TECHNICAL PROGRAM

08:00 PLENARY SESSION

1PL: 400 PLENARY I *REGENCY* DONALD GUBSER (NAVAL RESEARCH LABORATORY) AND BRUCE STRAUSS (DOE)

08:00 1PL-01 **MONDAY OPENING REMARKS AND AWARD PRESENTATIONS** *M. OSOFSKY;* NRL.

08:40 1PL-02 **SUPERCONDUCTIVITY FOR POWER APPLICATIONS IS GETTING MORE AND MORE ATTRACTIVE** *M. NOE;* KARLSRUHE INSTITUTE OF TECHNOLOGY.

10:10 1PL-03 **NEW SCIENCE FOR ACHIEVING PRACTICAL CUPRATE SUPERCONDUCTORS** *J. L. MACMANUS-DRISCOLL;* CAMBRIDGE.

11:10 1PL-04 **QUANTUM INFORMATION PROCESSING WITH SUPERCONDUCTING CIRCUITS** *I. SIDDIQI;* UNIVERSITY OF CALIFORNIA, BERKELEY.

13:30 ORAL SESSIONS

1EA: 156 TES BOLOMETERS I *EXECUTIVE* SAMUEL MOSELEY (NASA/GSFC) AND DOMINIC BENFORD ()

13:30 1EA-01 ***(INVITED)*** **TRANSITION-EDGE SENSOR BOLOMETER ARRAYS: APPLICATION, DESIGN, AND PERFORMANCE** *A. T. LEE;* UNIVERSITY OF CALIFORNIA.

14:00 1EA-02 **SUPERCONDUCTING DETECTORS FOR CHARACTERIZATION OF THE COSMIC MICROWAVE BACKGROUND** *E. J. WOLLACK;* NASA/GSFC.

14:15 1EA-03 **A DUAL-POLARIZED MULTI-CHROIC ANTENNA-COUPLED TES-BOLOMETER WITH A COCHLEA-INSPIRED CHANNELIZER CIRCUIT** *R. O'BRIENT;* UNIVERSITY OF CALIFORNIA AT BERKELEY.

14:30 1EA-04 **TOWARDS A LARGE-FORMAT FEEDHORN-COUPLED TES ARRAY FOR CMB POLARIMETRY** *H. M. CHO;* NIST-BOULDER; FOR THE TRUCE COLLABORATION.

14:45 1EA-05 **PROGRESS ON ANL/KICP TES BOLOMETERS FOR SPTPOL** *A. CRITES[1], L. BLEEM[1], J. CARLSTROM[1], C. CHANG[1], A. DATESMAN[2], R. DIVAN[3], W. EVERETT[1], J. MCMAHON[4], J. MEHL[1], S. MEYER[1], T. MONTROY[5], T. NATOLI[6], V. NOVOSAD[2], J. PEARSON[2], J. RUHL[5], J. SAYRE[5], G. WANG[2], V. YEFREMENKO[2];* [1]KAVLI INSTITUTE FOR COSMOLOGICAL PHYSICS, UNIVERSITY OF CHICAGO, [2]MSD ARGONNE NATIONAL LABS, [3]CMN ARGONNE NATIONAL LABS, [4]UNIVERSITY OF MICHIGAN, [5]DEPARTMENT OF PHYSICS, CASE WESTERN RESERVE UNIVERSITY, [6]UNIVERSITY OF CHICAGO.

15:00 1EA-06 **ULTRASENSETIVE TES BOLOMETER FOR FIR SPACE BASED ASTRONOMY.** *D. MOROZOV[1], P. MAUSKOPF[1], P. ADE[1], M. BRUIJN[2], P. DE KORTE[2], H. HOEVERS[2], M. RIDDER[2], P. KHOSROPANAH[2], J. GAO[3];* [1]CARDIFF UNIVERSITY, [2]NETHERLANDS INSTITUTE FOR SPACE RESEARCH (SRON), [3]DELFT UNIVERSITY.

15:15 1EA-07 **NBSI TES ARRAY AND READOUT: DEVELOPMENT AND CHARACTERISATION** *F. PAJOT[1], Y. ATIK[1], B. BELIER[2], L. BERGÉ[3], G. BORDIER[4], E. BRÉELLE[4], L. DUMOULIN[3], C. EVESQUE[1], F. GADOT[2], B. LERICHE[1], S. MARNIEROS[3], J. MARTINO[4], M. PIAT[4], D. PRELE[4], F. VOISIN[4], J. ZHONG[5];* [1]IAS CNRS-UP11 ORSAY, [2]IEF CNRS-UP11 ORSAY, [3]CSNSM CNRS-UP11 ORSAY, [4]APC CNRS-UP7 PARIS, [5]IAS CNRS-UP11 ORSAY AND PMO NANJING, CHINA.

1EB: 155 SYSTEM APPLICATIONS *DIPLOMAT* ELIE TRACK (IEEE-CSC) AND DEBORAH VAN VECHTEN (ONR)

13:30 1EB-01 ***(INVITED)*** **MODULAR, MULTI-FUNCTION DIGITAL-RF RECEIVER SYSTEM** *D. GUPTA, D. KIRICHENKO, V. DOTSENKO, R. MILLER, J. DELMAS, R. WEBBER, S. GOVORKOV;* HYPRES.

14:00 1EB-02 **PRACTICAL OPERATION OF CRYOGEN-FREE PROGRAMMABLE JOSEPHSON VOLTAGE STANDARDS** *R. E. SCHWALL, J. POWER, C. J. BURROUGHS, P. D. DRESSELHAUS, S. P. BENZ;* NIST.

14:15 1EB-03 **A HTS SQUID RECEIVER SYSTEM FOR TRANSIENT ELECTRO-MAGNETIC MEASUREMENTS** *R. STOLZ[1], A. CHWALA[1], F. BAUER[1], V.*

ZAKOSARENKO[1], R. IJSSELSTEIJN[1], U. HÜBNER[1], M. STARKLOFF[2], N. BONDARENKO[2], M. MEYER[2], H. MEYER[1]; [1]IPHT JENA, [2]SUPRACON AG.

14:30 1EB-04 **OCEANMAG - A FULLY MOBILE MAGNETIC GRADIENT TENSOR MEASUREMENT SYSTEM** *S. T. KEENAN, D. A. CLARK, P. J. CUSACK, J. A. YOUNG, C. P. FOLEY, K. E. LESLIE;* CSIRO MATERIALS SCIENCE AND ENGINEERING.

14:45 1EB-05 **SYSTEM-LEVEL COMPARISON FOR ROOM TEMPERATURE AND CRYOGENICALLY COOLED RF RECEIVER FRONT-ENDS** *A. M. LEESE DE ESCOBAR[1], T. GATHMAN[1], D. GUPTA[2];* [1]SPAWAR SYSTEMS CENTER PACIFIC, [2]HYPRES, INC..

15:00 1EB-06 **AN OPTICAL INPUT MODULE WITH SUPERCONDUCTING SINGLE-FLUX-QUANTUM CIRCUIT OPERATING AT 1550 NM BAND** *H. TERAI, S. SHINADA, Z. WANG, N. WADA;* NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS LABORATORY.

15:15 1EB-07 **CARBON NANOTUBE BASED POLYMER ADHESIVE FOR SUPERCONDUCTOR MULTI-CHIP MODULE PACKAGING** *R. S. E. JOHN[1], C. S. THOMPSON[1], V. V. DOTSENKO[2], J. DELMAS[2], D. GUPTA[2], A. P. MALSHE[1];* [1]UNIVERSITY OF ARKANSAS, [2]HYPRES INC..

1EC: 145 QUANTUM COMPUTING I *HAMPTON* JOHN CLARKE (UNIVERSITY OF CALIFORNIA, BERKELEY) AND PAUL BUNYK (D-WAVE SYSTEMS INC.)

13:30 1EC-01 ***(INVITED)*** **LONG COHERENCE TIME IN A SUPERCONDUCTING PERSISTENT-CURRENT QUBIT** *J. BYLANDER[1], S. GUSTAVSSON[1], F. YOSHIHARA[2], K. HARRABI[2], Y. NAKAMURA[3], J. TSAI[3], W. D. OLIVER[4];* [1]MIT, [2]THE INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH (RIKEN), JAPAN, [3]RIKEN AND NANO ELECTRONICS RESEARCH LABORATORIES, NEC CORP., JAPAN, [4]MIT AND MIT LINCOLN LABORATORY.

14:00 1EC-02 **DESIGN IMPROVEMENTS FOR SUPERCONDUCTING QUBITS** *M. STEFFEN, D. DIVINCENZO, S. KUMAR, M. KETCHEN, G. KEEFE, M. ROTHWELL, J. ROZEN;* IBM.

14:15 1EC-03 **DIRECT OBSERVATION OF COHERENT POPULATION TRAPPING IN A SUPERCONDUCTING ARTIFICIAL ATOM** *W. R. KELLY[1], Z. DUTTON[1], J. SCHLAFER[1], B. MOOKERJI[1], T. A. OHKI[1], J. S. KLINE[2], D. P. PAPPAS[2];* [1]RAYTHEON BBN TECHNOLOGIES, [2]NIST BOULDER.

14:30 1EC-04 **QUANTUM NOISE BROADENED CAPTURE INTO AUTORESONANCE** *K. MURCH, R. VIJAY, I. SIDDIQI;* QNL, UC BERKELEY.

14:45 1EC-05 **MANUFACTURABLE PHASE QUBITS** *R. M. LEWIS, J. E. BAUMGARDNER, A. A. PESETSKI, D. L. MILLER, E. FOLK, A. HERR, J. J. TALVACCHIO;* NORTHROP GRUMMAN.

15:00 1EC-06 **ANOMALOUS SWITCHING CURVES IN A SQUID PHASE QUBIT** *H. KWON[1], A. PRZYBYSZ[1], B. COOPER[1], H. PAIK[2], K. OSBORN[2], B. PALMER[2], R. BUDOYO[1], J. ANDERSON[1], C. LOBB[1], F. WELLSTOOD[1];* [1]UNIVERSITY OF MARYLAND, COLLEGE PARK, [2]LPS.

15:15 1EC-07 **MEASUREMENTS OF A COOPER-PAIR BOX COUPLED TO A QUASI-LUMPED ELEMENT RESONATOR** *Z. KIM[1], B. SURI1, V. ZARETSKEY1, S. NOVIKOV1, K. D. OSBORN2, F. C. WELLSTOOD3, B. S. PALMER[2];* [1]DEPARTMENT OF PHYSICS, UNIVERISTY OF MARYLAND, [2]LABORATORY FOR PHYSICAL SCIENCES, [3]JQI, CNAM, DEPARTMENT OF PHYSICS, UNIVERISTY OF MARYLAND.

1LA: 135 MOTORS AND GENERATORS *EMPIRE* TABEA ARNDT (SIEMENS) AND GERALD BROWN (NASA)

13:30 1LA-01 ***(INVITED)*** **FULL POWER TEST OF A 36.5 MW HIGH TEMPERATURE SUPERCONDUCTOR PROPULSION MOTOR** *G. L. SNITCHLER[1], B. GAMBLE[1], T. MACDONALD[1], D. ALEXANDER[2], D. RUMMLER[2], B. HARTMAN[2];* [1]AMERICAN SUPERCONDUCTOR, [2]NORTHRUP GRUMMAN ELECTRONIC SYSTEMS-MARINE SYSTEMS.

14:00 1LA-02 **DESIGN OF A 15,000 RPM, 2.5 MEGAWATT HTS GENERATOR SUITABLE FOR COMMERCIAL AND MILITARY APPLICATIONS AND THE RESULTS OF THE SUCCESSFUL 15,000 HTS ROTOR TEST** *L. J. LONG[1], J. PARKER[1], P. SCHRUM[2], R. G. BUCKLEY[3];* [1]LEI, [2]FOREFRONT ENGINEERING AND DESIGN, [3]INDUSTRIAL RESEARCH, LTD..

14:15 1LA-03 **10 MW CLASS SUPERCONDUCTOR WIND TURBINE GENERATOR** *G. L. SNITCHLER, B. GAMBLE, P. WINN, C. KING;* AMERICAN SUPERCONDUCTOR.

14:30 1LA-04 **DOUBLE-HELIX FULLY-SUPERCONDUCTING GENERATOR FOR NEW GENERATION OFF-SHORE WIND TURBINES** *P. J. MASSON, J. LAMMERS, V. PRINCE;* ADVANCED MAGNET LAB.

14:45 1LA-05 **TRANSVERSE FLUX ENHANCED TYPE SUPERCONDUCTING SYNCHRONOUS MACHINES FOR WIND POWER GENERATION** *H. OHSAKI[1], M. R. QUDDES[1], M. SEKINO[1], N. KASHIMA[2], S. NAGAYA[2];* [1]THE UNIVERSITY OF TOKYO, [2]CHUBU ELECTRIC POWER CO., INC..

15:00 1LA-06 **ADVANCES IN HTS INDUCTION-SYNCHRONOUS MACHINE DEVELOPMENT -CHALLENGING TO INNOVATIVE ELECTRIC VEHICLE-** *T. NAKAMURA[1], T. NISHIMURA[1], K. MATSUMURA[1], D. SEKIGUCHI[1], R. ASAI[1], M. FUKUI[1], T. MATSUO[1], N. AMEMIYA[1], Y. ITOH[2], M. YOSHIKAWA[2], T. TERAZAWA[2], K. OSAMURA[3], S. FUKUI[4], J. OGAWA[4], N. OKUMURA[5], Y. OHASHI[5], T. OKA[4];* [1]KYOTO UNIVERSITY, [2]IMRA MATERIAL R&D CO., LTD., [3]RESEARCH INSTITUTE FOR APPLIED SCIENCES, [4]NIIGATA UNIVERSITY, [5]AISIN SEIKI CO., LTD..

15:15 1LA-07 **DEVELOPMENT OF HIGH TEMPERATURE SUPERCONDUCTING MOTOR FOR INDUSTRIAL APPLICATION** *Y. KWON[1], H. KIM[1], S. BAIK[1], J. LEE[1], Y. KIM[2], Y. CHO[3];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]RESEARCH & DEVELOPMENT CENTER, DOOSAN HEAVY INDUSTRIES & CONSTRUCTION CO.,LTD., [3]CENTER FOR APPLIED SUPERCONDUCTIVITY TECHNOLOGY.

1LB: 137 RESISTIVE TYPE FAULT CURRENT LIMITERS I

PALLADIAN LOUIS ANTOGNAZZA (UNIVERSITY OF GENEVA) AND ACHIM HOBL (NEXANS SUPERCONDUCTORS GMBH)

13:30 1LB-01 ***(INVITED)*** **ESSENTIAL CONSIDERATIONS AND BASIC ESTIMATIONS FOR MGB2 BASED FAULT CURRENT LIMITERS** *M. D. SUMPTION, M. MAJOROS, E. W. COLLINGS;* THE OHIO STATE UNIVERSITY.

14:00 1LB-02 **NUMERICAL VALIDATION OF PHENOMENOLOGICAL HTS MODELS IN THE FLUX-FLOW REGIME BASED ON DIRECT COMPARISON WITH QUENCH EXPERIMENTAL DATA OF COATED CONDUCTORS** *F. ROY[1], B. DUTOIT[1], F. SIROIS[2];* [1]EPFL, [2]ECOLE POLYTECHNIQUE DE MONTREAL.

14:15 1LB-03 **SOME GRID CONSTRAINTS FOR SC FCL** *P. TIXADOR1, T. NGUYEN-NHAT[1], T. TRAN-QUOC[2], H. OKADA-VIEIRA[3];* [1]GRENOBLE INP, [2]GIE-IDEA, [3]CNRS.

14:30 1LB-04 **CONCEPTUAL DESIGN AND PARAMETER LIMITS OF A RESISTIVE TYPE SUPERCONDUCTING FAULT CURRENT LIMITER** *C. SCHACHERER, M. NOE;* KARLSRUHE INSTITUTE OF TECHNOLOGY KIT.

14:45 1LB-05 **NUMERICAL ANALYSIS OF THE CURRENT AND VOLTAGE SHARING ISSUES FOR RESISTIVE FAULT CURRENT LIMITER USING YBCO COATED CONDUCTORS** *Z. HONG, W. YUAN, M. AINSLIE, T. COOMBS;* CAMBRIDGE UNIVERSITY.

15:00 1LB-06 **FEM MODELING OF A RESISTIVE FAULT CURRENT LIMITER COIL IN NETWORK** *M. MAJOROS, M. D. SUMPTION, E. W. COLLINGS;* THE OHIO STATE UNIVERSITY.

15:15 1LB-07 **DESIGN OF A MGB2-BASED CRYOGEN-FREE COOLED DC RESISTIVE SFCL PROTOTYPE** *A. MORANDI[1], C. FERDEGHINI[2], U. GAMBARDELLA[3], A. MALAGOLI[2], F. NEGRINI[1], S. PACE[4];* [1]UNIVERSITY OF BOLOGNA, DIE - DEPT. OF ELECTRICAL ENGINEERING, VIALE RISORGIMENTO 2, 40136 BOLOGNA, ITALY, [2]CNR-SPIN GENOVA, CORSO PERRONE 24, 16152 GENOA, ITALY, [3]CNR-SPIN SALERNO, VIA S. ALLENDE, 84081 BARONISSI - SALERNO, ITALY, [4]UNIVERSITY OF SALERNO, DEPT. OF PHYSICS E. R. CAIANIELLO, VIA S. ALLENDE, 84081 BARONISSI - SALERNO, ITALY.

1MA: 120 PROCESS AND STRUCTURE OF COATED CONDUCTORS I

BLUE VYACHESLAV SOLOVYOV (BROOKHAVEN NATIONAL LABORATORY) AND M PARANTHAMAN (OAK RIDGE NATIONAL LABORATORY)

13:30 1MA-01 ***(INVITED)*** **PROGRESS IN RESEARCH AND DEVELOPMENT OF IBAD-MOCVD BASED SUPERCONDUCTING WIRES** *V. SELVAMANICKAM[1], Y. CHEN[2], G. MAJKIC[1], Y. QIAO[2], I. KESGIN[1], T. SHI[1], A. GUEVARA[1], Y. ZHANG[1], Y. ZHANG[1], Y. YAO[1], A. RAR[2], X. XIONG[2], S. SAMBANDAM[2], G. CAROTA[2], Y. XIE[2], J. DACKOW[2];* [1]UNIVERSITY OF HOUSTON, [2]SUPERPOWER.

14:00 1MA-02 **DEVELOPMENT OF HTS FILMS DEPOSITED BY REACTIVE COEVAPORATION ON SIMPLIFIED TEMPLATES FOR LOW-COST**

COATED CONDUCTORS *B. MOECKLY[1], V. GLYANTSEV[1], J. HUH[1], C. SHEEHAN[2], Y. COULTER[2], B. MAIOROV[2], V. MATIAS[2];* [1]STI, [2]LOS ALAMOS NATIONAL LABORATORY.

