



| Paper ID | Session | Accepted for the conference programme as | Title | corresp. author | Authors |
|----------|--------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 001 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | Cryogenics for the future accelerator complex NICA at JINR | Agapov N. | Agapov N., Batin V., Emelianov N., Hisameev I., Krakovsky B., Mitrofanova Y., Nikiforov D., Popov O., Shvidkiy D., Trubnikov G., Udut V., Ziskin G. |
| 013 | 2 Superconductivity and its Applications | poster | Design of a superconducting inductor for axial concentration flux motor | Ailam E.H. | Ailam E., Hachama M., Benallal M. N., Hocine A. |
| 010 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | Thermal Design of Cryogenic Permanent Magnet Undulator for SLS | Anghel A. | Anghel A., Jakob B., Bruegger M., Schmidt T., Tanaka T., Kohda T. |
| 004 | 6 Cryobiology, Preservation and Technology | lecture | Application of the Very Low Temperatures for the Preservation of Rare Plants' Seeds of Ukraine | Arapetyan E. | Arapetyan E., UsatenkoYu., Skibitska M. |
| 040 | 8 Liquefied Natural Gas | lecture | LNG as vehicle fuel in Italy | Arteconi A. | Arteconi A., Polonara F. |
| 041 | 8 Liquefied Natural Gas | lecture | A multiobjective optimization for micro-scale liquefaction plants | Arteconi A. | Arteconi A., Polonara F. |
| 016 | 2 Superconductivity and its Applications | poster | Stability of YBCO coated conductor according to Cu stabilizer thickness for cryogenic applications | Bae J.H. | Bae J.H., Eom B.Y., Kim H.J., Seong K.C. |
| 057 | 9 Cryogenic Energy Storage and Cryogenic Fuels | poster | The possibility application of LNG heat of vaporisation in the oxygen production from the atmospheric air by TSA method. | Banaszkiewicz T. | Banaszkiewicz T., Chorowski M. |
| 062 | 3 Cryocoolers and their Applications | poster | Studies of Performance Characteristics of Twin Thermoacoustic Prime Mover with Gas Mixtures as Working Fluids | Behera U. | Behera U., Kasthuriengan S., Kamble B., Kuzhiveli B., Krishnamoorthy V. |
| 012 | 2 Superconductivity and its Applications | poster | Comparison study between several configurations of axial flux superconducting motors | Benallal M.N. | Benallal M. N., Ailam E., Hachama M., Hocine A. |
| 036 | 2 Superconductivity and its Applications | lecture | Analysis of the SIS100 Superconducting Magnet Cooling | Bleile A. | Bleile A., Fischer E., Khozhibagiyan H., Mierau A. |
| 037 | 2 Superconductivity and its Applications | lecture | Measurement of Dynamic Heat Losses in the Fast Ramped Superconducting Magnets for the SIS100 Synchrotron | Bleile A. | Bleile A., Fischer E., Khozhibagiyan H., Mierau A., Schnizer P. |



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| 034 | 10 Industrial Applications of Cryogenic Gases | poster | Test procedures for cryogenic components and considerations for leakage measurement | Boersch M. | Boersch, M., Holdener, F., Iten, E., Oertig, D. |
| 022 | 7 Liquefaction and Separation of Industrial Gases | lecture | Enrichment of rare gases concentrates with application of diaphragm technologies | Bondarenko V.L. | Bondarenko V.L., Losyakov N.P., Simonenko Yu.M., Chuklin A.P. |
| 023 | 7 Liquefaction and Separation of Industrial Gases | poster | Mixtures on basis of rare gases. Application and methods of production | Bondarenko V.L. | Bondarenko V.L., Diachenko O.V. |
| 024 | 7 Liquefaction and Separation of Industrial Gases | lecture | Cascade units for neon isotope production by rectification method | Bondarenko V.L. | Bondarenko V.L., Simonenko Yu.M., Simonenko O.Yu., Yemelyanov A.M., Luschik A.A. |
| 058 | 7 Liquefaction and Separation of Industrial Gases | lecture | Air Separation Unit installation and qualification at the French Guyana Space Centre | Burdaszewski P. | Burdaszewski P |
| 048 | 5 Cryomedicine, Therapy and Technology | poster | Dreams and Reality of Superhigh Frequency Cryogenic Technology in Surgery | Butorina A. | Butorina A., Arkharov A., Matveev V. |
| 066 | 3 Cryocoolers and their Applications | lecture | Development of two-stage Joule-Thomson Microcooler at University of Twente | Cao H.S. | H.S. Cao, H.J. Holland, C.H. Vermeer, S. Vanapalli, D.R. Zalewski, H.J.M. ter Brake |
| 064 | 6 Cryobiology, Preservation and Technology | lecture | Biological and technological challenges establishing a future-proof cryogenic biomaterialbank | Ciba P. | Ciba P, Böhmert B, Lermen D, Fuhr GR, Kruse C |
| 059 | 7 Liquefaction and Separation of Industrial Gases | lecture | Assessment of the Storage of Crude Helium in Reserves in Europe and elsewhere. | Clarke R. | Clarke R., Scurlock R. |
| 049 | 2 Superconductivity and its Applications | poster | Study of Heat Electrodynamic Processes in High Temperature Superconductors (HTSC) Taking into Account Defects of Their Internal Structure | Dontsova E. | Arkharov A., Romanovskiy V., Dontsova E. |
| 073 | 1 Very Low Temperatures and their Application | lecture | The low temperature system of AEGIS | Eisel T. | Eisel T., Bremer J., Burghart G., Doser M., Dudarev A. |



