-13: 127 - Performance test and evaluation on emergency release system for liquefied hydrogen installed in the loading/unloading system

Wednesday, 5 September 2018 11:00 (20 minutes)

Session Classification: E-13: LNG and hydrogen systems

Contribution ID: 50

Type: **not specified**

E-13: 265 - Developments in Hydrogen Liquefaction Plants

Wednesday, 5 September 2018 11:20 (20 minutes)

Session Classification: E-13: LNG and hydrogen systems

Contribution ID: 51

Type: **not specified**

E-13: 339 - A mixed refrigerant cycle for cooling below 25 K

Wednesday, 5 September 2018 11:40 (20 minutes)

Session Classification: E-13: LNG and hydrogen systems

Contribution ID: 52

Type: **not specified**

E-13: 363 - Subcooling of liquid hydrogen with a cryogenic refrigerator

Wednesday, 5 September 2018 12:00 (20 minutes)

Session Classification: E-13: LNG and hydrogen systems

Contribution ID: 53

Type: **not specified**

S-01: 161 - Study of HTS superconducting coatings for beam impedance mitigation in the Future Circular Collider

Wednesday, 5 September 2018 11:00 (40 minutes)

Session Classification: S-01: Material requirements for advanced HTS magnets

Contribution ID: 54

Type: **not specified**

S-01: 049 - Numerical modelling of mechanical stresses in bulk superconductor magnets with and without mechanical reinforcement

Wednesday, 5 September 2018 11:40 (40 minutes)

Session Classification: S-01: Material requirements for advanced HTS magnets

Contribution ID: 55

Type: **not specified**

E-02: 018 - Numerical study on the performance sensitivity of a pulse tube cryocooler with active phase shifter

Wednesday, 5 September 2018 11:40 (20 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 56

Type: **not specified**

E-02: 037 - Low Cost Flexure Spring Testing

Wednesday, 5 September 2018 12:00 (20 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 57

Type: **not specified**

E-02: 55 - Investigation of U-type multi-bypass Pulse tube cooler

Wednesday, 5 September 2018 11:20 (20 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 58

Type: **not specified**

E-02: 196 - Investigation of a coaxial Stirling-type pulse tube cryocooler with the cooling capacity of 600 W at 777 k

Wednesday, 5 September 2018 11:00 (20 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 59

Type: **not specified**

E-07: 33 - Technical challenges of developing High Field Superconducting Magnets beyond 25 Tesla

Wednesday, 5 September 2018 11:00 (20 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: **60**

Type: **not specified**

E-07: 35 - Cryogenic test results of the superconducting magnets for the NICA complex and the SIS100 synchrotron of FAIR

Wednesday, 5 September 2018 11:20 (20 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: **61**

Type: **not specified**

E-07: 56 - Test stand for the characterization of superconducting magnets cooled with cryocoolers

Wednesday, 5 September 2018 11:40 (20 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: 62

Type: **not specified**

E-07: 62 - Experimental and numerical study of the different quench acceleration phenomena in the JT-60SA Toroidal Field Coils

Wednesday, 5 September 2018 12:00 (20 minutes)

Session Classification: E-07: Magnet technology, design and evaluation

Contribution ID: 63

Type: **not specified**

E-08: 156 - Quench detection of SRF cavities using He^{2*} molecular tracer-line tracking technique in superfluid helium

Wednesday, 5 September 2018 11:00 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 64

Type: **not specified**

E-08: 159 - Superfluid Helium Cooling and Compact Heat Exchanger for HL-LHC D2 Recombination Dipoles

Wednesday, 5 September 2018 11:20 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 65

Type: **not specified**

E-08: 162 - Heat source localisation by trilateration of helium II second sound detected with transition edge sensors thermometry

Wednesday, 5 September 2018 11:40 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: **66**

Type: **not specified**

E-08: 186 - Progress of PAPS cryogenic system

Wednesday, 5 September 2018 12:00 (20 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 67

Type: **not specified**

M-06: 011 - Extraction of instrumentation wires through the high-voltage insulation in the ITER magnet feeder system

Wednesday, 5 September 2018 11:00 (20 minutes)