14:15 1MA-03 **ADVANCES IN TFA YBA^{2}CU^{3}O7 THIN FILM GROWTH WITH CONTROLLED MICROSTRUCTURE** *X. OBRADORS, T. PUIG, K. ZALAMOVA, A. LLORDÉS, H. CHEN, A. PALAU, A. CALLEJA, X. GRANADOS, S. RICART, A. POMAR;* INSTITUT DE CIÈNCIA DE MATERIALS DE BARCELONA-CSIC.

14:30 1MA-04 **TFA-MOD DERIVED COATED CONDUCTORS WITH HIGH IC PROPERTY UNDER MAGNETIC FIELDS** *M. YOSHIZUMI[1], M. MIURA[1], K. NAKAOKA[1], Y. TAKAHASHI[1], Y. TAKAGI[1], T. IZUMI[1], Y. SHIOHARA[1], Y. AOKI[2];* [1]ISTEC-SRL, [2]SWCC SHOWA CABLE SYSTEMS CO., LTD..

14:45 1MA-05 **EXAMINATION OF THROUGH-THICKNESS/THROUGH-TIME PHASE EVOLUTION DURING MOD-TYPE REBCO PRECURSOR CONVERSION USING RAMAN MICROSCOPY** *Z. CHEN[1], V. A. MARONI[1], D. J. MILLER[1], X. LI[2], M. W. RUPICH[2], R. FEENSTRA[3];* [1]ARGONNE NATIONAL LABORATORY, [2]AMERICAN SUPERCONDUCTOR INC., [3]OAK RIDGE NATIONAL LABORATORY.

15:00 1MA-06 **ARE $5/KA•M COATED CONDUCTORS POSSIBLE?** *V. MATIAS[1], R. H. HAMMOND[2];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]STANFORD UNIVERSITY.

15:15 1MA-07 **[2]G HTS CONDUCTOR ENGINEERING - MEETING THE PERFORMANCE REQUIREMENTS FOR LARGE-SCALE APPLICATIONS** *Y. XIE[1], V. SELVAMANICKAM[2], D. HAZELTON[1], J. DACKOW[1];* [1]SUPERPOWER, INC., [2]UNIVERSITY OF HOUSTON & SUPERPOWER, INC..

1MB: 106 HTS THIN FILMS *BLUE PRE-FUNC.* YANWEI MA (INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES) AND HARALD WEBER (ATOMINSTITUT OSTERREICH)

13:30 1MB-01 **THEORY OF HIGH-POWER SURFACE RESISTANCE AS APPLIED TO MGB2** *Y. D. AGASSI[1], D. E. OATES[2], B. H. MOECKLY[3];* [1]NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION, BETHESDA MD, USA, [2]MIT LINCOLN LABORATORY, LEXINGTON MA, USA, [3]STI INC. SANTA BARBARA, CA, USA.

13:45 1MB-02 **CONTROL OF ORIENTATION OF RBCO FILMS ON SUBSTRATES WITH LOW AND HIGH LATTICE MISMATCH VIA SEED LAYER FORMATION** *S. SAMOILENKOV[1], A. MARKELOV[2], M. MOYZYKH[3], A. KAUL[4];* [1]INSTITUTE OF HIGH TEMPERATURE RAS, [2]DEPARTMENT OF MATERIALS SCIENCE, MOSCOW STATE UNIVERTSITY, [3]DEPARTMENT OF MATERIALS SCIENCE, MOSCOW STATE UNIVERSITY, [4]CHEMISTRY DEPARTMENT, MOSCOW STATE UNIVERSITY.

14:00 1MB-03 **OPTIMIZATION OF THE TFA-MOD PROCESS FOR INTRODUCTION OF BAZRO3 PINNING CENTERS IN YBCO FILMS** *S. V. GHALSASI[1], G. MAJKIC[2], K. SALAMA[2];* [1]VISITING RESEARCHER AT DEPARTMENT OF MECHANICAL ENGINEERING, UNIVERSITY OF HOUSTON, HOUSTON, TX 77204-4006 AND BECHTEL OGC, [2]DEPARTMENT OF MECHANICAL ENGINEERING, UNIVERSITY OF HOUSTON, HOUSTON, TX 77204-4006.

14:15 1MB-04 **CONTROLLING VORTEX MOTION IN MGB2 THIN FILMS** *S. TREIBER[1], J. ALBRECHT[2], H. HABERMEIER[3];* [1]MAX-PLANCK- INSTITUT MF, [2]HOCHSCHULE AALEN, [3]MAX-PLANCK- INSTITUT FKF.

14:30 1MB-05 **MAGNETO-OPTICAL STUDY OF THE ANISOTROPIC CURRENTS IN TILTED MGB2 FILMS** *A. A. POLYANSKII[1], A. YAMAMOTO[2], F. KAMETANI[1], D. ABRAIMOV[1], A. GUREVICH[1], D. LARBALESTIER[1], M. PUTTI[3], C. ZHUANG[4], X. XI[4];* [1]FSU, USA, [2]UNIVERSITY OF TOKYO, JAPAN, [3]UNIVERSITY OF GENOVA, ITALY, [4]TEMPLE UNIVERSITY, USA.

14:45 1MB-06 **MICROWAVE RESONANT ACTIVATION OF MGB2 THIN FILM JOSEPHSON JUNCTION** *R. C. RAMOS, J. G. LAMBERT, S. A. CARABELLO, J. T. MLACK, Z. E. THRAILKILL;* DREXEL UNIVERSITY.

15:00 1MB-07 **UNDERSTANDING THE MULTI-BAND EFFECTS ON CURRENT TRANSPORT IN TILTED MGB2 FILMS** *A. YAMAMOTO[1], M. PUTTI[2], A. POLYANSKII[3], F. KAMETANI[3], D. ABRAIMOV[3], A. GUREVICH[3], D. LARBALESTIER[3], C. ZHUANG[4], X. XI[4];* [1]UNIVERSITY OF TOKYO, [2]CNR-SPIN, UNIVERSITY OF GENOVA, [3]ASC, NATIONAL HIGH MAGNETIC FIELD LABORATORY, FLORIDA STATE UNIVERSITY, [4]TEMPLE UNIVERSITY.

15:15 1MB-08 **JOSEPHSON AND MULTI-GAP QUASI-PARTICLE TUNNELING IN CRYSTALLINE MGB2-BASED VERTICAL AND LATERAL JUNCTIONS** *J. LALOË, J. S. MOODERA;* MIT.

1MC: 105 SPECIAL SESSION IN HONOR OF JACK EKIN: MECHANICAL PROPERTIES OF A15 *CONGRESSIONAL* DANIEL DIETDERICH (LBNL) AND KOZO OSAMURA (RESEARCH INSTITUTE FOR APPLIEDSCIENCES)

13:30 1MC-01 **PROPOSED STANDARD FOR DETERMINING THE IRREVERSIBLE STRAIN LIMIT OF NB^{3}SN WIRES** *L. F. GOODRICH, N. CHEGGOUR, T. C. STAUFFER, J. D. SPLETT, X. LU, B. J. FILLA;* NIST.

13:45 1MC-02 **INFLUENCE OF TI AND TA DOPING ON THE IRREVERSIBLE STRAIN LIMIT OF TERNARY AND QUATERNARY NB^{3}SN SUPERCONDUCTING WIRES MADE BY THE RESTACKED-ROD PROCESS** *N. CHEGGOUR[1], L. F. GOODRICH[1], T. C. STAUFFER[1], J. D. SPLETT[1], X. LU[1], A. K. GHOSH[2], P. J. LEE[3], P. MUNDAY[3], G. AMBROSIO[4];* [1]NIST, [2]BNL, [3]FSU, [4]FNAL.

14:00 1MC-03 **A METALLOGRAPHIC STUDY OF STRAND DEGRADATION IN ITER TFMC CICC** *P. J. LEE[1], C. SANABRIA[1], W. L. STARCH[1], D. C. LARBALESTIER[1], M. C. JEWELL[2], A. DEVRED[2];* 1[1]APPLIED SUPERCONDUCTIVITY CENTER, NATIONAL HIGH MAGNETIC FIELD LABORATORY, FLORIDA STATE UNIVERSITY, [2]ITER ORGANIZATION.

14:15 1MC-04 **COMPARISON OF VARIOUS PARAMETERIZATION APPROACHES FOR THE DESCRIPTION OF CRITICAL CURRENT VS. STRAIN OF A STAINLESS STEEL JACKETED NB^{3}SN WIRE** *G. DE MARZI[1], V. CORATO[1], L. MUZZI[1], G. MONDONICO[2], B. SEEBER[2], R. FLÜKIGER[2];* [1]ENEA, [2]UNIVERSITY OF GENEVA.

14:30 1MC-05 ***(INVITED)*** **UNIFIED SCALING LAW: PARAMETERIZATION TESTING WITH RAW SCALING DATA** *J. W. EKIN[1], L. F. GOODRICH[2], N. CHEGGOUR[2], J. D. SPLETT[2], B. BORDINI[3], L. BOTTURA[3];* [1]NIST AND UNIV. OF COLORADO, [2]NIST, BOULDER CO, [3]CERN.

15:00 1MC-06 **A MODEL TO STUDY PLASTIC DEFORMATION IN NB^{3}SN DEFORMED STRANDS AND CABLES** *E. BARZI[1], M. BOSSERT[2], G. GALLO[1];* [1]FERMILAB, [2]STRAITS COMPANY.

15:15 1MC-07 **LOW IC SENSITIVITY OF RAPID QUENCHED NB^{3}AL WIRES UNDER TRANSVERSE COMPRESSIVE STRESS UP TO 300 MPA** *B. SEEBER[1], A. FERREIRA[1], G. MONDONICO[1], C. SENATORE[1], R. FLUKIGER[1], T. TAKEUCHI[2];* [1]UNIVERSITY OF GENEVA, [2]NATIONAL INSTITUTE FOR MATERIAL SCIENCE - NIMS.

16:00 ORAL SESSIONS

1EX: 158 TES CALORIMETERS *EXECUTIVE* JAN VAN DER KUUR (SRON NATIONAL INSTITUTE FOR SPACE RESEARCH) AND YUCHIRO EZOE (TOKYO METROPOLITAN UNIVERSITY)

16:00 1EX-01 ***(INVITED)*** **BASIC PRINCIPLES AND DESIGN CONSIDERATIONS FOR TRANSITION-EDGE SENSOR (TES) CALORIMETERS** *J. ULLOM;* NIST.

16:30 1EX-02 **SUPERCONDUCTING TRANSITION-EDGE SENSOR MICROCALORIMETERS FOR ULTRA-HIGH RESOLUTION ALPHA-PARTICLE SPECTROMETRY** *M. P. CROCE[1], M. K. BACRANIA[1], A. S. HOOVER[1], M. W. RABIN[1], N. J. HOTELING[1], E. M. BOND[1], W. A. MOODY[1], S. P. LAMONT[1], D. E. DRY[1], J. N. ULLOM[2], D. A. BENNETT[2], R. D. HORANSKY[2], V. KOTSUBO[2], R. CANTOR[3];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, [3]STAR CRYOELECTRONICS.

16:45 1EX-03 **LARGE ARRAYS AND LARGE ABSORBERS: A 256 PIXEL GAMMA-RAY SPECTROMETER BASED ON TES MICROCALORIMETERS** *D. A. BENNETT[1], W. B. DORIESE[1], G. C. HILTON[1], A. S. HOOVER[2], R. D. HORANSKY[1], N. HOTELING[2], K. D. IRWIN[1], P. J. KARPIUS[2], V. KUTSUBO[1], M. W. RABIN[2], C. D. REINTSEMA[1], D. SWETZ[1], L. R. VALE[1], D. T. VO[2], J. N. ULLOM[1];* [1]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, [2]LOS ALAMOS NATIONAL LABORATORY.

17:00 1EX-04 **DEVELOPMENT OF LEAD ABSORBER COUPLED TRANSITION EDGE SENSOR DETECTORS FOR POSITRON ANNIHILATION SPECTROSCOPY** *R. M. T. DAMAYANTHI, N. IYOMOTO, M. OHNO, H. TAKAHASHI;* UNIVERSITY OF TOKYO.

17:15 1EX-05 **THE TRANSITION-EDGE-SENSOR ARRAY FOR THE MICRO-X SOUNDING ROCKET** *M. E. ECKART[1], J. S. ADAMS[1], C. N. BAILEY[1], S. R. BANDLER[2], J. A. CHERVENAK[1], A. J. EWIN[1], F. M. FINKBEINER[1], R. L. KELLEY[1], C. A. KILBOURNE[1], F. S. PORTER[1], J. E. SADLEIR[1], S. J. SMITH[1], E. FIGUEROA-FELICIANO[3], P. WIKUS[3], A. THE MICRO-X COLLABORATION[4];* [1]NASA/GSFC, [2]NASA/GSFC AND UNIVERSITY OF MARYLAND, COLLEGE PARK, [3]MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 4VARIOUS.

17:30 1EX-06 **DEVELOPMENT OF TRANSITION-EDGE-SENSOR MICROCALORIMETERS FOR SOLAR PHYSICS** *S. R. BANDLER[1], C. N. BAILEY[2], J. A. CHERVENAK[2], M. E. ECKART[2], F. M. FINKBEINER[3], F. S. PORTER[2], C. A. KILBOURNE[2], R. E. KELLEY[2], J. E. SADLEIR[4], S. J. SMITH[1];* [1]UNIVERSITY OF MARYLAND & NASA/GSFC, [2]NASA/GSFC, [3]RSIS & NASA/GSFC, [4]UNIVERSITY OF ILLINOIS & NASA/GSFC.

17:45 1EX-07 **TRANSITION-EDGE-SENSOR X-RAY SPECTROSCOPY FOR ELECTRONIC-STRUCTURE MEASUREMENT IN PHOTOVOLTAIC SYSTEMS** *W. B. DORIESE[1], G. C. HILTON[1], K. D. IRWIN[1], D. R. SCHMIDT[1], D. S. SWETZ[1], J. N. ULLOM[1], D. A. FISCHER[2], V. SUNDSTROM[3], J. UHLIG[3], I. MAASILTA[4], M. PALOSAARI[4], K. KINNUNEN[5];* [1]NIST - BOULDER LABS, [2]NIST - GAITHERSBURG, [3]KEMICENTRUM LUND UNIVERSITY, [4]UNIVERSITY OF JYVASKYLA, [5]KEMICENTRUM LUND UNIVERSITY AND UNIVERSITY OF JYVASKYLA.

1EY: 152 FABRICATION *DIPLOMAT* PAUL DRESSELHAUS (NIST) AND ZHEN WANG (KOBE ADVANCED ICT RESEARCH CENTER)

16:00 1EY-01 **SUBMICRON SELF-SHUNTED NBN-TAN-NBTIN PLANARIZED JUNCTIONS** *J. C. VILLEGIER1, S. BOUAT1, M. AURINO1, M. HEITZMAN2, D. RENAUD[2];* [1]CEA-GRENOBLE INAC, [2]CEA-GRENOBLE LETI.

16:15 1EY-02 ***(INVITED)*** **FLEXIBLE MGB2 RIBBON CABLE INTERCONNECTS FOR DC AND RF APPLICATIONS** *C. YUNG, B. MOECKLY;* STI.

16:45 1EY-03 **SNIS BINARY ARRAYS OPERATION ON HIGH-ORDER SHAPIRO STEPS** *V. LACQUANITI[1], A. SOSSO[1], N. DE LEO[1], M. FRETTO[1], J. KOHLMANN[2], F. MUELLER[2];* [1]INRIM, [2]PTB.

17:00 1EY-04 ***(INVITED)*** **A SELF-SHUNTED JUNCTION TECHNOLOGY FOR SINGLE-FLUX-QUANTUM DIGITAL CIRCUITS** *D. OLAYA[1], P. D. DRESSELHAUS[1], S. P. BENZ[1], A. HERR[2], Q. P. HERR[2], A. G. IOANNIDIS[2], D. L. MILLER[2], A. W. KLEINSASSER[3];* [1]NIST, [2]NORTHROP GRUMMAN CORP., [3]JET PROPULSION LABORATORY.

17:30 1EY-05 **COMPARISON IN ELECTRICAL CHARACTERISTICS OF NBN JUNCTIONS WITH ALNX BARRIERS FORMED BY DIFFERENT PLASMA NITRIDATION METHODS** *H. AKAIKE, N. NAITO, Y. NAGAI, C. MARUYAMA, A. FUJIMAKI;* NAGOYA UNIVERSITY.

17:45 1EY-06 **MGB2/MGO/MGB2 JOSEPHSON JUNCTIONS FOR HIGH-SPEED CIRCUIT** *K. CHEN[1], C. ZHUANG[1], Q. LI[2], X. X. XI[1];* [1]TEMPLE UNIVERSITY, [2]THE PENNSYLVANIA STATE UNIVERSITY.

1EZ: 144 QUANTUM COMPUTING SYSTEMS AND CONTROL CIRCUITS *HAMPTON* WIL OLIVER (MIT LINCOLN LABS) AND BEN PALMER (LABORATORY FOR PHYSICAL SCIENCES)

16:00 1EZ-01 ***(INVITED)*** **EXPERIMENTAL INVESTIGATION OF AN EIGHT QUBIT SUPERCONDUCTING OPTIMIZATION PROCESSOR** *R. HARRIS, M. W. JOHNSON, T. LANTING, A. J. BERKLEY, J. JOHANSSON, P. BUNYK, E. TOLKACHEVA, E. LADIZINSKY;* D-WAVE SYSTEMS.

16:30 1EZ-02 **ROLE OF GEOMETRY ON THE COLOR OF FLUX NOISE IN DC SQUIDS** *F. WELLSTOOD[1], C. URBINA[2], J. CLARKE[3];* [1]UNIVERSITY OF MARYLAND, [2]CEA SACLAY, [3]UNIVERSITY OF CALIFORNIA, BERKELEY.

16:45 1EZ-03 **QUANTUM ERROR CORRECTION FEEDBACK USING RECIPROCAL QUANTUM LOGIC** *Q. P. HERR, A. Y. HERR, J. E. BAUMGARDNER II, A. A. PESETSKI;* NORTHROP GRUMMAN CORPORATION.

17:00 1EZ-04 **OPERATION OF PD-SOI STRUCTURES AT CRYOGENIC TEMPERATURES** *I. V. VERNIK[1], T. OHKI[1], M. B. KETCHEN[2], M. BHUSHAN[3];* [1]RAYTHEON BBN TECHNOLOGIES, [2]IBM RESEARCH, [3]IBM STG DIVISION.