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| 038 | 3 Cryocoolers and their Applications | lecture | Effects of the Inertance Tube on Pulse Tube Refrigerator Performance | Farouk B. | Antao, D. S., Farouk, B. |
| 039 | 3 Cryocoolers and their Applications | lecture | A 3-Dimensional Numerical Study a Co-Axial type Acoustic Stirling Cryocooler | Farouk B. | Antao, D. S., Spoor, P., Corey, J., Farouk, B. |
| 018 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | The MITICA facility: a possible optimization of the Cryogenic Plant cooling capacity | Fellin F. | Fellin F., Haas H., Hanke S., Meunier L., Passardi G., Scannapiego M., Valente M., Zaccaria P. |
| 033 | 2 Superconductivity and its Applications | poster | Properties of impregnated superconducting coils made from YBCO coated conductor using different technology of impregnation | Frolek L. | Frolek L., Seiler E., Šouc J. |
| 030 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | Design, Manufacturing and Assembly of the Cryogenic Transfer Line for XFEL/AMTF | Fydrych J. | Fydrych J., Chorowski M., Duda P., Grzegory P., Iluk A., Malcher K., Michalski G., Rusinski E., Strychalski G. |
| 045 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | Numerical simulation of mixed convection heat transfer to forced flow supercritical helium | Ghosh P. | Rebelo N., Ghosh P. |
| 089 | 6 Cryobiology, Preservation and Technology | lecture | State of Genetic Apparatus of Stem Compartment Cells of Cryopreserved Fetal Liver of Different Gestation Terms | Goltsev A.N. | Goltsev A.N., Lutsenko E.D., Dimitrov A.Yu., Durava T.G., Ostankov M.V., Yampolskaya E.Ye., Gaevskeya Yu.A., Babenko N.N., Chelombitko O.V. |
| 014 | 7 Liquefaction and Separation of Industrial Gases | poster | Analysis of precooling process in a helium liquefaction system with a G-M cryocooler | Gong L.H. | Xu D., Xu X.D., Gong L.H., Liu H.M., Li L.F. |
| 009 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | Development of a two-phase thermosiphon for extreme cooling requirements in the tritium source of KATRIN | Grohmann S. | Grohmann S., Bode T., Hötzel M., Schön H., Süßer M., Wahl T. |
| 015 | 2 Superconductivity and its Applications | lecture | Superconducting Current Feeders System for SST-1 | Gupta N.C. | Gupta N.C., Garg A., Sonara D., Panchal R., Shah P., Nimavat H., |