Session Classification: M-06: Metallic, composite materials, insulation and impregnation materials processing and properties

Contribution ID: 68

Type: **not specified**

M-06: 068 - An excellent cryogenic grinding performance of scrap tire rubber swollen by ScCO₂

Wednesday, 5 September 2018 11:20 (20 minutes)

Session Classification: M-06: Metallic, composite materials, insulation and impregnation materials processing and properties

Contribution ID: 69

Type: **not specified**

M-06: 320 - Enhancing high vacuum performance of multi-layer insulation systems with activated charcoal fabric

Wednesday, 5 September 2018 11:40 (20 minutes)

Session Classification: M-06: Metallic, composite materials, insulation and impregnation materials processing and properties

Contribution ID: 70

Type: **not specified**

M-06: 322 - Cryogenic properties of T/HDPE nanocomposites

Wednesday, 5 September 2018 12:00 (20 minutes)

Session Classification: M-06: Metallic, composite materials, insulation and impregnation materials processing and properties

Contribution ID: 71

Type: **not specified**

E-14: 73 - Experimental study of a meter-scale cryogenic neon pulsating heat pipe

Wednesday, 5 September 2018 13:30 (25 minutes)

Session Classification: E-14: New devices and novel concepts

Contribution ID: 72

Type: **not specified**

E-14: 163 - Superconducting cavities quench localisation by He-II second sound detection with transition edge sensors

Wednesday, 5 September 2018 13:55 (25 minutes)

Session Classification: E-14: New devices and novel concepts

Contribution ID: 73

Type: **not specified**

E-14: 183 - All polymer cryogen free cryostat for μ -MRI application at clinical field

Wednesday, 5 September 2018 14:20 (25 minutes)

Session Classification: E-14: New devices and novel concepts

Contribution ID: 74

Type: **not specified**

E-14: 237 - Cold, clean and green: improving the efficiency and environmental impact of a cryogenic expander

Wednesday, 5 September 2018 14:45 (25 minutes)

Session Classification: E-14: New devices and novel concepts

Contribution ID: 75

Type: **not specified**

E-14: 313 - Cryogenic Hydrogen Targets for proton generation with intense lasers.

Wednesday, 5 September 2018 15:10 (25 minutes)

Session Classification: E-14: New devices and novel concepts

Contribution ID: 76

Type: **not specified**

E-14: 338 - DC current injection into HTS coils using a superconducting dynamo.

Wednesday, 5 September 2018 15:35 (25 minutes)

Session Classification: E-14: New devices and novel concepts

Contribution ID: 77

Type: **not specified**

S-01: 387 - Design aspects and operational characteristics of the NHMFL 32T superconducting magnet

Wednesday, 5 September 2018 15:10 (50 minutes)

Session Classification: S-01: Material requirements for advanced HTS magnets

Contribution ID: 78

Type: **not specified**

S-01: 006 - High transport J_c in magnetic fields up to 27 T in $Ba_{0.6}K_{0.4}Fe_2As_2$ superconductor tapes

Wednesday, 5 September 2018 13:30 (50 minutes)

Session Classification: S-01: Material requirements for advanced HTS magnets

Contribution ID: 79

Type: **not specified**

S-01: 329 - Influence of the HTS Roebel cable architecture on its mechanical and electrical properties

Wednesday, 5 September 2018 14:20 (50 minutes)

Session Classification: S-01: Material requirements for advanced HTS magnets

Contribution ID: **80**

Type: **not specified**

E-02: 200 - Review of recent advances in Stirling-type pulse tube cryocoolers

Wednesday, 5 September 2018 14:05 (35 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: **81**

Type: **not specified**

E-02: 216 - Theoretical and experimental investigations on a four-stage Stirling-type pulse tube cryocooler reaching 3.0 K

Wednesday, 5 September 2018 13:30 (35 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 82

Type: **not specified**

E-02: 221 - Theoretical and experimental investigations on a 12 kW Oxford-type dual-opposed moving-coil linear compressor

Wednesday, 5 September 2018 14:40 (35 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 83

Type: **not specified**

E-01: 129 Turbo-Brayton cryogenic systems: latest commissioning and new applications

Wednesday, 5 September 2018 15:15 (35 minutes)

Session Classification: E-01: Large scale refrigeration, liquefaction, air separation and industrial cryogenics.