17:15 1EZ-05 **A SCALABLE CONTROL SYSTEM FOR A SUPERCONDUCTING ADIABATIC QUANTUM OPTIMIZATION PROCESSOR** *P. BUNYK, M. W. JOHNSON, A. J. BERKLEY, R. HARRIS, J. JOHANSSON, T. LANTING, E. TOLKACHEVA, I.*

PERMINOV, E. CHAPPLE, B. WILSON, J. HILTON, E. LADIZINSKY, G. ROSE; D-WAVE SYSTEMS INC..

17:30 1EZ-06 **MICROSTRIP SQUID AMPLIFIERS FOR QUBIT READOUT AT GIGAHERTZ FREQUENCIES AND MILLIKELVIN TEMPERATURES** *J. E. JOHNSON[1], E. M. HOSKINSON[2], D. KINION[3], C. MACKLIN[2], J. B. HANSEN[4], I. SIDDIQI[2], J. CLARKE[1];* [1]UC BERKELEY, [2]QNL, UC BERKELEY, [3]LAWRENCE LIVERMORE NATIONAL LABORATORY, [4]TECHNICAL UNIVERSITY OF DENMARK.

17:45 1EZ-07 **DISPERSIVE READOUT OF A FLUX QUBIT USING A MICROSTRIP SQUID AMPLIFIER** *E. M. HOSKINSON[1], J. E. JOHNSON[2], C. MACKLIN[3], J. CLARKE[2], I. SIDDIQI[3];* [1]QNL AND DEPT. OF PHYSICS, UC BERKELEY, [2]DEPT. OF PHYSICS, UC BERKELEY, [3]QNL, DEPT. OF PHYSICS, UC BERKELEY.

1LX: 170 ACCELERATOR AND DETECTOR MAGNETS *EMPIRE* MATTHEW JEWELL (ITER ORGANIZATION) AND TORU OGITSU (KEK)

16:00 1LX-01 ***(INVITED)*** **FIRST FULL-SYSTEM TEST OF THE ATLAS DETECTOR MAGNET SYSTEM** *H. H. J. TEN KATE[1], A. DUDAREV[1], N. DELRUELLE[1], K. BARTH[1], R. PENGO[2], R. RUBER[1], J. BUSKOP[3], E. BAYNHAM[4], C. BERRIAUD[5], P. VEDRINE[5], G. VOLPINI[6], F. BROGGI[6], A. YAMAMOTO[7];* [1]CERN, [2]CERN/INFN, [3]NIKHEF, [4]CCLRC, [5]CEA-SACLAY, [6]INFN-LASA, [7]KEK.

16:30 1LX-02 **DESIGN AND TEST STATUS OF THE FAST RAMPED SUPERCONDUCTING SIS100 DIPOLE MAGNET FOR FAIR** *E. FISCHER[1], P. AKISHIN[2], A. MIERAU[1], B. SCHNIZER[3], P. SCHNIZER[1], C. SCHROEDER[1], P. SHCHERBAKOV[4], P. SPILLER[1], S. WILFERT[1];* [1]GSI HELMHOLTZZENTRUM FÜR SCHWERIONENFORSCHUNG MBH, [2]JOINT INSTITUTE FOR NUCLEAR RESEARCH, [3]TECHNISCHE UNIVERITÄT GRAZ, [4]INSITUTE FOR HIGH ENERGY PHYSICS.

16:45 1LX-03 **PERFORMANCE OF A NB^{3}SN QUADRUPOLE UNDER HIGH STRESS** *H. FELICE[1], M. BAJKO[2], B. BINGHAM[1], B. BORDINI[2], L. BOTTURA[2], S. CASPI[1], D. R. DIETDERICH[1], P. FERRACIN[1], J. FEUVRIER[2], C. GILOUX[2], A. GODEKE[1], R. HAFALIA[1], C. R. HANNAFORD[1], A. MILANESE[2], J. C. PEREZ[2], G. DE RIJK[2], G. SABBI[1];* [1]LBNL, [2]CERN.

17:00 1LX-04 **TEST RESULTS OF HQ01A - A 120 MM 15 T NB^{3}SN QUADRUPOLE FOR THE LHC UPGRADE*** *S. CASPI[1], G. AMBROSIO[2], M. ANERELLA[3], E. BARZI[2], B. BINGHAM[1], R. BOSSERT[2], D. W. CHENG[1], G. CHLACHIDZE[2], D. DIETDERICH[1], H. FELICE[1], P. FERRACIN[1], A. GHOSH[3], A. R. HAFALIA[1], C. R. HANNAFORD[1], J. JOSEPH[1], V. V. KASHIKHIN[2], G. L. SABBI[1], J. SCHMALZLE[3], P. WANDERER[3], W. XIAORONG[1], A. V. ZLOBIN[2];* [1]LBNL, [2]FNAL, [3]BNL.

17:15 1LX-05 **TEST RESULTS OF THE FIRST 3.7 M LONG NB^{3}SN QUADRUPOLE BY LARP AND FUTURE PLANS** *G. AMBROSIO[1], N. ANDREEV[1], M. ANERELLA[2], E. BARZI[1], D. BOCIAN[1], R. BOSSERT[1], S. CASPI[3], G. CHLACHIDZE[1], D. DIETDERICH[3], H. FELICE[3], P. FERRACIN[3], A. GHOSH[2], A. GODEKE[3], R. HAFALIA[3], V. V. KASHIKHIN[1], M. LAMM[1], P. KOVACH[2], F. NOBREGA[1], I. NOVITSKY[1], D. ORRIS[1], E. PREBYS[1], G. L. SABBI[3], J. SCHMALZLE[2], P. WANDERER[2], A. ZLOBIN[1];* [1]FERMILAB, [2]BROOKHAVEN NATIONAL LABORATORY, [3]LAWRENCE BERKELEY NATIONAL LABORATORY.

17:30 1LX-06 **PERFORMANCE OF NB3SN RUTHERFORD CABLES FOR THE LARP LONG-QUADRUPOLE MAGNETS*** *A. K. GHOSH[1], D. R. DIETDERICH[2];* [1]BROOKHAVEN NATIONAL LABORATORY, [2]LAWRENCE BERKELEY NATIONAL LABORATORY.

17:45 1LX-07 **THE CONSTRUCTION OF THE MODEL OF THE CURVED FAST RAMPED SUPERCONDUCTING DIPOLE FOR FAIR SIS300 SYNCHROTRON** *P. FABBRICATORE[1], F. ALESSANDRIA[2], G. BELLOMO[2], S. FARINON[1], U. GAMBARDELLA[3], R. MARABOTTO[4], R. MUSENICH[1], M. SORBI[2], G. VOLPINI[2];* [1]INFN SEZIONE DI GENOVA, [2]INFN SEZIONE DI MILANO LASA, [3]INFN LABORATORI DI FRASCATI, [4]ASG SUPERCONDUCTORS GENOVA.

18:00 1LX-08 **TESTING THE SUPERCONDUCTING MAGNET AND CRYOGENICS FOR THE AMS-02 EXPERIMENT** *P. MCINTYRE;* TEXAS A&M UNIVERSITY.

1LY: 142 SYSTEM STUDIES I *PALLADIAN* PHILIPPE MASSON (ADVANCED MAGNET LAB) AND MINWON PARK (CHANGWON NATIONAL UNIVERSITY)

16:00 1LY-01 ***(INVITED)*** **NAVAL INTEGRATED CRYOGENIC ENGINEERING PLANT** *B. FITZPATRICK, J. KEPHART, N. SPIVEY;* NAVAL SURFACE WARFARE CENTER - CARDEROCK DIVISION.

16:30 1LY-02 ***(INVITED)*** **THE PROGRESS OF HTS POWER TECHNOLOGY IN CHINA** *L. XIAO, L. LIN, S. DAI;* INSTITUTE OF ELECTRICAL ENGINEERING, CAS.

17:00 1LY-03 **EXPERIMENT RESEARCH ON THE DYNAMIC VOLTAGE SAG COMPENSATION BY USING ^{2}G HIGH TEMPERATURE SMES** *J. ZHU, J. ZHU, Q. CHENG, B. YANG, J. TIAN, Y. GUO;* CHINA ELECTRIC POWER RESEARCH INSTITUTE.

17:15 1LY-04 **EFFICIENCY IMPROVEMENTS ON THE GRID BY USING SC MEDIUM VOLTAGE CABLES** *X. GRANADOS[1], R. RODRIGUEZ[2], S. CASCANTE[3], J. FRAU[3], R. SOIKA[4], T. PUIG[1], X. OBRADORS[1];* [1]ICMAB-CSIC, [2]LABEIN-TECNALIA, [3]ENDESA, [4]NEXANS.

17:30 1LY-05 **LONG TERM OPERATION AND FAULT TESTS OF A 22.9 KV HYBRID SFCL IN THE KEPCO GRID** *O. HYUN[1], S. YIM[1], S. YOO[1], M. KIM[1], H. KIM[1], S. YANG[1], W. KIM[1], J. SIM[2], K. PARK[2];* [1]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [2]LS INDUSTRIAL SYSTEMS.

17:45 1LY-06 **APPLICATION OF SFCLS TO A REAL GRID IN KOREA** *H. KIM[1], S. YIM[1], S. YU[1], D. HAN[1], S. YANG[1], W. KIM[1], O. HYUN[1], K. PARK[2], J. SIM[2], Y. KIM[2];* [1]KOREA ELECTRIC POWER RESEARCH INSTITUTE, KEPCO, [2]LS INDUSTRIAL SYSTEMS.

18:00 1LY-07 WITHDRAWN

18:15 1LY-08 WITHDRAWN

1MX: 119 PROCESS AND STRUCTURE OF COATED CONDUCTORS II *BLUE* MASATERU YOSHIZUMI (ISTEC AND XAVIER OBRADORS (ICMAB, BARCELONA)

16:00 1MX-01 ***(INVITED)*** **RECENT ENHANCEMENT OF CRITICAL CURRENT AND SPATIAL HOMOGENEITY IN THICK GDBCO/IBAD COATED CONDUCTORS** *T. KISS[1], A. MATSEKH[1], K. HIGASHIKAWA[1], R. FUGER[1], M. INOUE[1], S. AWAJI[2], K. WATANABE[2], Y. IIJIMA[3], T. SAITOH[3], T. IZUMI[4];* [1]KYUSHU UNIVERSITY, [2]TOHOKU UNIVERSITY, [3]FUJIKURA LTD., [4]SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC.

16:30 1MX-02 **PROGRESS IN FABRICATION OF HIGH-PERFORMANCE LONG LENGTH GDBCO COATED CONDUCTORS BY IN-PLUME PULSED LASER DEPOSITION TECHNIQUE** *S. LEE, N. CHIKUMOTO, K. NAKAO, T. MACHI, K. TANABE, M. YOSHIZUMI, T. IZUMI;* SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC.

16:45 1MX-03 **COATED CONDUCTORS IN LARGE SCALE PRODUCTION VIA HR-PLD AND ABAD: COMPROMISE BETWEEN OPTIMAL CONDUCTOR DESIGN, PROCESSING COSTS AND PERFORMANCE** *A. USOSKIN, A. RUTT, A. HALLBAUER, M. WASCHULEWSKI, L. KIRCHHOFF, J. KNOKE, T. SCHNEIDER, K. SCHLENGA;* BRUKER HTS GMBH.

17:00 1MX-04 **SCALE UP OF COATED CONDUCTOR SUBSTRATE PROCESS BY REEL-TO-REEL PLANARIZATION OF AMORPHOUS OXIDE LAYERS** *Y. QIAO[1], Y. CHEN[1], X. XIONG[1], S. KIM[1], V. MATIAS[2], C. SHEEHAN[2], Y. ZHANG[3], V. SELVAMANICKAM[3];* [1]SUPERPOWER, INC., 450 DUANE AVE., SCHENECTADY, NY 12304 USA, [2]SUPERCONDUCTIVITY TECHNOLOGY CENTER, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM USA, [3]DEPARTMENT OF MECHANICAL ENGINEERING, TEXAS CENTER FOR SUPERCONDUCTIVITY AT THE UNIVERSITY OF HOUSTON, HOUSTON, TX 77024, USA.

17:15 1MX-05 **DEVELOPMENT OF SOLUTION BASED BUFFER LAYERS FOR YBCO COATED CONDUCTORS** *M. P. PARANTHAMAN[1], T. AYTUG[1], C. CANTONI[1], S. H. WEE[1], Y. ZUEV[1], V. SELVAMANICKAM[2], L. STAN[3], Q. XIA[3];* [1]OAK RIDGE NATIONAL LABORATORY, [2]SUPERPOWER/UNIVERSITY OF HOUSTON, [3]LOS ALAMOS NATIONAL LABORATORY.

17:30 1MX-06 **PARAMAGENTIC SUBSTRATES FOR COATED CONDUCTORS: NI-W AND NI-W-CR** *U. GAITZSCH, J. EICKEMEYER, C. RODIG, H. KLAUSS, J. FREUDENBERGER, B. HOLZAPFEL, L. SCHULTZ;* IFW DRESDEN.

17:45 1MX-07 **ELECTRODEPOSITED AG AND CU-STABILIZATION LAYER FOR HIGH TEMPERATURE SUPERCONDUCTING COATED CONDUCTORS** *R. N. BHATTACHARYA[1], J. MANN[1], Y. QIAO[2], Y. ZHANG[3], V. SELVAMANICKAM[3];* [1]NATIONAL RENEWABLE ENERGY LABORATORY, [2]SUPERPOWER INC., [3]UNIVERSITY OF HOUSTON.

18:00 1MX-08 **QUENCH CHARACTERISTICS OF A CU-STABILIZED 2G HTS CONDUCTOR** *E. A. YOUNG[1], I. FALORIO[1], S. CHAPELL[2], Y. YANG[1];* [1]UNIVERSITY OF SOUTHAMPTON, [2]OXFORD INSTRUMENTS.

18:15 1MX-09 **SINGLE-MEASUREMENT APPROACH FOR DERIVING THE INTRA-GRANULAR CRITICAL CURRENT DENSITY OF RABITS BASED COATED CONDUCTORS WITH LARGE THROUGH-BOUNDARY CURRENT FLOW** *R. FEENSTRA[1], J. W. SINCLAIR[2], J. R. THOMPSON[2], D. K. CHRISTEN[1];* [1]OAK RIDGE NATIONAL LABORATORY, [2]UNIVERSITY OF TENNESSEE.

1MY: 114 FLUX-PINNING AND DYNAMICS: GENERAL I

BLUE PRE-FUNC. JUDY WU (UNIV. OF KANSAS) AND ANNA PALAU (INSTITUT DE CIENCIA DE MATERIALS DE BARCELONA (ICMAB-CSIC))

16:00 1MY-01 **COMPARATIVE STUDY OF VORTEX PINNING AND CREEP IN SUPERCONDUCTORS** *N. HABERKORN[1], S. A. BAILY[1], B. MAIOROV[1], T. G. HOLESINGER[1], Q. X. JIA[1], H. ZHOU[2], T. TAJIMA[1], L. CIVALE[1];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]NORTH CAROLINE STATE UNIVERSITY.

16:15 1MY-02 **VERY STRONG INTRINSIC FLUX PINNING AND VORTEX AVALANCHES IN (BA,K)FE^{2}AS2 SUPERCONDUCTING SINGLE CRYSTALS** *X. WANG[1], R. GHORBANI[1], S. LEE[2], S. DOU[1], C. LIN[3], T. JOHANSEN[4], Z. CHENG[1], G. PELECKIS[1], K. MULLER[5], M. SHABAZI[1], G. SUN[6], D. SUN[3];* [1]UNIVERSITY OF WOLLONGONG, [2]SOGANG UNIVERSITY, [3]MAX PLANCK INSTITUTE FOR SOLID STATE RESEARCH, [4]UNIVERSITY OF OSLO, [5]CSIRO, 6[4]MAX PLANCK INSTITUTE FOR SOLID STATE RESEARCH.

16:30 1MY-03 ***(INVITED)*** **THE EFFECT OF THE FINAL SIZE HEAT TREATMENTS ON THE PINNING PROPERTIES OF NBTI FILAMENTS: A VALIDATION OF THE 2-COMPONENTS PINNING MODEL** *L. MUZZI[1], G. DE MARZI[1], U. BESI VETRELLA[1], C. FIAMOZZI ZIGNANI[1], A. DELLA CORTE[1], J. SOMERKOSKY[2];* [1]ENEA, [2]LUVATA PORI OY.

16:45 1MY-04 **PARITY EFFECT OF FLUX QUANTIZATION IN A PERFORATED SUPERCONDUCTING NB FILM** *K. MUHAMMAD;* COMSATS INSTITUTE OF IT.

17:00 1MY-05 **THE SUPERCONDUCTING PROPERTIES OF NANOCRYSTALLINE NIOBIUM CARBONITRIDE** *M. J. RAINE, D. P. HAMPSHIRE;* DURHAM UNIVERSITY.

17:15 1MY-06 **SIMULATION OF VORTEX-ANTIVORTEX PAIR ANIQUILATION IN A MESOSCOPIC SUPERCONDUCTOR** *J. BARBA-ORTEGA[1], A. AGUIAR[2];* [1]GRUPO DE FÍSICA DE NUEVOS MATERIALES, UNIVERSIDAD NACIONAL DE COLOMBIA, BOGOTÁ - COLOMBIA, [2]UFPE.

17:30 1MY-07 **BACKFLOW OF TRANSPORT CURRENT IN TYPE-II SUPERCONDUCTORS** *H. S. RUIZ[1], A. BADÍA-MAJÓS[1], C. LÓPEZ[2];* [1]UNIVERSIDAD DE ZARAGOZA–I.C.M.A.-C.S.I.C., [2]UNIVERSIDAD DE ALCALÁ DE HENARES, DEPT. MATH..

17:45 1MY-08 WITHDRAWN

1MZ: 101 MGB2 WIRES I

CONGRESSIONAL GIOVANNI GIUNCHI (EDISON SPA) AND PETER LEE (NHMFL, FSU)

16:00 1MZ-01 ***(INVITED)*** **SUPERCONDUCTING PROPERTIES OF DIFFUSION PROCESSED MUTI-FILAMENTARY MGB2 WIRES** *H. KUMAKURA[1], J. HUR[2], K. TOGANO[1], A. MATSUMOTO[1], H. WADA[1], K. KIMURA[2];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]THE UNIVERSITY OF TOKYO.