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| 046 | 6 Cryobiology, Preservation and Technology | lecture | Analysis on protein stability in Tris buffered purified bulk solutions during the freezing process | Heidingsfelder J. | Heidingsfelder J., Reinsch H., Klier J., Herzog R. |
| 076 | 7 Liquefaction and Separation of Industrial Gases | lecture | Thermosiphon Tanks for reliable pump operation | Hnizdil T. | Hnizdil T., Lánský M., Chrz V. |
| 054 | 2 Superconductivity and its Applications | lecture | Cooling systems for superconducting power applications – experiences gained in HTS cable and fault-current limiter projects | Hobl A. | Hobl A., Bock J., Schmidt F. |
| 083 | 3 Cryocoolers and their Applications | poster | Study on the Miniature Turbo-Expander of Reverse Brayton Cryocooler at 100K | Hou Y. | Hou Y., Lai T., Zhao H., Chen R. |
| 084 | 7 Liquefaction and Separation of Industrial Gases | poster | Experimental investigation on the thermodynamic performance of turbo-expander in two phases | Hou Y. | Lai T., Hou Y., Niu L. |
| 027 | 7 Liquefaction and Separation of Industrial Gases | poster | Design of a cryogenic helium plate-fin heat exchanger | Hu Z.J. | Hu Z.J., Qiu Y.N., Zhang N., Li Q. |
| 061 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | The development of methods and means for long-term storage of liquid hydrogen of high purity | Cheremnykh O. Ya. | Cheremnykh O. Ya. |
| 069 | 9 Cryogenic Energy Storage and Cryogenic Fuels | poster | The development of methods and means of gasification of liquid hydrogen under supercritical parameters | Cheremnykh O. Ya. | Cheremnykh O. Ya. |
| 082 | 9 Cryogenic Energy Storage and Cryogenic Fuels | poster | The development of methods and means of evacuation of hydrogen from tanks of a space flying apparatus under supercritical parameters | Cheremnykh O. Ya. | Cheremnykh O. Ya. |
| 047 | 7 Liquefaction and Separation of Industrial Gases | lecture | Exergy Analysis to Determine Appropriate Design and Operating Parameters for Collins Refrigerator-Liquefier under Mixed Mode Operation | Chowdhury K | Chowdhury K; Kundu A.; Thomas R. J; Ghosh P |
| 051 | 2 Superconductivity and its Applications | lecture | Components and Systems for HTS Applications | Kade A. | Kade A., Klupsch M., Kuhn M., Kaiser G., Herzog, R., Klier J. |



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| 085 | 7 Liquefaction and Separation of Industrial Gases | lecture | Oxygen Supply for CO ₂ Capture by Oxyfuel Coal Combustion | Kalbassi M. | Kalbassi M., Higginbotham P., Gibson S. |
| 088 | 1 Very Low Temperatures and their Application | lecture | Studies of Adsorption Characteristics of Activated Carbons down to 4.5K for Development of Cryosorption Pumps | Kasthuriengan S. | Kasthuriengan S., Behera U., Gangradey R., Krishnamoorthy V., Udgata S.S., Tripathi V.S. |
| 078 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | Feasibility Study of "CO ₂ free hydrogen chain" utilizing Australian brown coal linked with CCS | Kenji I. | Inoue Kenji, Yoshino Yasushi, Harada Eiichi |
| 002 | 2 Superconductivity and its Applications | lecture | Experimental Study of Superconducting Magnets for the NICA Accelerator Complex | Khodzhbagiyani H. | Khodzhbagiyani H., Bazanov A., Donyagin A., Galimov A., Karpinsky V., Kuznetsov G., Nikitaev P., Smirnov A., Trubnikov G. |
| 017 | 2 Superconductivity and its Applications | poster | The cryogenic insulation characteristics of GFRP in Liquid Nitrogen | Kim H.J. | H. J. Kim, K. C. Seong, J. H. Choi, S. H. Kim |
| 032 | 10 Industrial Applications of Cryogenic Gases | lecture | Advanced Cryogenic Process for low Purity Oxygen Production | Kirchner L. | Kirchner, L., Lochner, S. |
| 050 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | A new cryogenic high-pressure H ₂ test area: First results | Klier J. | J. Klier, G. Kaiser, M. Klupsch, A. Kade, M. Schneider, R. Herzog |
| 077 | 5 Cryomedicine, Therapy and Technology | lecture | Study of Contact Methods to Cool Biological Tissue in Local Cryosurgery | Kondratenko R. | Nesterov S., Kondratenko R. |
| 021 | 4 Cryogenics in Particle Physics / Space Cryogenics | poster | Liquid cryogen targets for experiments in nuclear relativistic and particle physics | Konstantinov A.V. | Konstantinov A., Borzunov U., Shimanskiv S., Varava A. |
| 065 | 4 Cryogenics in Particle Physics / Space Cryogenics | poster | Cryogenic System of Superconducting Separator for Kaon Channel of IHEP Accelerator | Kozub S. | Kozub S., Ageyev A., Orlov A., Zinchenko S. |
| 071 | 1 Very Low Temperatures and their Application | poster | Cryogenic He experiment on natural turbulent convection | Kralik T. | Kralik T., Urban P.; Musilova V., Hanzelka P., Srnka A., Repisky A. |
| 072 | 1 Very Low Temperatures and their Application | poster | Radiative heat transfer at low temperatures over microscopic distances in vacuo | Kralik T. | Kralik T., Musilova V., Hanzelka P., Horak M., Srnka A. |
| 052 | 3 Cryocoolers and their Applications | lecture | 3-Cycle Pulse Tube Cooler for Cryogenic High-Power Applications | Kuhn M. | Kuhn M., Kaiser G., Schildbach T., Schroeder G., Klier J., Herzog R |