Contribution ID: **84**

Type: **not specified**

M-11: 090 - A different approach at solid and super solid Helium 4

Wednesday, 5 September 2018 14:30 (30 minutes)

Session Classification: M-11 - Heat transfer, thermodynamic and fluid properties of cryogenic materials

Contribution ID: 85

Type: **not specified**

M-11: 134 - Design and simulation of the cold compressor impeller in large superfluid helium system

Wednesday, 5 September 2018 15:00 (30 minutes)

Session Classification: M-11 - Heat transfer, thermodynamic and fluid properties of cryogenic materials

Contribution ID: 86

Type: **not specified**

M-11: 185 - Pressure loss behaviour of LN2 flow in helically corrugated pipes with insertion of HTS power transmission cables

Wednesday, 5 September 2018 15:30 (30 minutes)

Session Classification: M-11 - Heat transfer, thermodynamic and fluid properties of cryogenic materials

Contribution ID: 87

Type: **not specified**

M-11: 286 - Development of the stranded cable-type heat conductor made of ultra-high purity Aluminium

Wednesday, 5 September 2018 13:30 (30 minutes)

Session Classification: M-11 - Heat transfer, thermodynamic and fluid properties of cryogenic materials

Contribution ID: **88**

Type: **not specified**

M-11: 314 - Velocity measurements in high Reynolds cryogenic helium facilities at SBT

Wednesday, 5 September 2018 14:00 (30 minutes)

Session Classification: M-11 - Heat transfer, thermodynamic and fluid properties of cryogenic materials

Contribution ID: 89

Type: **not specified**

E-08: 199 - Commissioning of the SuperKEKB final focusing SC magnet cryogenic systems

Wednesday, 5 September 2018 13:30 (25 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 90

Type: **not specified**

E-08: 201 - Thermodynamic cycle design for a 700W@3K sub-cooled helium refrigerator test facility

Wednesday, 5 September 2018 13:55 (25 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 91

Type: **not specified**

E-08: 249 - Overview and status of the Long-Baseline Neutrino Facility cryogenics system

Wednesday, 5 September 2018 14:20 (25 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 92

Type: **not specified**

E-08: 250 - Experimental and numerical investigations of operational parameters of TRIUMF's cyclotron cryogenic system

Wednesday, 5 September 2018 14:45 (25 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 93

Type: **not specified**

E-08: 287 - Cryogenic system for the SCLF cryomodule test facility

Wednesday, 5 September 2018 15:10 (25 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 94

Type: **not specified**

E-08: 317 - Final commissioning of the helium cryogenic system for the HIE-Isolde project including four RF cryo-modules

Wednesday, 5 September 2018 15:35 (25 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 95

Type: **not specified**

M-06: 335 - Aerogel-based insulation materials for cryogenic applications

Wednesday, 5 September 2018 13:30 (20 minutes)

Session Classification: M-06: Metallic, composite materials, insulation and impregnation materials processing and properties

Contribution ID: 96

Type: **not specified**

M-07: 238 - Metallurgical changes of cryogenically created coated carbide and its performance while wet machining austenitic stainless steel –310

Wednesday, 5 September 2018 14:00 (40 minutes)

Session Classification: M-07: Cryogenic materials testing and methods

Contribution ID: 97

Type: **not specified**

M-07: 131 - Design of device for thermal emissivity measurement at low temperature based on cryocooler

Wednesday, 5 September 2018 14:40 (40 minutes)

Session Classification: M-07: Cryogenic materials testing and methods

Contribution ID: **98**

Type: **not specified**

M-07: 022 - Fatigue cyclic testing of the ITER CS inlets

Wednesday, 5 September 2018 15:20 (40 minutes)