16:30 1MZ-02 ***(INVITED)*** **A NEW GENERATION OF IN SITU MGB2 WIRES WITH IMPROVED CRITICAL CURRENT DENSITIES AND IRREVERSIBILITY FIELDS OBTAINED BY COLD DENSIFICATUON** *R. L. FLÜKIGER[1], S. M. A. HOSSAIN[1], C. SENATORE[1], M. RINDFLEISCH[2];* [1]UNIVERSITY OF GENEVA, [2]HYPER TECH RESEARCH INC., COLUMBUS OH 43212, USA.

17:00 1MZ-03 **MGB2 - AN APPROACH FOR MANUFACTURING TECHNICAL MGB2 WIRES FOR APPLICATIONS IN HEALTH CARE** *A. AUBELE[1], B. SAILER[1], V. ABAECHERLI[1], K. SCHLENGA[1], W. HAESSLER[2], M. HERRMANN[2], C. RODIG[2], B. HOLZAPFEL[2];* [1]BRUKER EAS GMBH, [2]IFW DRESDEN.

17:15 1MZ-04 **PROGRESS IN THE DEVELOPMENT OF MGB2 BASED WIRES AND APPLICATIONS** *G. GRASSO, S. BERTA, S. BRISIGOTTI, A. TUMINO, M. PALOMBO, D. PIETRANERA, V. CUBEDA;* COLUMBUS SUPERCONDUCTORS SPA.

17:30 1MZ-05 **DEVELOPMENT OF MGB2 SUPERCONDUCTOR WIRE AND COILS FOR PRACTICAL APPLICATIONS AT HYPER TECH RESEARCH** *M. TOMSIC[1], M. RINDFLEISCH[1], J. YUE[1], T. WIEBER[1], D. DOLL[1], M. SUMPTION[2], M. SUSNER[2], E. COLLINGS[2], S. BOHNENSTIEHL[2], S. DOU[3];* [1]HYPER TECH RESEARCH, [2]OHIO STATE UNIVERSITY, [3]UNIVERSITY OF WOLLONGONG.

17:45 1MZ-06 **THE INFLUENCE OF DENSIFICATION ON THE CRITICAL CURRENT DENSITY OF MGB2 STRANDS** *Y. YANG[1], M. SUSNER[1], M. D. SUMPTION[1], M. RINDFLEISCH[2], M. TOMSIC[2], E. W. COLLINGS[1];* [1]CENTER FOR SUPERCONDUCTING AND MAGNETIC MATERIALS THE OHIO STATE UNIVERSITY, [2]HYPER TECH RESEARCH, COLUMBUS, OH.

20:00 POSTER SESSIONS

1EPA: 322 HTS FABRICATION I *EXHIBIT HALL* SAJID SALEEM (UNIVERSITY COLLEGE LONDON) AND SEIJI ADACHI (SRL-ISTEC)

20:00 1EPA-01 / 81 **EVOLUTION OF ELECTRICAL AND ELECTRODYNAMIC PROPERTIES OF YBA[2]CU[3]O7-X BICRYSTAL JOSEPHSON JUNCTIONS WITH OXYGEN LOADING** *I. I. GUNDAREVA[1], O. Y. VOLKOV[1], Y. Y. DIVIN[2], V. N. GUBANKOV[1], V. V. PAVLOVSKIY[1];* [1]KOTEL'NIKOV INSTITUTE OF RADIO ENGINEERING AND ELECTRONICS OF RAS, MOSCOW, 125009, RUSSIA, [2]FORSCHUNGSZENTRUM JÜLICH, D-52425 JÜLICH, GERMANY.

20:00 1EPA-02 / 82 **DESIGN OF A HTS RF-SQUID BASED ON BIEPITAXIAL JOSEPHSON JUNCTION TECHNOLOGY** *L. LONGOBARDI[1], D. STORNAIUOLO[2], G. PAPARI[3], F. TAFURI[1];* [1]SECONDA' UNIVERSITA' DEGLI STUDI DI NAPOLI AND CNR-SPIN, [2]CNR-SPIN, NAPOLI, [3]NEST, CNR-INFM AND SCUOLA NORMALE SUPERIORE DI PISA.

20:00 1EPA-03 / 83 **STEP-EDGE JOSEPHSON JUNCTIONS WITH MULTILAYERED HIGH TEMPERATURE SUPERCONDUCTING THIN FILM** *O. V. SHCHERBAKOVA[1], A. V. PAN[1], S. FEDOSEEV[1], J. DU[2], S. K. H. LAM[2], C. P. FOLEY[1];* [1]ISEM, UNIVERSITY OF WOLLONGONG, [2]CSIRO MATERIALS SCIENCE AND ENGINEERING.

20:00 1EPA-04 / 84 WITHDRAWN

20:00 1EPA-05 / 85 **ANNEALING TEMPERATURE EFFECTS ON YBCO/LAALO3 AND YBCO/CEO2/AL2O3 FOR MICROWAVE APPLICATIONS BY TFA-MOD** *Q. LI[1], D. SHI[1], X. ZHU[2], L. WANG[1], S. DOU[1];* [1]INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, [2]KEY LABORATORY OF MATERIALS PHYSICS, INSTITUTE OF SOLID STATE PHYSICS, CHINESE ACADEMY OF SCIENCES.

20:00 1EPA-06 / 86 **NANOSTRUCTURING OF YBCO JOSEPHSON JUNCTIONS BY PHASE SEPARATION** *D. GUSTAFSSON, B. IANDOLO, T. BAUCH, F. LOMBARDI;* CHALMERS UNIVERSITY OF TECHNOLOGY.

20:00 1EPA-07 / 87 **TRANSPORT PROPERTIES OF YBCO NANOWIRES** *S. NAWAZ, T. BAUCH, F. LOMBARDI;* CHALMERS UNIVERSITY OF TECHNOLOGY.

20:00 1EPA-08 / 88 **NUMERICAL CALCULATION STUDY ON THE CURRENT DISTRIBUTION OF YBCO NANOBRIDGES AND ITS APPLICATION TO THE CONTROL OF THE CHARACTERISTICS OF ASYMMETRIC BRIDGES** *M. INOUE, K. KAJINO, K. FUJITA, K. HAYAKAWA, A. FUJIMAKI;* NAGOYA UNIVERSITY.

20:00 1EPA-09 / 89 **RATCHET EFFECT OF VORTEX MOTION IN ASYMMETRICAL NANOBRIDGES WITH A MAGNETIC FIELD** *K. KAJINO, K. FUJITA, K. HAYAKAWA, M. INOUE, A. FUJIMAKI;* NAGOYA UNIVERSITY.

1EPB: 320 LTS FABRICATION *EXHIBIT HALL* ARTHUR LICHTENBERGER (UNIVERSITY OF VIRGINIA) AND ALAN KLEINSASSER (JPL)

20:00 1EPB-01 / 90 **DIFFUSION STOP-LAYERS FOR SUPERCONDUCTOR INTEGRATED CIRCUITS AND QUBITS WITH NB-BASED JOSEPHSON JUNCTIONS** *S. K. TOLPYGO, D. AMPARO, R. T. HUNT, J. A. VIVALDA, D. YOHANNES;* HYPRES, INC..

20:00 1EPB-02 / 91 **INVESTIGATION OF THE ROLE OF H IN FABRICATION-PROCESS-INDUCED VARIATIONS OF NB/AL/ALOX/NB JOSEPHSON JUNCTIONS** *D. AMPARO[1], S. K. TOLPYGO[2];* [1]STONY BROOK UNIVERSITY, [2]HYPRES, INC..

20:00 1EPB-03 / 92 **DEVELOPMENT OF NB-BASED NON-HYSTERETIC JOSEPHSON JUNCTION FABRICATION PROCESS USING METAL-SILICIDE BARRIER**

Y. CHONG, J. S. CHOI, W. SONG, Y. H. LEE, S. I. PARK; KOREA RESEARCH INSTITUTE OF STANDARDS AND SCIENCE.

20:00 1EPB-04 / 93 WITHDRAWN

20:00 1EPB-05 / 94 WITHDRAWN

20:00 1EPB-06 / 95 **THE EFFECT OF MAGNETIC NANOPARTICLES ON INDUCTANCES TOWARD SFQ DEVICE APPLICATION** *H. AKAIKE, K. SHIGEHARA, S. YANO, T. OKUMURA, A. FUJIMAKI;* NAGOYA UNIVERSITY.

20:00 1EPB-07 / 96 **CURRENT NOISE INVESTIGATIONS IN JOSEPHSON DEVICES BY SWITCHING CURRENT MEASUREMENTS** *C. GRANATA, A. VETTOLIERE, R. RUSSO, M. RUSSO, B. RUGGIERO;* ISTITUTO DI CIBERNETICA.

20:00 1EPB-08 / 97 **MEASUREMENT OF EPITAXIAL NBN/ALN/NBN TUNNEL JUNCTIONS WITH A LOW CRITICAL CURRENT DENSITY AT LOW TEMPERATURE** *W. QIU, Z. WANG;* KOBE ADVANCED ICT RESEARCH CENTER, NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY.

20:00 1EPB-09 / 98 **FABRICATION OF HIGH-QUALITY NBN/ALN/NBN TUNNEL JUNCTIONS WITH A WIDE RANGE OF CURRENT DENSITY** *Z. WANG, W. QIU, K. MAKISE, H. TERAI;* NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY.

20:00 1EPB-10 / 99 **CHARACTERIZATION OF NBTIN THIN FILMS DEPOSITED ON VARIOUS SUBSTRATES** *K. MAKISE[1], M. TAKEDA[2], H. TERAI[1], Z. WANG[1];* [1]KOBE ADVANCED ICT RESEARCH CENTER, NICT, [2]GRADUATE SCHOOL OF SCIENCE AND TECHNOLOGY, SHIZUOKA UNIVERSITY.

1EPC: 303 MICROWAVE I *EXHIBIT HALL* STEPHEN REMILLARD (HOPE COLLEGE) AND STUART BERKOWITZ (OUT OF THE FOG RESEARCH)

20:00 1EPC-01 / 100 **FABRICATION AND CHARACTERISTICS OF ULTRA-WIDEBAND BANDPASS YBCO FILTER WITH IMPENDENCE STUBS** *L. M. WANG[1], C. T. WU[2], W. C. LIN[2], M. L. CHANG[2];* [1]GRADUATE INSTITUTE OF APPLIED PHYSICS, NATIONAL TAIWAN UNIVERSITY, [2]DEPARTMENT OF ELECTRICAL ENGINEERING, DA-YEH UNIVERSITY.

20:00 1EPC-02 / 101 **PICO PULSE PROPAGATION ANALYSIS OF HTS STRIP LINE USING TIME-DEPENDENT GINZBURG-LANDAU EQUATION** *S. YOSHIMORI;* TAKUSHOKU UNIVERSITY.

20:00 1EPC-03 / 102 **DC AND MICROWAVE CHARACTERIZATION OF YBCO WEAK LINKS** *T. G. MCCONKEY, H. A. ATIKIAN, H. A. MAJEDI;* UNIVERSITY OF WATERLOO, INSTITUTE FOR QUANTUM COMPUTING.

20:00 1EPC-04 / 103 **RELATING THE NONLINEAR SURFACE IMPEDANCE TO THE LOCAL NONLINEAR SUPERFLUID DENSITY IN HIGH TEMPERATURE SUPERCONDUCTORS** *E. ROCAS[1], C. COLLADO[1], A. PADILLA[2], J. C. BOOTH[1];* [1]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, [2]UNIVERSITAT POLITECNICA DE CATALUNYA.

20:00 1EPC-05 / 104 **ANALYSIS AND DESIGN OF NEGATIVE RESISTANCE JOSEPHSON PARAMETRIC AMPLIFIERS** *H. R. MOHEBBI[1], A. H. MAJEDI[2];* [1]UNIVERSITY OF WATERLOO, INSTITUTE FOR QUANTUM COMPUTING,, [2]UNIVERSITY OF WATERLOO, INSTITUTE FOR QUANTUM COMPUTING.

20:00 1EPC-06 / 105 **DEVELOPMENT OF TWIN SLOT DIPOLE ANTENNA INTEGRATED YBCO GRAIN BOUNDARY JOSEPHSON JUNCTION DETECTORS FOR 0.2 TO 1 THZ** *N. TAKAHASHI, H. YAMADA, A. SAITO, S. OHSHIMA, K. NAKAJIMA;* YAMAGATA UNIVERSITY.

20:00 1EPC-07 / 106 **WITHDRAWN**

20:00 1EPC-08 / 107 **WITHDRAWN**

1EPD: 315 TES BOLOMETERS II *EXHIBIT HALL* PETER TIMBIE (UNIVERSITY OF WISCONSIN) AND EDWARD WOLLACK (NASA)

20:00 1EPD-01 / 108 **TES SERIES ARRAY BOLOMETER FOR 4.2K APPLICATION** *J. BEYER, D. DRUNG;* PHYSIKALISCH-TECHNISCHE BUNDESANSTALT.

20:00 1EPD-02 / 109 **ALMN TRANSITION EDGE SENSORS FOR CMB POLARIMETERS** *D. R. SCHMIDT[1], H. CHO[1], H. HUBMAYR[1], P. LOWELL[1], M. NIEMACK[1], G. O'NEIL[1], J. ULLOM[1],*

K. YOON[1], K. IRWIN[1], B. HOLZAPFEL[2], M. LUEKER[2], E. GEORGE[2], E. SHIROKOFF[2]; [1]NIST, [2]PHYSICS DEPARTMENT, UNIVERSITY OF CALIFORNIA AT BERKELEY.

20:00 1EPD-03 / 110 **CHARACTERIZATION OF SI_XN_Y ABSORBERS AND THERMAL SUPPORT BEAMS FOR ULTRA-SENSITIVE FAR-INFRARED (IR)/SUB-MM TRANSITION EDGE SENSORS** *A. D. BEYER[1], M. E. KENYON[2], P. M. ECHTERNACH[2], B. -. EOM[3], J. BUENO[2], P. K. DAY[2], J. J. BOCK[1], C. M. BRADFORD[1];* [1]CALIFORNIA INSTITUTE OF TECHNOLOGY/JET PROPULSION LABORATORY, [2]JET PROPULSION LABORATORY, [3]CALIFORNIA INSTITUTE OF TECHNOLOGY.

20:00 1EPD-04 / 111 WITHDRAWN.

20:00 1EPD-05 / 112 **THERMAL MODELING OF TES DEVICES USED IN FEEDHORN COUPLED MILLIMETER WAVE POLARIMETERS** *J. HUBMAYR[1], J. W. APPEL[2], J. E. AUSTERMANN[3], J. A. BEALL[1], D. BECKER[1], B. A. BENSON[4], L. E. BLEEM[4], C. L. CHANG[4], J. E. CARLSTROM[4], H. M. CHO[1], A. T. CRITES[4], T. ESSINGER-HILEMAN[2], W. EVERETT[4], N. W. HALVERSON[3], J. W. HENNING[3], G. C. HILTON[1], K. D. IRWIN[1], J. MCMAHON[5], J. MEHL[4], S. S. MEYER[4], S. MOSELEY[6], M. D. NIEMACK[1], L. P. PARKER[2], S. T. STAGGS[2], K. YOON[1];* [1]NIST QUANTUM DEVICES GROUP, [2]PRINCETON UNIVERSITY, [3]CENTER FOR ASTROPHYSICS AND SPACE ASTRONOMY, DEPARTMENT OF ASTROPHYSICAL AND PLANETARY SCIENCES AND DEPARTMENT OF PHYSICS, UNIVERSITY OF COLORADO, BOULDER, [4]KALVI INSTITUTE FOR COSMOLOGICAL PHYSICS, UNIVERSITY OF CHICAGO, [5]DEPARTMENT OF PHYSICS, UNIVERSITY OF MICHIGAN, [6]NASA GODDARAD SPACE FLIGHT CENTER.

20:00 1EPD-06 / 113 **ENERGY RESOLUTION OF TERAHERZ SINGLE-PHOTON-SENSITIVE BOLOMETRIC DETECTORS** *D. F. SANTAVICCA[1], B. REULET[2], B. S. KARASIK[3], S. V. PEREVERZEV[3], D. OLAYA[4], M. E. GERSHENSON[4], F. W. CARTER[1], L. FRUNZIO[1], D. E. PROBER[1];* [1]YALE UNIVERSITY, [2]UNIVERSITE PARIS-SUD, [3]JET PROPULSION LAB, [4]RUTGERS UNIVERSITY.

20:00 1EPD-07 / 114 **WITHDRAWN**

1LPA: 296 BEARINGS AND FLYWHEELS - FLYWHEEL SYSTEMS *EXHIBIT HALL* JOHN HULL (THE BOEING COMPANY) AND JIM KERBY (FERMILAB)

20:00 1LPA-01 / 115 **MODE COUPLING OF A FLEXIBLE ROTOR SUPPORTED BY A SUPERCONDUCTING MAGNETIC BEARING DUE TO THE NONLINEARITY OF ELECTROMAGNETIC FORCE** *H. GOTANDA, T. SUGIURA;* KEIO UNIVERSITY.

20:00 1LPA-02 / 116 **NEW CONCEPT OF FLYWHEEL ENERGY STORAGE SYSTEM USING SMB AND PMB** *M. SUBKHAN, M. KOMORI;* KYUSHU INSTITUTE OF TECHNOLOGY, JAPAN.

20:00 1LPA-03 / 117 **THE LOSS CHARACTERISTICS OF SFES WITH AMORPHOUS CORE FOR PMSM** *J. LEE[1], S. HAN[1], Y. HAN[1], B. PARK[1], B. PARK[1], S. JUNG[1], T. SUNG[2];* [1]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [2]HANYANG UNIVERSITY.

20:00 1LPA-04 / 118 **SUBHARMONIC RESONANCE OF A ROTOR SUPPORTED BY A HIGH-TC SUPERCONDUCTOR** *T. SUDA, S. KOBAYASHI, T. SUGIURA;* KEIO UNIVERSITY.

20:00 1LPA-05 / 119 **TEST RESULTS OF A COMPACT DISK-TYPE MOTOR/GENERATOR UNIT WITH SUPERCONDUCTING BEARINGS FOR FLYWHEEL ENERGY STORAGE SYSTEMS WITH ULTRA-LOW IDLING LOSSES** *Z. KOHARI;* BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS.

20:00 1LPA-06 / 120 **DESIGN OF HYBRID SUSPENSION SYSTEM OF SUPERCONDUCTING AND ELECTROSTATIC SUSPENSION** *J. LIU[1], Q. WANG[2], X. LI[1];* [1]INSTITUTE OF ELECTRICAL ENGINEERING & GRUADUATE UNIVERSITY, CAS, [2]INSTITUTE OF ELECTRICAL ENGINEERING, CAS.