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| 056 | 2 Superconductivity and its Applications | poster | Superconducting unclosed shields for improving homogeneity of the magnetic field in magnetic systems | Kulikov E. | Kulikov E., Agapov N., Dorofeev G., Drobin V., Malinovski H., Prokofichev Yu., Smirnov A., Trubnikov G. |
| 067 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | Thermophysical Properties of Hydrogen and Deuterium at all Ortho-Para Compositions | Leachman J. | Leachman J., Richardson I. |
| 043 | 3 Cryocoolers and their Applications | poster | Multifunctional Measurement Apparatus for Thermophysical Property Based on GM Cryocooler | Liu H. | Huiming Liu, Dong Xu, Peng Xu, Xiangdong Xu, Laifeng Li, Linghui Gong |
| 011 | 2 Superconductivity and its Applications | poster | Design and Manufacture of Cryogenic Sub-Cooler for High Temperature Superconductors | Mahmoudian S.M.R. | Mahmoudian S.M.R., Alinejad N., Zandkarimi M., Zarvandi M. |
| 070 | 6 Cryobiology, Preservation and Technology | lecture | Safety and Quality Assurance in Donation, Harvest and Preservation of Cells and Tissues of Human Origin – A Review of Own Experience | Měříčka P. | Měříčka, P., Straková, H., Štěrbá, L. |
| 019 | 4 Cryogenics in Particle Physics / Space Cryogenics | poster | Cool-down processes of NICA accelerator complex | Mitrofanova Y.A. | Mitrofanova Y., Agapov N., Batin V., Emelianov N., Nikiforov D., Shvidkiy D. |
| 042 | 2 Superconductivity and its Applications | lecture | Refrigeration Characteristics of Slush Nitrogen for High Temperature Superconducting Cable | Nakamura N. | Nakamura N., Komagome T., Lee Y, Ikeuchi M., Yaguchi H., Machida A, Boone J. |
| 044 | 9 Cryogenic Energy Storage and Cryogenic Fuels | cancelled by the author | Integrated Refrigeration and Storage for Liquid Hydrogen Ground Servicing | Notardonato W. | Notardonato, W., Oliviera, J., Tomsik, T., Baik, J. |
| 087 | 6 Cryobiology, Preservation and Technology | lecture | Cryopreservation of mesenchymal stromal cells by vitrification in multicomponent solutions | Petrenko A. | Petrenko A.Yu., Trufanova N.A., Petrenko Yu.A. |
| 079 | 1 Very Low Temperatures and their Application | lecture | Modern ways of reaching and using millikelvin temperatures | Phelan K. | Wernicke D., Phelan K. |
| 006 | 5 Cryomedicine, Therapy and Technology | lecture | Cryotherapy state-of-art and challenges in Poland | Piotrowska A. | Chorowski M., Piotrowska A., Adamowicz B., Haladyn E. |