Session Classification: M-07: Cryogenic materials testing and methods

Contribution ID: 99

Type: **not specified**

E-05: Cryostat technology and thermal insulation

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **100**

Type: **not specified**

E-06: Thermo-physical properties of solids and fluids in cryo-systems

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **101**

Type: **not specified**

E-07: Magnet technology, design and evaluation

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **102**

Type: **not specified**

E-07: Magnet technology, design and evaluation

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **103**

Type: **not specified**

E-08: Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **104**

Type: **not specified**

E-09: Low temperature refrigeration for quantum computers, detectors and LT experiments

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **105**

Type: **not specified**

E-10: Superconducting current leads and links

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **106**

Type: **not specified**

**M-01: processing and properties
NbTi/Nb₃Sn/A15/RE123/BSCCO and MgB₂**

Wednesday, 5 September 2018 16:20 (1 hour)

Session Classification: Wednesday Poster Session

Contribution ID: **107**

Type: **not specified**

E-15: 36 - MRI and its global impact in healthcare

Thursday, 6 September 2018 09:30 (20 minutes)

Session Classification: E-15: Biological, medical and food applications

Contribution ID: **108**

Type: **not specified**

E-15: 191 - A tissue snap-freezing device without sacrificial cryogens

Thursday, 6 September 2018 09:50 (20 minutes)

Session Classification: E-15: Biological, medical and food applications

Contribution ID: **109**

Type: **not specified**

E-15: 291 - Snap-freezing of biological specimens enclosed in cryo-vials with different thermal properties: a quantitative study

Thursday, 6 September 2018 10:10 (20 minutes)

Session Classification: E-15: Biological, medical and food applications

Contribution ID: 110

Type: **not specified**

E-02: 305 - Outgassing characteristics analysis of mechanical cryocooler materials

Thursday, 6 September 2018 09:30 (30 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 111

Type: **not specified**

E-02: 318 - Minimising flow losses within the pulse tube of a Stirling pulse tube cryocooler

Thursday, 6 September 2018 10:00 (30 minutes)

Session Classification: E-02: Cryocoolers: Pulse tube, GM, Stirling, Magnetic and other coolers

Contribution ID: 112

Type: **not specified**

M-04: 382 - Thirty years of bulk superconductivity: history and prospects

Thursday, 6 September 2018 09:30 (20 minutes)

Session Classification: M-04: HTS Bulk, thin films and cables

Contribution ID: 113

Type: **not specified**

M-04: 171 - Effect of bending and twisting in electro-mechanical properties of HTS Tapes used for HTS power cable

Thursday, 6 September 2018 09:50 (20 minutes)

Session Classification: M-04: HTS Bulk, thin films and cables

Contribution ID: 114

Type: **not specified**

E-11: 021 - Rotor cooling concept for the ASuMED superconductive motor

Thursday, 6 September 2018 10:10 (20 minutes)

Session Classification: E-11: Cryogenics for power applications and transportation

Contribution ID: 115

Type: **not specified**

E-04: 108 - Development of a new MLI for orbital cryogenic propulsion systems: thermal performance under one atmosphere to vacuum

Thursday, 6 September 2018 09:50 (20 minutes)

Session Classification: E-04: Space cryogenic applications

Contribution ID: 116

Type: **not specified**

E-04: 203 - In-orbit performance of the SLSTR cryo-cooler system on Sentinel 3A.

Thursday, 6 September 2018 09:30 (20 minutes)

Session Classification: E-04: Space cryogenic applications

Contribution ID: 117

Type: **not specified**

E-04: 364 - ADR Design and Operation for the X-ray Astrophysics Recovery Mission XARM

Thursday, 6 September 2018 10:10 (20 minutes)

Session Classification: E-04: Space cryogenic applications

Contribution ID: **118**

Type: **not specified**

E-08: 325 - Options for a reliable cryogenic supply for the FAIR facility

Thursday, 6 September 2018 09:30 (15 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: **119**

Type: **not specified**

E-08: 349 - Conceptual design of the DTT magnets cooling loops

Thursday, 6 September 2018 09:45 (15 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 120

Type: **not specified**

E-08: 354 - Cryogenic supply for the facility for antiproton and ion research

Thursday, 6 September 2018 10:00 (15 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 121

Type: **not specified**

E-08: 376 - Preliminary conceptual design of FCC-hh refrigerators: Linde evaluation