1LPB: 295 BEARINGS AND FLYWHEELS - LEVITATION RELATED *EXHIBIT HALL* QUAN LI (UNIVERSITY OF CAMBRIDGE) AND MASARU KIUCHI (KYUSHU INSTITUTE OF TECHNOLOGY)

20:00 1LPB-01 / 121 **BASIC STUDY ON MAGNETICALLY LEVITATED CONVEYER SYSTEM USING FIELD-COOLING MAGNETIZATION AND PULSE-FIELD MAGNETIZATION** *Y. MIYATAKE[1], M. KOMORI[2];* [1]KYUSHU INSTITUTE OF TECHNOLOGY, [2]KYUSHU INSTITUTE OF TECHNOLOGY, JAPAN.

20:00 1LPB-02 / 122 **SIMPLE SEMI-ANALYTICAL APPROACH TO ESTIMATE THE LEVITATION FORCE AND PENETRATION PROFILE OF AXIAL FLUX**

SUPERCONDUCTING BEARINGS *Z. KOHARI;* BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS.

20:00 1LPB-03 / 123 **LATERAL AND LEVITATION FORCES BETWEEN A SMALL MAGNET AND SUPERCONDUCTING SPHERE AND THE STABILITY OF THE MAGNET** *H. AL-KHATEEB[1], M. NUSEIRAT[2], N. AYOUB[3];* [1]JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, [2]KING SAUD BIN ABDULAZIZ UNIV. FOR HEALTH SCIENCES, COLLEGE OF MEDICINE, [3]SCHOOL OF APPLIED NATURAL SCIENCES, GERMAN JORDANIAN UNIVERSITY.

20:00 1LPB-04 / 124 **LEVITATION PROPERTIES OF THE SUPERCONDUCTING MAGNETIC BEARINGS** *Y. ARAI, H. SEINO, K. NAGASHIMA;* RAILWAY TECHNICAL RESEARCH INSTITUTE.

20:00 1LPB-05 / 125 **APPLICATION OF [2]G-TAPE FOR PASSIVE AND CONTROLLED SUPERCONDUCTING LEVITATION** *F. SASS[1], G. G. SOTELO[2], R. DE ANDRADE JR.[1];* [1]FEDERAL UNIVERSITY OF RIO DE JANEIRO, [2]FLUMINENSE FEDERAL UNIVERSITY.

20:00 1LPB-06 / 126 **ANALYSIS ON THE LEVITATION CHARACTERISTICS OF THE SUPERCONDUCTING BALL** *S. ZHAO;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

1LPC: 292 DIELECTRICS: GENERAL *EXHIBIT HALL* JUN LU (NATIONAL HIGH MAGNETIC FIELD LABORATORY) AND HIROKI KOJIMA (NAGOYA UNIVERSITY)

20:00 1LPC-01 / 127 **THE ELECTRICAL INSULATION CHARACTERISTICS OF GFRP FOR SUPERCONDUCTING DEVICES** *H. KIM1, K. SEONG[1], J. CHOI[2], J. CHOI[3], H. CHEON[3], S. KIM[3];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]LS CABLE, [3]GYEONGSANG NATIONAL UNIVERSITY.

20:00 1LPC-02 / 128 **LIQUID NITROGEN BREAKDOWN DUE TO THERMALLY GENERATED BUBBLES IN PLANE-PLANE ELECTRODE GEOMETRY** *I. SAUERS, D. R. JAMES, A. R. ELLIS, E. TUNCER, G. POLIZOS, M. O. PACE;* OAK RIDGE NATIONAL LABORATORY.

20:00 1LPC-03 / 129 **VERY LOW FREQUENCY (0.1 HZ) BREAKDOWN OF VARIOUS POLYMERS IMMERSED IN LIQUID NITROGEN** *I. SAUERS, D. R. JAMES, A. R. ELLIS, E. TUNCER, G. POLIZOS, M. O. PACE;* OAK RIDGE NATIONAL LABORATORY.

20:00 1LPC-04 / 130 **INFLUENCE OF BUBBLE FORMATION ON THE DIELECTRIC BEHAVIOUR OF LIQUID NITROGEN** *M. BLAZ, M. KURRAT;* UNIVERSITY OF BRAUNSCHWEIG.

20:00 1LPC-05 / 131 **ELECTRICAL BREAKDOWN OF COMPRESSED HELIUM GAS** *H. RODRIGO, G. H. HELLER, S. PAMIDI, D. G. CROOK, S. L. RANNER, B. TROCIEWITZ, S. DALE;* FLORIDA STATE UNIVERSITY, CENTER FOR ADVANCED POWER SYSTEMS.

20:00 1LPC-06 / 132 **ANALYSIS OF INSULATION DESIGN FOR HIGH VOLTAGE AC AND DC HTS CABLES** *Q. QIU;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

20:00 1LPC-07 / 133 **DESIGN AND ANALYSIS OF 110KV/3KA COLD DIELECTRIC SUPERCONDUCTING POWER CABLES** *H. LIU, Y. WANG, H. ZHANG, W. PI;* NORTH CHINA ELECTRIC POWER UNIVERSITY.

1LPD: 289 MOTORS AND GENERATORS - DESIGN AND FEM *EXHIBIT HALL* PHILIPPE MASSON (ADVANCED MAGNET LAB) AND SHAILENDRA CHOUHAN (NATIONAL SUPERCONDUCTING CYCLOTRON)

20:00 1LPD-01 / 134 **NUMERICAL ANALYSIS AND DESIGN CONSIDERATIONS OF ADVANCED LINEAR TYPE MAGNETIC FLUX PUMP DEPENDED ON PERMANENT MAGNET EXCITATION** *Y. CHUNG1, Y. YOON2, D. BAE3, T. KO[4];* [1]THE UNIVERSITY OF SUWON, [2]ANSAN COLLEGE OF TECHNOLOGY, [3]CHUNGJU NATIONAL UNIVERSITY, [4]YONSEI UNIVERSITY.

20:00 1LPD-02 / 135 **TOWARDS A FEM TOOL FOR FLEXIBLE ANALYSIS OF SUPERCONDUCTING MOTORS** *J. LLOBERAS[1], J. LÓPEZ[2], E. BARTOLOMÉ[1];* [1]EUSS, [2]UPC.

20:00 1LPD-03 / 136 **ANALYSES AND CONTROL OF A HIGH TEMPERATURE SUPERCONDUCTING MOTOR** *H. WANG, Y. DAI, Q. WANG;* INSTITUTE OF ELECTRICAL ENGINEERING,CHINESE ACADEMY OF SCIENCES.

20:00 1LPD-04 / 137 **DESIGN OF THE AXIAL AND RADIAL FLUX HTS MOTOR WITH SUPERCONDUCTING ARMATURE WINDING** *L. LI, J. CAO, B. KOU, S. YANG, X. LIU;* HARBIN INSTITUTE OF TECHNOLOGY.

20:00 1LPD-05 / 138 **DESIGN AND AC LOSS ANALYSIS OF A FULLY SUPERCONDUCTING 10HP HOMOPOLAR MOTOR WITH YBCO CC WINDINGS** *S. PARK[1], Y. KIM[1], S. LEE[1], J. LEE2, W. KIM[3], C. PARK[4], I. PARK[5], K. CHOI[1], S. HAHN[6];* [1]KOREA POLYTECHNIC UNIVERSITY, [2]WOOSUK UNIVERSITY, [3]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [4]SEOUL NATIONAL UNIVERSITY, [5]SUNGKYUNKWAN UNIVERSITY, [6]ELECTRICAL ENGINEERING AND SCIENCE RESEARCH INSTITUTE.

20:00 1LPD-07 / 140 **ELECTROMAGNETIC DESIGN STUDY OF TRANSVERSE FLUX ENHANCED TYPE SUPERCONDUCTING WIND TURBINE GENERATORS** *M. R. QUDDES[1], M. SEKINO[1], H. OHSAKI[1], N. KASHIMA[2], S. NAGAYA[2];* [1]THE UNIVERSITY OF TOKYO, [2]CHUBU ELECTRIC POWER CO., INC..

20:00 1LPD-08 / 141 **A SMALL-SIZED HTS HOMOPOLAR SYNCHRONOUS ROTATING MACHINE** *J. LEE[1], H. KIM[2], S. BAIK[2], Y. KWON[2], S. LEE[3], J. HONG[3], M. PARK[1], I. YU[1];* [1]CHANGWON NATIONAL UNIVERSITY, [2]KERI, [3]HANYANG UNIVERSITY.

20:00 1LPD-09 / 142 **LOAD ANGLE CALCULATION OF A SUPERCONDUCTING SYNCHRONOUS MOTOR** *S. BAIK[1], Y. KWON[1], H. KIM[1], J. LEE[1], Y. KIM[2];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]DOOSAN HEAVY INDUSTRIES.

1LPE: 331 MOTORS AND GENERATORS - INDUCTION *EXHIBIT HALL* JIM BRAY (GE) AND SASHA ISHMAEL (FLORIDA INSTITUTE OF TECHNOLOGY & ADVANCED MAGNET LAB. INC.)

20:00 1LPE-01 / 143 **SMES BASED EXCITATION SYSTEM FOR DOUBLY-FED INDUCTION GENERATOR IN WIND POWER APPLICATION** *J. SHI, Y. TANG, Y. XIA, L. REN, J. LI;* R&D CENTER OF APPLIED SUPERCONDUCTIVITY, HUAZHONG UNIVERSITY OF SCIENCE & TECHNOLOGY.

20:00 1LPE-02 / 144 **A LINEAR DOUBLY-SALIENT HTS MACHINE FOR WAVE ENERGY CONVERSION** *Y. DU[1,2], K. CHAU[1,3], M. CHENG[1], Y. WANG[1] J. LI[3];*

[1]SCHOOL OF ELECTRICAL ENGINEERING, SOUTHEAST UNIVERSITY, NANJING,[2] SCHOOL OF ELECTRICAL AND INFORMATION ENGINEERING, JIANGSU UNIVERSITY, [3]DEPT. OF ELECTRICAL AND ELECTRONIC ENGINEERING, THE UNIVERSITY OF HONG KONG.

20:00 1LPE-03 / 145 **ROTATION TESTS OF A SUPERCONDUCTING INDUCTION/SYNCHRONOUS MOTOR WITH MGB2 WIRE IN LIQUID AND GASEOUS HELIUM** *K. KAJIKAWA[1], T. NAKAMURA[2], M. TAKAHASHI[3], T. WAKUDA[3];* [1]KYUSHU UNIVERSITY, [2]KYOTO UNIVERSITY, [3]HITACHI.

20:00 1LPE-04 / 146 **FUNDAMENTAL CHARACTERISTICS OF FULLY SUPERCONDUCTING HTS INDUCTION-SYNCHRONOUS MACHINE FOR ELECTRIC VEHICLE** *D. SEKIGUCHI[1], T. NAKAMURA[1], M. FUKUI[1], T. NISHIMURA[1], K. MATSUMURA[1], N. AMEMIYA[1], Y. ITOH[2], M. YOSIKAWA[2], T. TERAZAWA[2];* [1]KYOTO UNIVERSITY, [2]IMRA MATERIALS R&D CO., LTD.,.

20:00 1LPE-05 / 147 **A FAST ANALYTICAL METHOD TO COMPUTE THE RADIAL FLUX DENSITY DISTRIBUTION IN THE AIRGAP OF A SUPERCONDUCTING INDUCTOR.** *G. MALE, T. LUBIN, S. MEZANI, J. LEVEQUE;* LABORATOIRE GREEN.

20:00 1LPE-06 / 148 **DESIGN AND ANALYSIS OF A HTS BRUSHLESS DOUBLY-FED DOUBLY-SALIENT MACHINE** *C. LIU, K. T. CHAU, J. ZHONG, J. LI;* THE UNIVERSITY OF HONG KONG.

20:00 1LPE-07 / 149 **ANALYTIC EVALUATION OF HTS INDUCTION MOTOR FOR ELECTRIC ROLLING STOCK** *T. KONISHI[1], T. NAKAMURA[2], T. NISHIMURA[2], N. AMEMIYA[2];* [1]RAILWAY TECHNICAL RESEARCH INSTITUTE, [2]KYOTO UNIVERSITY.

20:00 1LPE-08 / 150 **DESIGN AND MANUFACTURING OF HTS COILS FOR 30KVA SYNCHRONOUS ELECTRICAL MACHINE** *G. CELENTANO, G. MESSINA, G. GIORGI, F. MAIERNA, S. RUECA, R. VIOLA, A. DELLA CORTE;* ENEA.

1LPF: 288 MOTORS AND GENERATORS - MODELING AND LOSSES *EXHIBIT HALL* KIRUBA SIVASUBRAMANIAM (GE) AND KAZUHIRO KAJIKAWA (KYUSHU UNIVERSITY)

20:00 1LPF-01 / 151 **CURRENT CAPACITY OF HTS TAPE UNDER AC EXTERNAL MAGNETIC FIELD** *L. LI, J. CAO, S. YANG;* HARBIN INSTITUTE OF TECHNOLOGY.

20:00 1LPF-02 / 152 **CRITICAL CURRENT AND ELECTRIC LOSS UNDER MAGNETIC FIELD AT 30 K ON BI-2223 SUPERCONDUCTING COIL FOR SHIP PROPULSION MOTOR** *Y. KOSHIBA[1], S. YUAN[1], N. MAKI[1], M. IZUMI[1], K. UMEMOTO[2], K. AIZAWA[2], Y. KIMURA[2], M. YOKOYAMA[2];* [1]TOKYO UNIVERSITY OF MARINE SCIENCE AND TECHNOLOGY, [2]KAWASAKI HEAVY INDUSTRIES LTD..

20:00 1LPF-03 / 153 **RESEARCH ON DISTRIBUTION OF MAGNETIC FIELD AROUND THE SUPERCONDUCTING COILS IN FERROMAGNETIC ENVIRONMENT** *L. LI, J. CAO, S. YANG, B. KOU;* HARBIN INSTITUTE OF TECHNOLOGY.

20:00 1LPF-04 / 154 **IMPROVED DESIGN TO REDUCE EDDY-CURRENT LOSS IN RETAIN-RING IN SUPERCONDUCTING MACHINES** *S. LEE1, J. HONG[1], Y. KWON[2], H. PARK[3], Y. KIM[3];* [1]HANYANG UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [3]DOOSAN HEAVY INDUSTRIES AND CONSTRUCTION CO., LTD..

20:00 1LPF-05 / 155 **CHARACTERISTIC COMPARISON ACCORDING TO THE CHANGE OF END-WINDING SHAPE IN FIELD COIL FOR SUPERCONDUCTING MACHINES** *S. LEE1, J. HONG[1], Y. KWON[2], H. KIM[2], Y. JO[2], Y. KIM[3];* [1]HANYANG UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [3]DOOSAN HEAVY INDUSTRIES AND CONSTRUCTION CO., LTD..

20:00 1LPF-06 / 156 **COIL OPTIMIZATION FOR HTS MACHINES** *N. MIJATOVIC[1], B. B. JENSEN[1], V. M. R. ZERMENO[2], C. TRÆHOLT[1], A. B. ABRAHAMSEN[3], M. P. SØRENSEN[2], N. F. PEDERSEN[1];* [1]TECHNICAL UNIVERSITY OF DENMARK - DEPARTMENT OF ELECTRICAL ENGINEERING, [2]TECHNICAL UNIVERSITY OF DENMARK - DEPARTMENT OF MATHEMATICS, [3]RISØ NATIONAL LABORATORY FOR SUSTAINABLE ENERGY - MATERIALS RESEARCH DIVISION.

20:00 1LPF-07 / 157 **RESEARCH AND DEVELOPMENT OF ALTERNATIVE CONCEPTS IN HTS MACHINES** *J. M. PINA[1], D. P. INÁCIO[1], G. F. LUÍS[2], J. M. CEBALLOS[3], P. R. PEREIRA[1], J. F. MARTINS[1], M. VENTIM NEVES[1], A. ÁLVAREZ[3], A. L. RODRIGUES[1];* [1]CENTRE OF TECHNOLOGY AND SYSTEMS, [2]FACULDADE DE CIÊNCIAS E TECNOLOGIA, 3"BENITO MAHEDERO" GROUP OF ELECTRICAL APPLICATIONS OF SUPERCONDUCTORS.

20:00 1LPF-08 / 139 **EXPERIMENTAL CHARACTERIZATION OF A CONVENTIONAL (ALUMINUM) AND A SUPERCONDUCTING (YBCO) AXIAL FLUX DISC MOTOR** *D. P. INÁCIO[1], J. M. PINA[1], J. F. MARTINS[1], M. F. VENTIM-NEVES[1], A. ÁLVAREZ[2]; G. LUIS[3,1]*[1]CTS - UNINOVA (FCT-UNL), 2" BENITO MAHEDERO" GROUP OF ELECTRICAL APPLICATIONS OF SUPERCONDUCTORS, [3]FACULDADE DE CIÊNCIAS E TECNOLOGIA, UNIVERSIDADE NOVA DE LISBOA

1LPG: 291 MOTORS AND GENERATORS -TESTS *EXHIBIT HALL* TRIFON LASKARIS (GE) AND TAKETSUNE NAKAMURA (KYOTO UNIVERSITY)

20:00 1LPG-01 / 158 **HIGH TEMPERATURE SUPERCONDUCTOR ARMATURE WINDING DESIGN OF A SYNCHRONOUS MOTOR** *F. XU, A. CHEN, X. LIU, J. CAO, L. LI;* HARBIN INSTITUTE OF TECHNOLOGY.

20:00 1LPG-02 / 159 **STUDY OF LARGE SCALE WIND TURBINE SYNCHRONOUS GENERATORS WITH HTS FIELD WINDINGS** *S. FUKUI1, J. OGAWA[1], T. SATO[1], O. TSUKAMOTO[2], N. KASHIMA[3], S. NAGAYA[3];* [1]NIIGATA UNIVERSITY, [2]YOKOHAMA NATIONAL UNIVERSITY, [3]CHUBU ELECTRIC POWER CO. INC..

20:00 1LPG-03 / 160 **DESIGN AND MODEL TEST OF A HIGH TEMPERATURE SUPERCONDUCTING GENERATOR FOR WIND POWER APPLICATIONS** *X. LI, L. HAN, D. ZHANG, J. ZHANG, S. DAI, D. XIA, L. LIN, L. XIAO;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

20:00 1LPG-04 / 161 **TESTING OF A LIGHTWEIGHT CORELESS HTS SYNCHRONOUS GENERATOR COOLED BY SUBCOOLED LIQUID NITROGEN.** *W. O. BAILEY;* UNIVERSITY OF SOUTHAMPTON.

20:00 1LPG-05 / 162 **FURTHER TESTING OF AN IRON-CORED HTS SYNCHRONOUS GENERATOR COOLED BY LIQUID AIR.** *W. O. S. BAILEY;* UNIVERSITY OF SOUTHAMPTON.