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| 007 | 7 Liquefaction and Separation of Industrial Gases | lecture | Thermodynamic analysis of liquid oxygen production system based on coupling Joule-Thomson cooler with PSA | Piotrowska A. | Piotrowska A., Chorowski M. |
| 035 | 4 Cryogenics in Particle Physics / Space Cryogenics | poster | Design, manufacturing and assembly of XATC test cryostats for AMTF | Polinski J. | Polinski J., Bozhko Y., Petersen P., Chorowski M., Duda P., Grzegory P., Michalski G., Schaffran J., Strychalski G., Zhirnov A. |
| 029 | 7 Liquefaction and Separation of Industrial Gases | poster | Study concerning the possibility for increasing argon recovery from a cryogenic air separation process | Popa V. | Popa V., Cuzic M., Serban Al. |
| 031 | 8 Liquefied Natural Gas | lecture | Conceptual Design of an Efficient Small LNG Production Facility | Quack H. | Quack H. |
| 081 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | Search for the Best Processes to Liquefy Hydrogen in Very Large Plants | Quack H. | Quack H., Essler J., Haberstroh Ch. |
| 026 | 2 Superconductivity and its Applications | lecture | The cryogenic system of the 43 T Hybrid magnet of LNCMI Grenoble, France | Ronayette L. | Ronayette L., Barbier R., Bredy Ph., Fazilleau Ph., Grandclement C., Hervieu B., Joss W., Juster FP., Pfister R., Pugnât P. |
| 005 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | Liquid Natural Gas exergy utilization by coupling the LNG regasification unit and filling system for Natural Gas adsorption storage tanks | Rozsak E. | Rozsak E., Chorowski M. |
| 060 | 7 Liquefaction and Separation of Industrial Gases | lecture | The Future of Helium? A Global Agency to Oversee Production, Storage, Supply and Use of Helium Gas and Liquid. | Scurlock R. | Scurlock R., Clarke R., Glowacki B., Nuttall W. |
| 025 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | Cryogenic hydrogen storage in highly porous materials – A modelling approach – | Schlemminger C. | Schlemminger Ch., Næss E., Bünger U. |
| 053 | 1 Very Low Temperatures and their Application | lecture | Compact Dilution Refrigerator for Sensor Cooling | Schneider M. | Schneider M., Arndt J., Giesel J., Zerweck-Trogisch U., Klier J., Herzog R. |



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| 090 | 4 Cryogenics in Particle Physics / Space Cryogenics | poster | Status of the Cryogenic System for the Ariel E-LINAC at TRIUMF | Sitnikov A. | Sitnikov A. , Bylinskii I. , Koscielniak S. , Kovesnikov A. , Laxdal R. , Yosifov D. |
| 063 | 7 Liquefaction and Separation of Industrial Gases | rejected | Energy Saving Opportunities In Oxygen Plant –A CASE STUDY | Sonani B.J. | Sonani B.J., Ratnadhariya J.K. |
| 086 | 2 Superconductivity and its Applications | poster | Critical Current Degradation Analysis in Irradiated Superconducting Materials | Sosnowski J. | Sosnowski J. |
| 028 | 7 Liquefaction and Separation of Industrial Gases | poster | Development of an Equation of State for the Representation of Solid-Liquid, Solid-Vapour, and Liquid-Vapour Equilibria of Substances of Interest for the Air Distillation Process | Stringari P. | Campestrini M., Stringari P. |
| 055 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | Presentation of the German DIN Working Group – Safety Devices for Helium Cryostats | Süsser M. | Grohmann S., Haberstroh Ch., Süßer M. |
| 068 | 3 Cryocoolers and their Applications | poster | High-power Stirling-type pulse tube cryocooler for operation near 80 K | Thummes G. | Sun J., Dietrich M., Thummes G. |
| 020 | 4 Cryogenics in Particle Physics / Space Cryogenics | lecture | Design proposal for MITICA Cryogenic Plant | Valente M. | Valente M., Fellin F., Haas H., Hanke S., Scannapiego M., Zaccaria P. |
| 074 | 6 Cryobiology, Preservation and Technology | lecture | Standardization of the cryopreservation process for parathyroid glands | Von Walcke-Wulffen, | Von Walcke-Wulffen, V.-J. |
| 080 | 9 Cryogenic Energy Storage and Cryogenic Fuels | lecture | Principles for the liquefaction of hydrogen with emphasis on pre-cooling processes | Walnum H.T. | Walnum H.T., Berstad D., Drescher M., Nekså P., Quack H., Haberstroh Ch., Essler J. |
| 003 | 6 Cryobiology, Preservation and Technology | lecture | Coupled Transport of Water and Cryoprotectant across Cell Membranes and Applications to Cryopreservation | Weng L. | Weng L., Li W. |
| 008 | 3 Cryocoolers and their Applications | lecture | Low temperature phase equilibria of refrigerant mixtures | Winkelmann D. | Winkelmann D., Oellrich L.R. |

Cryogenics
2012



12th Cryogenics 2012

IIR International Conference

September 11 – 14, 2012 Dresden, Germany



ACCEPTED CONTRIBUTIONS

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| 075 | 6 Cryobiology, Preservation and Technology | lecture | Cryomechatronics in the context of biobanking: The technology of the central HIV-biobank for vaccine research. | Zimmermann H. | Zimmermann H. |