Thursday, 6 September 2018 10:15 (15 minutes)

Session Classification: E-08 - Large scale cryogenics: fusion reactors, accelerators, superconducting cavities and detectors

Contribution ID: 122

Type: **not specified**

E-05: 167 - Design of the Helium gas transfer line for the Warm Regeneration System of the ITER fusion reactor

Thursday, 6 September 2018 09:30 (15 minutes)

Session Classification: E-05: Cryostat technology and thermal insulation

Contribution ID: 123

Type: **not specified**

E-05: 169 - Experimental measurements on MLI performance from 20-60 K to 4.2 K

Thursday, 6 September 2018 09:45 (15 minutes)

Session Classification: E-05: Cryostat technology and thermal insulation

Contribution ID: 124

Type: **not specified**

E-05: 272 - Thermal performance of the new superfluid helium vertical test cryostats for magnet tests at CERN

Thursday, 6 September 2018 10:00 (15 minutes)

Session Classification: E-05: Cryostat technology and thermal insulation

Contribution ID: 125

Type: **not specified**

E-11: Cryogenics for power applications and transportation

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 126

Type: **not specified**

E-12: Various applications of superconductors

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 127

Type: **not specified**

E-13: LNG and hydrogen systems

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 128

Type: **not specified**

E-14: New devices and novel concepts

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: **129**

Type: **not specified**

E-15: Biological, medical and food applications

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 130

Type: **not specified**

E-16: Instrumentation, telemetry and process control

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 131

Type: **not specified**

E-16: Instrumentation, telemetry and process control

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 132

Type: **not specified**

E-17: Safety, reliability and standards

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 133

Type: **not specified**

M-01: Processing and properties NbTi/Nb₃Sn/A15/RE123/BSCCO and MgB₂

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 134

Type: **not specified**

M-02: Pnictides and other superconducting materials

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 135

Type: **not specified**

M-03: Superconductor stability, AC losses and electromagnetic properties

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 136

Type: **not specified**

M-04: HTS Bulk, thin films and cables

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 137

Type: **not specified**

M-06: Metallic, composite materials, insulation and impregnation materials processing and properties

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 138

Type: **not specified**

M-07: Cryogenic materials testing and methods

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 139

Type: **not specified**

M-08: New cryogenic materials properties and applications

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 140

Type: **not specified**

M-09: Cryogenic low and high power electronics, superconducting detectors

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 141

Type: **not specified**

M-10: Radiation and other degradation effects

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 142

Type: **not specified**

M-11: Heat transfer, thermodynamic and fluid properties of cryogenic materials

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 143

Type: **not specified**

M-03: 095 - Insulative high thermal conduction plastics for increase of stability in conduction-cooled HTS coils

Thursday, 6 September 2018 10:50 (1h 40m)

Session Classification: Thursday Poster Session

Contribution ID: 144

Type: **not specified**

E-16: 046 - Implementation of preventive diagnostics measures for the CERN cryogenic system

Thursday, 6 September 2018 14:30 (20 minutes)

Session Classification: E-16: Instrumentation, telemetry and process control

Contribution ID: 145

Type: **not specified**

E-16: 082 - Characterization of the Venturi flowmeters for the control of ITER magnets

Thursday, 6 September 2018 14:50 (20 minutes)

Session Classification: E-16: Instrumentation, telemetry and process control

Contribution ID: 146

Type: **not specified**

E-16: 172 - Measurements of pressure oscillations and mechanical vibrations

Thursday, 6 September 2018 15:10 (20 minutes)

Session Classification: E-16: Instrumentation, telemetry and process control

Contribution ID: 147

Type: **not specified**

E-09: 341 - Ultra-low vibration Helium reliquefiers for Magnetoencephalography

Thursday, 6 September 2018 14:30 (30 minutes)

Session Classification: E-09: Low temperature refrigeration for quantum computers, detectors and LT experiments.

Contribution ID: 148

Type: **not specified**

E-09: 350 - Continuous sub-kelvin cooling from an adiabatic demagnetization refrigerator

Thursday, 6 September 2018 15:00 (30 minutes)

Session Classification: E-09: Low temperature refrigeration for quantum computers, detectors and LT experiments.