20:00 1LPG-06 / 163 **DEVELOPMENT OF AN HTS ROTOR FOR A HIGH-SPEED GENERATOR** *M. G. FEE[1], M. P. STAINES[2], R. G. BUCKLEY[2], L. LONG[3];* [1]HTS-110 LTD, [2]INDUSTRIAL RESEARCH LTD, [3]LONG ELECTROMAGNETICS INC.

1LPH: 293 OTHER POWER GEAR *EXHIBIT HALL* ISTVAN VAJDA (BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS) AND YASUYUKI SHIRAI (KYOTO UNIVERSITY)

20:00 1LPH-01 / 164 **PERFORMANCE CHARACTERISTICS OF POWER SAVING TYPE HTS POWER SUPPLY UTILIZED SOLAR ENERGY SYSTEM** *Y. CHUNG1, H. JO2, D. BAE3, H. KANG3, M. AHN4, Y. YOON5, T. KO[2];* [1]THE UNIVERSITY OF SUWON, [2]YONSEI UNIVERSITY, [3]CHUNGJU NATIONAL UNIVERSITY, [4]KUNSAN NATIONAL UNIVERSITY, [5]ANSAN COLLEGE OF TECHNOLOGY.

20:00 1LPH-02 / 165 **APPLICATION OF MGB2 TO A SWITCH FOR EXTRACTION OF STORED MAGNETIC ENERGY** *T. TAYLOR[1], Y. YANG[2];* [1]CERN, [2]SOUTHAMPTON UNIVERSITY, U.K..

20:00 1LPH-03 / 166 **PROTOTYPE OF SC INVERTER** *K. OSAMURA[1], A. SAKAI[2], T. NAKAMURA[2], T. OKA[3];* [1]RESEARCH INSTITUTE FOR APPLIED SCIENCES, [2]KYOTO UNIVERSITY, [3]NIIGATA UNIVERSITY.

20:00 1LPH-04 / 167 **SIMULATION OF MAGNETICALLY TRIGGERED MGB2 SWITCHES** *S. A. ISHMAEL[1], P. J. MASSON[2], S. MEZANI[3], R. MEINKE[2];* [1]FLORIDA INSTITUTE OF TECHNOLOGY & ADVANCED MAGNET LAB. INC., [2]ADVANCED MAGNET LAB. INC., [3]UNIVERSITÉ NANCY.

20:00 1LPH-05 / 168 **DEVELOPMENT OF A TOROIDAL COIL USING YBCO COATED CONDUCTOR FOR DC REACTOR** *N. HARADA[1], M. YAMAMOTO[1], K. UEDA[1], M. TSUDA[2], T. HAMAJIMA[2], M. FURUSE[3], S. FUCHINO[3];* [1]YAMAGUCHI UNIVERSITY, [2]TOHOKU UNIVERSITY, [3]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY.

1LPJ: 290 SFCL *EXHIBIT HALL* MATHIAS NOE (FZK) AND HIDEKI MAEDA (RIKEN)

20:00 1LPJ-01 / 169 **PROTECTIVE COOPERATION BETWEEN A SUPERCONDUCTING FAULT CURRENT LIMITER AND A RECLOSING SYSTEM** *H. S. CHOI[1], Y. S. CHO[1], B. I. JUNG[1], D. C. CHUNG[2];* [1]CHOSUN UNIVERSITY, [2]WOOSUK UNIVERSITY.

20:00 1LPJ-02 / 170 **POWER BURDEN OF FLUX-COUPLING TYPE SUPERCONDUCTING FAULT CURRENT LIMITER IN THE THREE-PHASE POWER SYSTEM** *B. I. JUNG[1], Y. S. CHO[1], H. S. CHOI[1], D. C. CHUNG[2];* [1]CHOSUN UNIVERSITY, [2]WOOSUK UNIVERSITY.

20:00 1LPJ-03 / 171 **CONDITION BASED MONITORING OF SUPERCONDUCTING FAULT CURRENT LIMITER USING FUZZY SUPPORT VECTOR REGRESSION** *I. SEO, B. HA, S. LEE, C. SHIN, S. YIM, H. KIM, O. HYUN;* KOREA ELECTRIC POWER RESEARCH INSTITUTE.

20:00 1LPJ-04 / 172 **ANALYTICAL DESIGN METHOD AND EXPERIMENTAL TEST OF 1KV/2KA CLASS NON-INDUCTIVE HIGH-TC SUPERCONDUCTING FAULT CURRENT LIMITER** *Y. KIM[1], D. PARK[2], K. CHANG[1], Y. YOON[3], T. KO[1];* [1]YONSEI UNIVERSITY, [2]MESSACHUSETTS INSTITUTE OF TECHNOLOGY, [3]ANSAN COLLEGE OF TECHNOLOGY.

20:00 1LPJ-05 / 173 WITHDRAWN

20:00 1LPJ-06 / 174 **TEMPERATURE SPATIAL DISTRIBUTION OF HIGH-TC COATED CONDUCTOR BY NUMERICAL METHOD WHEN A FAULT CURRENT FLOWS** *S. CHOI, Y. KIM, K. CHANG, J. JANG, T. KO;* YONSEI UNIVERSITY.

20:00 1LPJ-07 / 175 **SIMULATION OF A TRANSFORMER TYPE HTS SUPERCONDUCTING FAULT CURRENT LIMITER PERFORMANCE IN AN ELECTRICAL POWER DISTRIBUTION FEEDER** *E. RUPPERT[1], A. E. J.1, C. A. BALDAN[2], C. Y. SHIGUE[2], J. S. LAMAS[2];* [1]UNICAMP, [2]USP.

20:00 1LPJ-08 / 176 WITHDRAWN

1LPK: 269 SFCL DESIGN AND TEST *EXHIBIT HALL* PASCAL TIXADOR (GRENOBLE INP) AND HYOSANG CHOI (CHOSUN UNIVERSITY)

20:00 1LPK-01 / 177 **STUDY ON CURRENT LIMITING CHARACTERISTICS WITH FAULT TYPE AND FAULT ANGLE DURING CONNECTION BETWEEN THE WIRES FOR CURRENT LIMITER AND CABLE USING YBCO THIN FILM TYPE WIRE** *H. DU[1], D. LEE[1], B. HAN[1], S. SONG[1], J. LEE[1], Y. KIM[1], S. HAN[2];* [1]CHONBUK NATIONAL UNIVERSITY, [2]KEPRI.

20:00 1LPK-02 / 178 **DESIGN AND TEST RESULTS OF A 0.9 MVA RESISTIVE TYPE HTS FAULT CURRENT LIMITER** *V. E. KEILIN, V. V. LOBYNTSEV, M. S. NOVIKOV, S. J. NOVIKOV, V. I. SHCHERBAKOV;* KURCHATOV INSTITUTE.

20:00 1LPK-03 / 179 **TEST OF A MODULAR FAULT CURRENT LIMITER FOR 220V LINE USING YBCO COATED CONDUCTOR TAPES WITH SHUNT PROTECTION** *C. A. BALDAN[1], J. S. LAMAS[2], C. Y. SHUGUE[3], E. RUPPERT[4];* [1]EEL/USP AND DEE/UNESP - BRAZIL, [2]GHENT UNIVERSITY - BELGIUM, [3]EEL/USP - BRAZIL, [4]FEEC/UNICAMP- BRAZIL.

20:00 1LPK-04 / 180 **WITHDRAWN**

20:00 1LPK-05 / 181 **OPERATING CHARACTERISTICS OF OVAL-SHAPED RESISTIVE SUPERCONDUCTING FAULT CURRENT LIMITER** *H. JO[1], K. CHANG[1], Y. KIM[1], H. KIM[1], S. CHU[1], H. KIM[2], Y. YOON[3], J. SONG[4], H. LEE[4], T. KO[1];* [1]YONSEI UNIVERSITY, [2]THE KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [3]ASAN COLLEGE OF TECHNLOLGY, [4]KOREA UNIVERSITY.

20:00 1LPK-06 / 182 **NOVEL DESIGN OF THE STRUCTURE OF A NON-INDUCTIVE SUPERCONDUCTING COIL** *M. AHN[1], H. LEE[2], T. KO[3];* [1]KUNSAN NATIONAL UNIVERSITY, [2]KOREA UNIVERSITY, [3]YONSEI UNIVERSITY.

20:00 1LPK-07 / 183 **STUDY ON INITIAL OPERATING PROPERTIES OF RESISTIVE TYPE SFCLS USING YBCO THIN-FILM WIRE WITH ELECTRICAL COUPLING CONDITION** *H. DU[1], D. LEE[1], Y. KIM[1], B. HAN[1], S. SONG[1], J. LEE[1], S. HAN[2];* [1]CHONBUK NATIONAL UNIVERSITY, [2]KEPRI.

1LPL: 298 SFCL DESIGN OF OTHER TYPES

EXHIBIT HALL STEFFEN ELSCHNER (UNIVERSITY OF APPLIED SCIENCE, MANNHEIM) AND HYE-RIM KIM (KOREA ELECTRIC POWER RESEARCH INSTITUTE)

20:00 1LPL-01 / 184 **WITHDRAWN**

20:00 1LPL-02 / 185 **EXPERIMENTAL INVESTIGATION OF AN ACTIVE SUPERCONDUCTING SURRENT SONTROLLER** *J. WANG, L. ZHOU, J. SHI;* HUAZHONG UNIVERSITY OF SCIENCE & TECHNOLOGY.

20:00 1LPL-03 / 186 **FAULT CURRENT LIMITATION BY A TRANSFORMER TYPE FCL BASED ON THE SECOND GENERATION HTS WIRES** *L. S. FLEISHMAN[1], E. P. VOLKOV[1], V. A. MALGINOV[2], A. V. MALGINOV[2], A. Y. KUNTSEVICH[2], A. S. SHEYNSHTEYN[3];* [1]KRZHIZHANOVSKY POWER ENGINEERING INSTITUTE, [2]P.N. LEBEDEV PHYSICAL INSTITUTE, [3]EL CAMINO COLLEGE.

20:00 1LPL-04 / 187 **RECOVERY TIME AND BOILING HEAT CHARACTERISTICS OF SUPERCONDUCTING TAPES SUITABLE FOR SFCL APPLICATIONS** *M. K. AL-MOSAWI, W. BAILEY, C. BEDUZ, Y. YANG;* ENERGY TECHNOLOGY RESEARCH GROUP, INSTITUTE OF CRYOGENICS.

20:00 1LPL-05 / 188 **LOSS AND TRANSITION STUDIES OF SHUNTED FREE-STABILIZED YBCO TAPE FOR SFCL APPLICATIONS** *P. SUÁREZ, A. ALVAREZ, J. M. CEBALLOS, B. PÉREZ;* UNIV. OF EXTREMADURA.

20:00 1LPL-06 / 189 **MULTIPLE CRITERIA DECISION MAKING METHODS FOR OPTIMIZATION DESIGN AND LOCATION OF FAULT CURRENT LIMITERS** *H. HEYDARI, R. SHARIFI;* IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY.

1LPM: 297 SFCL WIRE/TAPE FOR FCL

EXHIBIT HALL ISTAN VAJAD AND MIKE OSOFSKY (NRL)

20:00 1LPM-01 / 190 **OPTIMISATION OF [2]G YBCO WIRES FOR RESISTIVE FAULT CURRENT LIMITER** *A. KUDYMOW[1], S. ELSCHNER[2], O. MAEDER[1], W. GOLDACKER[1];* [1]KARLSRUHE INSTITUTE OF TECHNOLOGY, INSTITUTE FOR TECHNICAL PHYSICS, [2]UNIVERSITY OF APPLIED SCIENCE, MANNHEIM.

20:00 1LPM-02 / 191 **RECOVERY CHARACTERISTIC OF COATED CONDUCTORS FOR SUPERCONDUCTING FAULT CURRENT LIMITERS** *A. BERGER, M. NOE, W. GOLDACKER, A. KUDYMOW;* KARLSRUHE INISTITUTE OF TECHNOLOGY (KIT).

20:00 1LPM-03 / 192 **ESTIMATION OF OVER-CURRENT PERFORMANCE IN YBCO SUPERCONDUCTING THIN FILMS FOR FAULT CURRENT LIMITER** *M. YASUDA, T. KAWAHARA, Y. YOKOMIZU, T. MATSUMURA;* NAGOYA UNIVERSITY.

20:00 1LPM-04 / 193 WITHDRAWN

20:00 1LPM-05 / 194 **IMPACT OF SHUNT RESISTORS ON SIMULTANEOUS QUENCHES IN SERIES-CONNECTED 2G YBCO COILS OF DC REACTOR TYPE SFCL** *E.*

LEE[1], T. KO[1], M. AHN[2], Y. YOON[3], J. JANG[1]; [1]YONSEI UNIVERSITY, [2]KUNSAN NATIONAL UNIVERSITY, [3]ANSAN COLLEGE OF TECHNOLOY.

20:00 1LPM-06 / 195 **WITHDRAWN**

20:00 1LPM-07 / 196 **HTS TAPES COOLED BY LIQUID NITROGEN AT CURRENT OVERLOADS** *S. FETISOV, V. ZUBKO, V. VYSOTSKY;* RUSSIAN SCIENTIFIC R&D CABLE INSTITUTE.

20:00 1LPM-08 / 197 WITHDRAWN

1LPN: 294 SMES *EXHIBIT HALL* JOHN PFOTENHAUER (UNIVERSITY OF WISCONSIN - MADISON) AND KOJI SHIKIMACHI (CHUBU ELECTRIC POWER CO., INC.)

20:00 1LPN-01 / 198 **OPERATIONAL LOSS CHARACTERISTIC ANALYSIS OF 10KJ CLASS TOROIDAL-TYPE SMES** *K. KIM[1], A. KIM[1], M. PARK[1], I. YU[1], B. EOM[2], K. SIM[2], H. KIM[2], J. BAE[2], K. SEONG[2];* [1]CHANGWON NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

20:00 1LPN-02 / 199 **TEST RESULTS OF 30 KVA / 10 KJ SMES FOR VOLTAGE SAG COMPENSATION** *T. JANOWSKI[1], S. KOZAK[2], J. KOZAK[2], G. WOJTASIEWICZ[2], B. KONDRATOWICZ-KUCEWICZ[2], M. MAJKA[2];* [1]LUBLIN UNIVERSITY OF TECHNOLOGY, [2]ELECTROTECHNICAL INSTITUTE IN WARSAW.

20:00 1LPN-03 / 200 **THE ELECTROMAGNETIC ANALYSIS AND STRUCTURE DESIGN OF A 1 MJ MAGNET FOR SMES** *J. ZHANG, S. DAI;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

20:00 1LPN-04 / 201 **UNIT COIL DEVELOPMENT FOR Y-SMES** *K. SHIKIMACHI, T. TAMADA, M. NARUSE, N. HIRANO, S. NAGAYA;* CHUBU ELECTRIC POWER CO., INC..

20:00 1LPN-05 / 202 **ANALYSIS OF EDDY CURRENT LOSSES AND MAGNETIZATION LOSSES IN TOROIDAL MAGNETS FOR A 2.5 MJ HTS SMES** *S. LEE[1], S. H. PARK[1], J. K. LEE[2], W. S. KIM[3], S. J. LEE[4], J. H. BAE[5], K. C. SEONG[5], S. H. KIM[5], C. PARK[6], K. CHOI[1], S. HAHN[7];* [1]KOREA POLYTECHNIC UNIVERSITY, [2]WOOSUK UNIVERSITY, [3]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [4]UIDUK UNIVERSITY, [5]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [6]SEOUL NATIONAL UNIVERSITY, [7]ELECTRICAL ENGINEERING AND SCIENCE RESEARCH INSTITUTE.

20:00 1LPN-06 / 203 **SIMULTANEOUS OPTIMIZATION OF SMES COIL SIZE AND CONTROL PARAMETERS FOR ROBUST POWER SYSTEM STABILIZATION** *I. NGAMROO;* KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG.

20:00 1LPN-07 / 204 **ANALYSIS OF STRESS DISTRIBUTION IN HELICAL COILS WITH GEODESIC WINDINGS BASED ON VIRIAL THEOREM** *H. TSUTSUI, S. NOMURA, S. TSUJI-IIO, R. SHIMADA;* TOKYO INSTITUTE OF TECHNOLOGY.

20:00 1LPN-08 / 205 **A DUAL MODE CONTROL STRATEGY OF SMES FOR MULTIFUNCTIONAL APPLICATION** *W. GUO, L. XIAO, S. DAI, Z. ZHANG, L. LIN;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

1MPA: 213 COATED CONDUCTORS: BUFFERS *EXHIBIT HALL* MASASHI MUKAIDA (KYUSHU UNIVERSITY) AND NAOJI KASHIMA (CHUBU ELECTRIC POWER CO., INC.)

20:00 1MPA-01 / 206 **THE OXIDATION BEHAVIOUR AT THE NI-W AND CEO2 INTERFACE WITH AND WITHOUT PD OVER LAYER** *A. MANCINI[1], G. CELENTANO[1], A. VANNOZZI[1], V. GALLUZZI[1], A. RUFOLONI[1], A. AUGIERI[1], A. ANGRISANI ARMENIO[1], S. GAUDIO[1], I. COLANTONI[2], I. DAVOLI[2];* [1]ENEA, [2]ROMA TOR VERGATA UNIVERSITY.

20:00 1MPA-02 / 207 **DEPOSITION OF SELF-EPITAXIAL CEO2 BUFFER LAYER ON MGO SUBSTRATES BY PLD FOR COATED CONDUCTOR** *R. KO[1], K. KO[2], S. JANG[1], S. OH[1], C. PARK[2], H. HA[1], H. KIM[1], D. HA[1], K. SONG[3], S. KANG[3], Y. KIM[4];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]SEOUL NATIONAL UNIVERSITY, [3]CHONBUK NATIONAL UNIVERSITY, [4]PUSAN NATIONAL UNIVERSITY.

20:00 1MPA-03 / 208 **PREPARATION OF CEO2 BUFFER LAYER BY ELECTRON BEAM EVAPORATION DEPOSITION ON LMO BUFFERD IBAD-MGO** *J. LEE[1], S. PARK[1], S. MOON[2], H. LEE[1], G. HONG[1];* [1]KOREA POLYTECHNIC UNIVERSITY, [2]SUNAM CO., LTD..

20:00 1MPA-04 / 209 **FABRICATION OF THE THICK CEO2/LA[2]ZR[2]O7 (LZO) BUFFER LAYERS THROUGH SEED LAYER MODIFICATION USED FOR COATED CONDUCTORS** *Y. CHENG, H. SUO;* BEIJING UNIVERSITY OF TECHNOLOGY.

20:00 IMPA-05 / 210 **SURFACE DECORATION OF BATIO3 ON LAALO3 SUBSTRATE BY CHEMICAL SOLUTION DEPOSITION** *D. SHI[1], L. WANG[1], Q. LI[1], C. STEVEN[2], T. YAMASHITA[2], J. BARRY[2], S. DOU[1];* [1]INSTITUTE FOR SUPERCONDUCTING & ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, [2]MESAPLEXX PTY LTD, 7 CLUNIES ROSS COURT, EIGHT MILE PLAINS, QLD 4113, AUSTRALIA.

20:00 IMPA-06 / 211 **ADVANCED BUFFER LAYER ARCHITECTURES PREPARED BY CHEMICAL SOLUTION DEPOSITION** *M. BAECKER[1], M. STEFFENS[1], J. KUNERT[1], C. EDNEY[2], D. WESOLOWSKI[2], P. CLEM[2];* [1]ZENERGY POWER GMBH, [2]SANDIA NL.

20:00 IMPA-07 / 212 **OPTIMIZATION OF THE INITIAL STAGE OF MAGNESIUM OXIDE TEMPLATE FILM TEXTURE DEVELOPMENT USING ION ASSIST BEAM DEPOSITION FOR HTS COATED CONDUCTORS** *J. R. GROVES[1], V. MATIAS[2], L. STAN[2], R. F. DEPAULA[2], R. H. HAMMOND[1], B. M. CLEMENS[1];* [1]STANFORD UNIVERSITY, [2]LOS ALAMOS NATIONAL LABORATORY.

20:00 IMPA-08 / 213 **STUDY OF (00L) TILTING OF IBAD MGO AND DEVELOPMENT OF IBAD AND BUFFER PROCESSES ON PLANARIZED SUBSTRATES** *X. XIONG[1], Y. QIAO[1], A. RAR[1], S. KIM[1], M. JONES[1], J. CAO[2], G. SHI[2], V. SELVAMANICKAM[2];* [1]SUPERPOWER INC, [2]UNIVERSITY OF HOUSTON.

IMPB: 219 COATED CONDUCTORS: BUFFERS AND PROCESSING *EXHIBIT HALL* TSUTOMU KOIZUMI (SWCC SHOWA ELECTRIC CABLE SYSTEMS CO., LTD.) AND RON FEENSTRA (OAK RIDGE NATIONAL LABORATORY)

20:00 IMPB-01 / 214 **STUDY OF MGO-BASED BUFFER LAYER ARCHITECTURE FOR THE DEVELOPMENT OF ALTERNATIVE YBCO COATED CONDUCTOR** *A. VANNOZZI[1], V. GALLUZZI[1], A. MANCINI[1], A. RUFOLONI[1], A. AUGIERI[1], A. ANGRISANI ARMENIO[1], S. GAUDIO[1], L. CIONTEA[2], G. THALMAIER[2], T. PETRISOR[2], G. CELENTANO[1];* [1]ENEA, [2]U.T. CLUJ.

20:00 IMPB-02 / 215 **STUDIES OF MULTI-LAYER CE0.^{8}GD0.^{2}O1.9 (CGO) THICK FILMS DEPOSITED ON HOME-MADE TEXTURED NIW SUBSTRATES BY A SIMPLE METAL-ORGANIC DEPOSITION TECHNIQUE** *M. LIU;* BEIJING UNIVERSITY OF TECHNOLOGY.

20:00 IMPB-03 / 216 **PREPARATION OF A NOVEL CE1-XLAXO2 /GD^{2}ZR^{2}O7 BUFFER LAYER STACK ON NIW ALLOY SUBSTRATES BY THE MOD ROUTE** *Y. ZHAO[1], D. PAVLOPOULOS[1], A. ABRAHAMSEN[1], J. GRIVEL[1], M. ZIMMERMANNZ[2];* [1]RISØ DTU, [2]HAMBURGER SYNCHROTRONSTRAHLUNGSLABOR, DEUTSCHES ELEKTRONEN-SYNCHROTRON,.

20:00 IMPB-04 / 217 **MOCVD OF YBCO AND OXIDE BUFFER LAYERS ON TEXTURED NI-TAPES** *O. STADEL[1], R. MUYDINOV[2], J. SCHMIDT[1], H. KEUNE[1], G. BRÄUER[2];* [1]PERCOTECH AG, [2]TECHNICAL UNIVERSITY OF BRAUNSCHWEIG.

20:00 IMPB-05 / 218 **INK-JET PRINTING OF FLUORINE-FREE WATER-BASED PRECURSORS FOR COATED CONDUCTORS** *I. VAN DRIESSCHE[1], J. FEYS[1], M. BÄCKER[2], K. DE BUYSSER[1], P. LOMMENS[1], V. CLOET[1], P. VERMEIR[1], I. CARDINAEL[1], N. VAN DE VELDE[1], V. NARAYANAN[1], B. GLOWACKI[3];* [1]GHENT UNIVERSITY, BELGIUM, [2]ZENERGY POWER GMBH, GERMANY, [3]CAMBRIDGE UNIVERSITY, UK.

20:00 IMPB-06 / 219 **DEVELOPMENT OF SIMPLIFIED BUFFER ARCHITECTURES BASED ON IBAD-TIN FOR COATED CONDUCTOR APPLICATIONS** *R. GÄRTNER, R. HÜHNE, L. SCHULTZ, B. HOLZAPFEL;* IFW DRESDEN.

20:00 IMPB-07 / 220 **INFLUENCE OF BUFFER LAYER SURFACE MORPHOLOGY ON YBCO CRITICAL CURRENT DENSITY DEPOSITED ON NIW TAPES** *Y. LI, L. LIU, Z. ZHAO, H. LIU;* SHANGHAI JIAO TONG UNIVERSITY.

20:00 IMPB-08 / 221 **DEVELOPMENT OF ALL-CSD PROCESSES FOR COATED CONDUCTORS AT NEXANS: LIMITATIONS AND POSSIBLE SOLUTIONS** *M. O. RIKEL, J. EHRENBERG, M. KLEIN, S. MAHACHI, B. HOPPE, J. SCHUETZ, J. BOCK;* NEXANS SUPERCONDUCTORS.

IMPC: 220 COATED CONDUCTORS: PROCESSING *EXHIBIT HALL* MARK RIKEL (NEXANS SUPERCONDUCTORS) AND ALBERTO CALLEJA (ICMAB-CSIC)

20:00 IMPC-01 / 222 WITHDRAWN

20:00 IMPC-02 / 223 **THICKNESS DEPENDENCE OF THE CRITICAL-CURRENT DENSITY AND ITS RELATION TO THE NEAR-INTERFACE CRYSTAL IMPERFECTION IN FLUORINE-FREE-MOD YBCO FILMS** *H. MATSUI, K. TSUKADA, T. TSUCHIYA, M. SOHMA, I. YAMAGUCHI, T. MANABE, T. KUMAGAI;*

NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY (AIST).

20:00 1MPC-03 / 224 **WITHDRAWN**

20:00 1MPC-04 / 225 **DEVELOPMENT OF TFAYBCO COATED CONDUCTORS ON ABADYSZ SUBSTRATES** *R. VLAD[1], A. POMAR[1], A. PALAU[1], A. CALLEJA[1], T. PUIG[1], X. OBRADORS[1], A. USOSKIN[2], B. HOLZAPFEL[3], R. HÜHNE[3];* [1]INSTITUT DE CIÈNCIA DE MATERIALS DE BARCELONA, ICMAB-CSIC, CAMPUS UAB, 08193, BELLATERRA, SPAIN, [2]BRUKER HTS GMBH, SIEMENSSTR 88, 63755 ALZENAU, GERMANY, [3]IFW DRESDEN, HELMHOLTZSTRASSE 20, D-01069 DRESDEN,GERMANY.

20:00 1MPC-05 / 226 **SURFACE PLANARIZATION OF HASTELLOY SUBSTRATE BY USING Y^2O3 SOLUTION DEPOSITION** *J. L. PARK[1], O. J. KWON[1], K. E. KO[1], J. Y. KIM[1], S. S. OH[2], C. PARK[1];* [1]SEOUL NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE (KERI).

20:00 1MPC-06 / 227 **DEPOSITION OF YBCO THIN FILM BY AEROSOL ASSISTED SPRAY PYROLYSIS USING LOW COST METAL PRECURSORS** *B. J. KIM[1], J. G. KIM[2], J. H. KIM[2], S. X. DOU[2], H. G. LEE[1], G. W. HONG[1];* [1]KOREA POLYTECHNIC UNIVERSITY, [2]ISEM, UNIVERSITY OF WOLLONGONG.

20:00 1MPC-07 / 228 **CHEMICAL SOLUTIONS AND DEPOSITION SYSTEMS FOR BUFFER LAYERS AND YBCO-TFA GROWTH FOR COATED CONDUCTOR ARCHITECTURES** *A. CALLEJA, S. RICART, X. GRANADOS, C. F. SÁNCHEZ VALDÉS, M. VILARDELL, T. PUIG, X. OBRADORS;* INSTITUT DE CIÈNCIA DE MATERIALS DE BARCELONA-CSIC.

20:00 1MPC-08 / 229 **ANALYSIS OF YBCO PHASE FORMATION IN THIN FILMS GROWN USING A METAL PROPIONATE COATING SOLUTION** *A. ANGRISANI ARMENIO[1], G. CELENTANO[1], V. GALLUZZI[1], A. MANCINI[1], A. AUGIERI[1], A. RUFOLONI[1], S. GAUDIO[1], A. VANNOZZI[1], T. PETRISOR[2], L. CIONTEA[2], G. CONTINI[3], I. DAVOLI[4];* [1]ENEA, [2]TECHNICAL UNIVERSITY OF CLUJ-NAPOCA, [3]ISTITUTO DI STRUTTURA DELLA MATERIA—CNR, [4]UNIVERSITÀ DI ROMA 'TOR VERGATA'.

1MPD: 221 COATED CONDUCTORS: PROCESSING AND PERFORMANCE I *EXHIBIT HALL* SERGEY LEE (SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC) AND VENKAT SELVAMANICKAM (UNIVERSITY OF HOUSTON)

20:00 1MPD-01 / 230 **DEVELOPMENT OF THE LONG YBCO COATED CONDUCTOR USING TFA-MOD PROCESS** *T. KOIZUMI[1], K. KIMURA[1], T. NAKANISHI[1], Y. AOKI[1], N. AOKI[1], T. HASEGAWA[1], Y. IIJIMA[2], T. SAITOH[2], Y. TAKAHASHI[3], Y. MASATERU[3], S. MIYATA[3], Y. YAMADA[3], T. IZUMI[3], Y. SHIOHARA[3];* [1]SWCC SHOWA CABLE SYSTEMS CO., LTD., [2]FUJIKURA LTD., [3]ISTEC-SRL.

20:00 1MPD-02 / 231 **WITHDRAWN**.

20:00 1MPD-03 / 232 **SMBCO/IBAD-MGO COATED CONDUCTORS FABRICATED BY CO-EVAPORATION AND EX-SITU CONVERSION PROCESS** *H. HA[1], S. OH[1], J. MAEONG[2], Y. YUN[1], H. KIM[1], R. KO[1], D. HA[1], S. MOON[1], C. PARK[3];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]GYEONGSANG NATIONAL UNIVERSITY, [3]SEOUL NATIONAL UNIVERSITY.

20:00 1MPD-04 / 233 **SUPERCONDUCTING PROPERTIES OF COATED CONDUCTORS ON TEXTURED HIGHLY ALLOYED NI-W TAPES** *J. HAENISCH, R. HÜHNE, J. EICKEMEYER, T. D. THERSLEFF, A. KAUFFMANN, J. FREUDENBERGER, L. SCHULTZ, B. HOLZAPFEL;* IFW DRESDEN, HELMHOLTZSTR. 20, 01069 DRESDEN, GERMANY.

20:00 1MPD-05 / 234 **FABRICATION OF $GD^1BA^2CU^3OX$ COATED CONDUCTORS FOR HTS CABLES** *K. ABIRU, Y. SHINGAI, M. KONISHI, K. OHMATSU;* SUMITOMO ELECTRIC INDUSTRIES, LTD.

20:00 1MPD-06 / 235 **NOVEL YBCO GROWTH ON CARBON NANOTUBE STRUCTURES** *A. IGNATIEV[1], X. ZHANG[1], J. BYKOVA[2], E. GALSTYAN[2], A. KUZNETSOV[2], B. MIRKHAIDAROV[2], A. HOWARD[2], A. ZAKHIDOV[2];* [1]UNIVERSITY OF HOUSTON, [2]UNIVERSITY OF TEXAS AT DALLAS.

20:00 1MPD-07 / 236 **THE DEVELOPMENT OF DOUBLE-SIDED COATED CONDUCTOR** *B. W. TAO[1], J. XIONG[2], X. H. ZHAO[1], Y. D. XIA[1], N. ZHANG[1], F. ZHANG[1], Y. R. LI[1];* [1]UESTC, [2]LANL.

20:00 1MPD-08 / 237 **POSSIBILITY OF ND:YAG-PLD METHOD FOR FABRICATING REBCO COATED CONDUCTOR** *Y. ICHINO[1], Y. YOSHIDA[2], T. YOSHIMURA[2], Y. KANAZAWA[2], Y. TAKAI[2], M. YOSHIZUMI[3], T. IZUMI[3], Y. SHIOHARA[3];* [1]ECOTOPIA

SCIENCE INSTITUTE, NAGOYA UNIVERSITY, [2]DEPT. OF ENERGY ENGINEERING AND SCIENCE, NAGOYA UNIVERSITY, [3]SUPERCONDUCTIVITY RESEARCH LABORATORY.

20:00 1MPD-09 / 238 **PUSHING COATED CONDUCTOR CRITICAL CURRENTS BEYOND 1 KA PER CM WIDTH: STACKS OF YBCO LAYERS** *Y. JUNG, C. J. SHEEHAN, J. Y. COULTER, V. MATIAS;* SUPERCONDUCTIVITY TECHNOLOGY CENTER, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM 87545, USA.

1MPE: 222 COATED CONDUCTORS: PROCESSING AND PERFORMANCE II *EXHIBIT HALL* TOLGA AYTUG (OAK RIDGE NATIONAL LABORATORY) AND ALEXANDER USOSKIN (BRUKER HTS GMBH)

20:00 1MPE-01 / 239 **THE MAGNETIC PROPERTIES OF SMBCO COATED CONDUCTOR ON IBAD-MGO TEMPLATE FABRICATED BY EDDC** *K. SONG[1], S. KANG[1], R. KO[2], H. KIM[2], H. HA[2], S. OH[2], S. MOON[3], C. PARK[4], S. YOO[4];* [1]CHONBUK NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [3]SUNAM CO., LTD, [4]SEOUL NATIONAL UNIVERSITY.

20:00 1MPE-02 / 240 **ADVANCED FAST RCE PROCESS FOR REBCO COATED CONDUCTOR** *J. LEE, S. YOON, H. LEE, S. MOON;* SUNAM CO.,LTD.

20:00 1MPE-03 / 241 **COATED CONDUCTORS OF YBA^{2}CU^{3}O7-Δ (YBCO) USING PECHINI´S SOLUTION** *P. A. GARCÉS, M. B. LÓPEZ, A. MARIÑO;* UNIVERSIDAD NACIONAL DE COLOMBIA.

20:00 1MPE-04 / 242 **INK-JET PRINTING OF WATER-BASED YBCO COATINGS AND PATTERNS** *P. VERMEIR[1], J. FEYS[1], I. CARDINAEL[1], S. HOPKINS[2], J. BENNEWITZ[3], P. LOMMENS[1], K. DE BUYSSER[1], I. VAN DRIESSCHE[1];* [1]GHENT UNIVERSITY, BELGIUM, [2]UNIVERSITY OF CAMBRIDGE, UK, [3]ZENERGY POWER GMBH, GERMANY.

20:00 1MPE-05 / 243 **EX-SITU CONVERSION OF CO-EVAPORATED PRECURSORS FOR FABRICATING SMBCO COATED CONDUCTORS** *J. LEE[1], K. KO[1], H. KIM[2], S. MOON[2], H. HA[3], S. OH[3], S. YOO[1];* [1]DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING, SEOUL NATIONAL UNIVERSITY, KOREA, [2]SUPERCONDUCTOR, NANO & ADVANCED MATERIALS CORPORATION, ANYANG, KOREA, [3]SUPERCONDUCTIVITY RESEARCH CENTER, KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, CHANGWON, KOREA.

20:00 1MPE-06 / 244 **VECTOR MAGNETIC FIELD CRITICAL CURRENT CHARACTERIZATION OF HTS COATED CONDUCTORS DEPOSITED ON SOLUTION DEPOSITION PLANARIZED IBAD** *D. REAGOR[1], J. COULTER[1], F. BACA[1], T. G. HOLESINGER[1], V. MATIAS[1], C. SHEEHAN[1], B. MOECKLY[2];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]SUPERCONDUCTOR TECHNOLOGIES INC..

20:00 1MPE-07 / 245 **FABRICATION OF ROUND WIRE USING COATED CONDUCTOR FOR POWER APPLICATIONS** *H. HA[1], S. OH[1], Y. YUN[1], J. MAENG[2], K. SIM[1], S. KIM[1], J. CHO[1];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]GYEONGSANG NATIONAL UNIVERSITY.

20:00 1MPE-08 / 246 **FABRICATION AND CHARACTERIZATION OF GDBCO COATED CONDUCTOR USING CEO2-BUFFERED IBAD-MGO TEMPLATE** *K. KO[1], J. LEE[1], R. KO[2], H. KIM[3], S. MOON[3], S. OH[2], S. YOO[1];* [1]DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING, SEOUL NATIONAL UNIVERSITY, KOREA, [2]SUPERCONDUCTIVITY RESEARCH CENTER, KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, CHANGWON, KOREA, [3]SUPERCONDUCTOR, NANO & ADVANCED MATERIALS CORPORATION, ANYANG, KOREA.

1MPF: 218 COATED CONDUCTORS: SUBSTRATES AND BUFFERS *EXHIBIT HALL* GORAN MAJKIC (UNIVERSITY OF HOUSTON) AND PAUL CLEM (SANDIA NATIONAL LABORATORY)

20:00 1MPF-01 / 247 **NOVEL SUBSTRATE BASED ON TEXTURED CU {100}<001> FOR COATED CONDUCTORS** *N. KASHIMA[1], K. SHIMA[2], S. KUBOTA[2], S. NAGAYA[1], T. DOI[3], M. INOUE[4], T. KISS[4];* [1]CHUBU ELECTRIC POWER CO., INC., [2]TANAKA KIKINZOKU KOGYO K. K., [3]KAGOSHIMA UNIVERSITY, [4]KYUSHU UNIVERSITY.