Contribution ID: 149

Type: **not specified**

M-04: 327 - Enhanced-textured-powder Bi-2212/Ag wire development

Thursday, 6 September 2018 14:30 (30 minutes)

Session Classification: M-04: HTS Bulk, thin films and cables

Contribution ID: 150

Type: **not specified**

M-09: 063 - A Compact 4 K Cooling System for Superconducting Nanowire Single Photon Detectors

Thursday, 6 September 2018 15:00 (30 minutes)

Session Classification: M-09: Cryogenic low and high power electronics, superconducting detectors

Contribution ID: 151

Type: **not specified**

E-06: 030 - Study on heat transfer between the High Luminosity LHC beam screens and the He II-cooled beam tube

Thursday, 6 September 2018 14:30 (30 minutes)

Session Classification: E-06: Thermo-physical properties of solids and fluids in cryo-systems

Contribution ID: 152

Type: **not specified**

E-06: 31 - Study on transient heat transport at metal to dielectric interfaces in the temperature range between 3.5 K and 30 K

Thursday, 6 September 2018 15:00 (30 minutes)

Session Classification: E-06: Thermo-physical properties of solids and fluids in cryo-systems

Contribution ID: 153

Type: **not specified**

E-09: 32 - Heat transfer at dielectric –metallic interfaces in the ultra-low temperature range

Thursday, 6 September 2018 16:00 (20 minutes)

Session Classification: E-09: Low temperature refrigeration for quantum computers, detectors and LT experiments.

Contribution ID: 154

Type: **not specified**

E-09: 34 - Development trends in Superconducting and Cryogenics technologies for Quantum Applications

Thursday, 6 September 2018 16:20 (20 minutes)

Session Classification: E-09: Low temperature refrigeration for quantum computers, detectors and LT experiments.

Contribution ID: 155

Type: **not specified**

E-09: 187 - Stable temperature regulation for TES test below 200mK employing improved Cohen-Coon method

Thursday, 6 September 2018 16:40 (20 minutes)

Session Classification: E-09: Low temperature refrigeration for quantum computers, detectors and LT experiments.

Contribution ID: 156

Type: **not specified**

M-04: 190 - Comparison of the superconducting properties of YBa₂Cu₃O₇ and YBa₂Cu₃O₇-Ag

Thursday, 6 September 2018 16:00 (30 minutes)

Session Classification: M-04: HTS Bulk, thin films and cables

Contribution ID: 157

Type: **not specified**

M-04: 223 - Design considerations for electric motors using stacks of high temperature superconducting tape as permanent magnets

Thursday, 6 September 2018 16:30 (30 minutes)

Session Classification: M-04: HTS Bulk, thin films and cables

Contribution ID: 158

Type: **not specified**

E-04: 098 - Cooling performance of Joule Thomson coolers in 300K-50mK cryochain demonstration for ATHENA X-IFU

Thursday, 6 September 2018 16:00 (30 minutes)

Session Classification: E-04: Space cryogenic applications

Contribution ID: 159

Type: **not specified**

E-04: 105 - Emissivity of black plated open honeycomb and black coatings at cryogenic temperatures

Thursday, 6 September 2018 16:30 (30 minutes)

Session Classification: E-04: Space cryogenic applications

Contribution ID: **160**

Type: **not specified**

E-10: 017 - Development of 10 kA current leads cooled by a cryogenic mixedrefrigerant cycle

Thursday, 6 September 2018 16:00 (30 minutes)

Session Classification: E-10: Superconducting current leads and links

Contribution ID: 161

Type: **not specified**

E-05: 275 - Development of thin, highly radiation transparent cryostats for the detector magnets of the Future Circular Collider

Thursday, 6 September 2018 16:30 (30 minutes)

Session Classification: E-05: Cryostat technology and thermal insulation

Contribution ID: 162

Type: **not specified**

E-05: 301 - Design of an ultra-thin, radiation length optimized, metallic cryostat for a 2T/4m free bore detector solenoid

Thursday, 6 September 2018 16:00 (30 minutes)

Session Classification: E-05: Cryostat technology and thermal insulation