20:00 1MPF-02 / 248 **FABRICATION OF THE TEXTURED NI-9.3AT.%W ALLOY SUBSTRATE USED FOR COATED CONDUCTORS** *H. SUO1, M. GAO1, P. GAO1, Y. ZHAO1, J. GRIVEL[2];* [1]BEIJING UNIVERSITY OF TECHNOLOGY, [2]DTU RISØ NATIONAL LABORATORY.

20:00 1MPF-03 / 249 **FABRICATION A TEXTURED NON-MAGNETIC NI-12AT.%V ALLOY SUBSTRATE FOR COATED CONDUCTORS** *M. GAO;* BEIJING UNIVERSITY OF TECHNOLOGY.

20:00 1MPF-04 / 250 **PREPARATION OF SMOOTH METAL SUBSTRATE BY WET-CHEMICAL COATING METHOD** *J. LEE[1], S. PARK[1], S. MOON[2], H. LEE[1], G. HONG[1];* [1]KOREA POLYTECHNIC UNIVERSITY, [2]SUNAM CO., LTD..

20:00 1MPF-05 / 251 **LZO AS A PROTECTIVE BARRIER AGAINST OXIDATION OF NIW SUBSTRATES** *S. PETIT, J. L. SOUBEYROUX, M. MIKOLAJCZYK, N. DECHOUX, S. PAIRIS, P. ODIER;* CNRS.

20:00 1MPF-06 / 252 **STUDY OF CSD BUFFER LAYERS AND THEIR BUFFER CAPACITY IN COATED CONDUCTORS** *I. VAN DRIESSCHE[1], N. VAN DE VELDE[1], V. NARAYANAN[1], P. LOMMENS[1], K. DE BUYSSER[1], M. BÄCKER[2];* [1]GHENT UNIVERSITY, BELGIUM, [2]ZENERGY POWER GMBH, GERMANY.

20:00 1MPF-07 / 253 **SOLUTION DERIVED SM^2O3 BUFFER LAYERS ON BIAXIALLY TEXTURED NI-W SUBSTRATES FOR YBCO COATED CONDUCTOR** *L. WANG[1], D. SHI[1], X. ZHU[2], Q. LI[1], S. DOU[1];* [1]INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, [2]KEY LABORATORY OF MATERIALS PHYSICS, INSTITUTE OF SOLID STATE PHYSICS, CHINESE ACADEMY OF SCIENCES.

20:00 1MPF-08 / 254 **REEL-TO-REEL COPPER ELECTROPLATING ON PLD COATED CONDUCTOR** *U. FLOEGEL-DELOR[1], F. N. WERFEL[1], T. RIEDEL[1], D. WIPPICH[1], B. GOEBEL[1], R. ROTHFELD[1], P. SCHIRRMEISTER[1], A. USOSKIN[2], A. RUTT[2];* [1]ADELWITZ TECHNOLOGIEZENTRUM GMBH (ATZ), [2]BRUKER HTS GMBH.

1MPG: 208 LTS THIN FILMS AND MULTILAYERS *EXHIBIT HALL* JEAN-CLAUDE VILLEGIER (CEA-GRENOBLE) AND TIMOTHY HAUGAN (U.S. AIR FORCE RESEARCH LABORATORY)

20:00 1MPG-01 / 255 **GROWTH OF SUPERCONDUCTING FILMS BY ATOMIC LAYER DEPOSITION** *J. A. KLUG, T. PROSLIER, J. W. ELAM, M. J. PELLIN, J. NOREM;* ARGONNE NATIONAL LABORATORY.

20:00 1MPG-02 / 256 **AMORPHOUS AND CRYSTALLINE MAGNETIC/SUPERCONDUCTING HYBRIDS: INTERPLAY BETWEEN PERIODIC DEFECTS AND RANDOM DEFECTS** *A. GOMEZ[1], D. PEREZ DE LARA[1], A. ALIJA[2], E. M. GONZALEZ[1], J. I. MARTIN[2], M. VELEZ[2], J. L. VICENT[1];* [1]UNIVERSIDAD COMPLUTENSE, [2]UNIVERSIDAD OVIEDO.

20:00 1MPG-03 / 257 WITHDRAWN

20:00 1MPG-04 / 258 **ADVANCEMENTS IN EPITAXIAL TRILAYER GROWTH UTILIZING NB/RE BILAYERS ON SAPPHIRE** *P. B. WELANDER;* MIT LINCOLN LABORATORY.

20:00 1MPG-05 / 259 **GIANT CONDUCTANCE ANISOTROPY IN MAGNETICALLY COUPLED F/S/F STRUCTURES** *G. KARAPETROV[1], A. BELKIN[2], M. IAVARONE[3], R. DIVAN[1], J. HILLER[1], T. PROSLIER[1], J. E. PEARSON[1], V. NOVOSAD[1];* [1]ARGONNE NATIONAL LABORATORY, [2]ARGONNE NATIONAL LABORATORY AND ILLINOIS INSTITUTE OF TECHNOLOGY, [3]TEMPLE UNIVERSITY.

TUESDAY, AUGUST 03, 2010

08:00 ORAL SESSIONS

2EA: 159 TES INSTRUMENTATION AND LOW ENERGY CALORIMETERS *EXECUTIVE* W. DORIESE (NIST) AND SIMON BANDLER (UNIVERSITY OF MARYLAND & NASA/GSFC)

08:00 2EA-01 ***(INVITED)*** **DETECTION OF SINGLE 8-μM PHOTONS USING A NANO-HEB DETECTOR** *S. PEREVERZEV[1], B. KARASIK[1], A. SOIBEL[1], D. OLAYA[2], D. SANTAVICCA[3], F. CARTER[3], D. PROBER[3], M. GERSHENSON[4], A. SERGEEV[5];* [1]JET PROPULSION LABORATORY/CALTECH, [2]NIST, [3]YALE UNI., [4]RUTGERS UNI., [5]SUNY AT BUFFALO.

08:30 2EA-02 **98 % QUANTUM EFFICIENCY PHOTON NUMBER RESOLVING TES DETECTORS WITH MULTI-LAYERED OPTICAL RESONATOR** *D. FUKUDA[1], G. FUJII[1], T. NUMATA[1], K. AMEMIYA[1], A. YOSHIZAWA[1], H. TSUCHIDA[1], H. FUJINO[1], H. ISHII[1], T. ITATANI[1], S. INOUE[2];* [1]AIST, [2]NIHON UNIV..

08:45 2EA-03 **HIGH EFFICIENCY PHOTON COUNTING TRANSITION EDGE SENSORS OPTIMIZED FOR ABSORPTION AT 810NM** *S. NAM[1], A. E. LITA[1], B. CALKINS[2], L. A. PELLOCHOUD[1], T. GERRITS[1], A. MIGDALL[1];* [1]NIST, [2]UNIVERSITY OF COLORADO, BOULDER AND NIST.

09:00 2EA-04 **AN 850 MICRON HIGH RESOLUTION, HIGH SENSITIVITY, PASSIVE VIDEO IMAGING SYSTEM USING TRANSITION EDGE SENSORS** *D. T. BECKER[1], J. A. BEALL[1], H. M. CHO[1], W. D. DUNCAN[1], G. C. HILTON[1], R. D. HORANSKY[1], K. D. IRWIN[1], P. LOWELL[1], M. D. NIEMACK[1], C. D. REINTSEMA[1], F. SCHIMA[1], R. E. SCHWALL[1], K. W. YOON[1], P. A. ADE[2], C. E. TUCKER[1];* [1]NIST-BOULDER, [2]CARDIFF UNIVERSITY.

09:15 2EA-05 **LABOCA-2 - A MULTIPLEXED 300 CHANNEL BOLOMETER CAMERA FOR 870 MICROMETER WAVELENGTH** *T. MAY[1], V. ZAKOSARENKO[1], E. HEINZ[1], K. PEISELT[1], A. KRUEGER[1], S. ANDERS[1], H. MEYER[1], E. KREYSA[2], W. ESCH[2], G. LUNDERSHAUSEN[2];* [1]INSTITUTE OF PHOTONIC TECHNOLOGY, [2]MAX-PLANCK INSTITUTE FOR RADIOASTRONOMY.

09:30 2EA-06 **DEVELOPMENT OF MULTILAYER READOUT WIRING FOR LARGE-FORMAT TES X-RAY MICROCALORIMETER ARRAYS** *Y. EZOE[1], Y. ISHISAKI[1], H. YOSHITAKE[2], N. SEKIYA[2], S. OISHI[1], Y. ABE[1], H. AKAMATSU[1], Y. TAKEI[2], N. Y. YAMASAKI[2], K. MITSUDA[2], T. OHASHI[1], T. MOROOKA[3], K. TANAKA[4];* [1]TOKYO METROPOLITAN UNIVERSITY, [2]ISAS/JAXA, [3]SEIKO INSTRUMENTS INC., [4]SEIKO NANOTECHNOLOGY INC..

09:45 2EA-07 **HIGH POWER ELECTRON TUNNELING REFRIGERATORS OPTIMIZED FOR MAXIMAL COOLING** *P. J. LOWELL, G. C. O'NEIL, J. M. UNDERWOOD, J. N. ULLOM;* NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.

2EB: 146 MIXED SIGNAL CIRCUITS I

DIPLOMAT QUENTIN HERR (NGC) AND NOBUYUKI YOSHIKAWA (YOKOHAMA NATIONAL UNIVERSITY)

08:00 2EB-01 ***(INVITED)*** **DESIGN AND DEMONSTRATION OF A 4-BIT FLASH-TYPE SFQ A/D CONVERTER INTEGRATED WITH ERROR CORRECTION AND INTERLEAVE CIRCUITS** *H. SUZUKI[1], M. OIKAWA[1], K. NISHII[1], K. ISHIHARA[2], K. FUJIWARA[3], M. MARUYAMA[4], M. HIDAKA[1];* [1]ISTEC/SRL, [2]TOKYO DENKI UNIVERSITY, [3]ISTEC/SRL, SANDISK LIMITED JAPAN (CURRENT AFFILIATION), [4]ISTEC/SRL, AIST (CURRENT AFFILIATION).

08:30 2EB-02 ***(INVITED)*** **MULTI-BAND DIGITAL RF RECEIVER** *S. SARWANA, D. KIRICHENKO, V. DOTSENKO, A. F. KIRICHENKO, S. B. KAPLAN, D. GUPTA;* HYPRES INC..

09:00 2EB-03 **MULTITONE WAVEFORM SYNTHESIS WITH A QUANTUM VOLTAGE NOISE SOURCE** *S. BENZ, P. DRESSELHAUS, C. BURROUGHS;* NIST.

09:15 2EB-04 **OPTIMIZATION OF JOSEPHSON JUNCTION COMPARATORS IN TERMS OF SPEED AND ACCURACY** *B. EBERT, T. ORTLEPP;* ILMENAU UNIVERSITY OF TECHNOLOGY.

09:30 2EB-05 **EVENT-DRIVEN DUAL CHANNEL OVERSAMPLED ANALOG-TO-DIGITAL CONVERTER FOR A DETECTOR SYSTEM** *A. FUJIMAKI, Y. HOGASHI, S. MIYAJIMA, T. KUSUMOTO;* NAGOYA UNIVERSITY.

09:45 2EB-06 **10 VOLT PROGRAMMABLE JOSEPHSON VOLTAGE STANDARD CIRCUITS USING NBSI-BARRIER JUNCTIONS** *P. D. DRESSELHAUS, M. M. ELSBURY, D. OLAYA, C. J. BURROUGHS, S. P. BENZ;* NIST.

2EC: 172 ULF-NMR/MRI AND BIO APPLICATIONS I

HAMPTON THOMAS SCHURIG (PTB BERLIN) AND KEIJI ENPUKU (KYUSHU UNIVERSITY)

08:00 2EC-01 ***(INVITED)*** **CO-REGISTRATION OF MEG AND ULF MRI USING A 7 CHANNEL LOW-TC SQUID SYSTEM** *P. MAGNELIND, H. SANDIN, P. VOLEGOV, A. MATLASHOV, T. OWENS, J. GOMEZ, M. ESPY;* LOS ALAMOS NATIONAL LABORATORY.

08:30 2EC-02 **FIELD-TOLERANT SQUID SENSORS FOR A COMBINED MEG-MRI SYSTEM** *J. LUOMAHAARA[1], J. HASSEL[1], J. PENTTILÄ[2], M. KIVIRANTA[1], L. GRÖNBERG[1];* [1]TECHNICAL RESEARCH CENTER OF FINLAND, [2]AIVON OY.

08:45 2EC-03 **ULTRALOW FIELD MRI AT 132 μT FOR THE DETECTION OF TUMORS** *S. BUSCH[1], M. HATRIDGE[1], T. WONG[1], M. MOESSLE[1], K. CHEW[2], J. SIMKO[2], A. PINES[1], J. CLARKE[1];* [1]UC BERKELEY/LBNL, [2]UC SAN FRANCISCO.

09:00 2EC-04 **LOW-FIELD NUCLEAR MAGNETIC RESONANCE AND MAGNETIC RESONANCE IMAGING USING HIGH-TC SQUID FOR TUMOR DETECTION** *H. C. YANG[1], S. H. LIAO[1], H. H. CHEN[2], H. E. HORNG[2], S. Y. YANG[3], K. W. HUANG[4], L. M. WANG[1], M. J. CHEN[1], K. L. CHEN[1];* [1]DEPARTMENT OF PHYSICS, NATIONAL TAIWAN UNIVERSITY, [2]INSTITUTE OF ELECTRO-OPTICAL SCIENCE AND TECHNOLOGY, NATIONAL TAIWAN NORMAL UNIVERSITY, [3]MAGQU

CO., LTD., [4]DEPARTMENT OF SURGERY AND ANGIOGENESIS CENTER, NATIONAL TAIWAN UNIVERSITY HOSPITAL AND NATIONAL TAIWAN UNIVERSITY COLLEGE OF MEDICINE.

09:30 2EC-06 **SQUIDS VS FARADAY COILS FOR ULTRA-LOW FIELD NUCLEAR MAGNETIC RESONANCE: EXPERIMENTAL AND SIMULATION COMPARISON** *A. N. MATLASHOV, M. A. ESPY, R. H. KRAUS, I. M. SAVUKOV, L. J. SCHULTZ, A. V. URBAITIS, P. L. VOLEGOV;* LOS ALAMOS NATIONAL LABORATORY.

09:45 2EC-07 **HTS COILS FOR MRI APPLICATIONS; ASSESSMENT OF SPLIT-RING AND COUNTER ROTATING CURRENTS DESIGNS** *J. WOSIK[1], K. NESTERUK[2], L. XIE[3], F. IP[4];* [1]UNIVERSITY OF HOUSTON, ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT AND TEXAS CTR. FOR SUPERCONDUCTIVITY, [2]INSTITUTE OF PHYSICS, POLISH ACADEMY OF SCIENCES, WARSAW, POLAND, [3]UNIVERSITY OF HOUSTON, [4]UNIVERSITY OF TEXAS, HEALTH SCIENCES CENTER, SAN ANTONIO, TEXAS, USA.

2LA: 131 NOVEL INSTRUMENTATION AND MEASUREMENTS

EMPIRE XIAORONG WANG (LAWRENCE BERKELEY NATIONAL LABORATORY) AND LEONID TKACHENKO (INSTITUTE FOR HIGH ENERGY PHYSICS (IHEP))

08:00 2LA-01 **STATISTICAL STUDY ON INHOMOGENEOUS CURRENT TRANSPORT PROPERTY OF COATED CONDUCTORS ALONG ITS LONGITUDINAL DIRECTION FOR POWER APPARATUS DEVELOPMENT** *Y. TAKAMURA[1], T. NAKAMURA[1], N. AMEMIYA[1], K. NAKAO[2], T. IZUMI[2];* [1]KYOTO UNIVERSITY, [2]ISTEC-SRL.

08:15 2LA-02 **A HYBRID, THREE-DIMENSIONAL FINITE ELEMENT MODEL OF QUENCH DYNAMICS IN AN YBA^{2}CU^{3}OX COATED-CONDUCTOR COIL BASED ON A MICROSCOPIC MIXED-DIMENSIONAL COATED CONDUCTOR TAPE MODEL** *W. CHAN[1], J. SCHWARTZ[2];* [1]DEPARTMENT OF MECHANICAL ENGINEERING, FAMU-FSU COLLEGE OF ENGINEERING AND DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING, NORTH CAROLINA STATE UNIVERSITY, [2]DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING, NORTH CAROLINA STATE UNIVERSITY.

08:30 2LA-03 **MULTI-PURPOSE FIBER OPTIC SENSORS FOR SUPERCONDUCTING MAGNETS: PROCESS MONITORING OF BI2SR2CACU2OX AND QUENCH DETECTION** *M. TURENNE[1], G. FLANAGAN[1], R. JOHNSON[1], F. HUNTE[2], J. SCHWARTZ[2];* [1]MUONS, INC., [2]NCSU.

08:45 2LA-04 **DETECTION SYSTEM FOR PROPAGATING NORMAL-ZONES WITH PICK-UP COILS IN THE LHD HELICAL COILS** *S. IMAGAWA, N. YANAGI, T. MITO;* NATIONAL INSTITUTE FOR FUSION SCIENCE.

09:00 2LA-05 WITHDRAWN

09:15 2LA-06 **BRITTLE SUPERCONDUCTING MAGNETS: AN EQUIVALENT STRAIN MODEL** *E. BARZI[1], M. DANUSO[2];* [1]FERMILAB, [2]FINMECCANICA.

09:30 2LA-07 **INTRODUCTION OF NONLINEAR PROPERTIES INTO HIERARCHICAL MODELS OF NB^{3}SN STRANDS** *B. COLLINS, J. KRISHNAN, D. ARBELAEZ, S. PRESTEMON, P. FERRACIN, A. GODEKE, D. DIETDERICH, G. SABBI;* LAWERENCE BERKELEY NATIONAL LABORATORY.

09:45 2LA-08 **A NOVEL OPTICAL GAUGE FOR MEASURING COIL STRAIN DURING THERMAL COOLDOWN AND ENERGIZATION OF A SUPERCONDUCTING COIL** *M. LAKRIMI, S. BAXTER, A. M. THOMAS, Y. GAO, H. BLAKES;* SIEMENS PLC, HEALTHCARE SECTOR, MR MAGNET TECHNOLOGY.

2LB: 124 FUSION I

PALLADIAN LUIGI MUZZI (ENEA) AND LOUIS ZANI (FUSION FOR ENERGY)

08:00 2LB-01 ***(INVITED)*** **ITER NB^{3}SN STRAND TESTING UNDER AXIAL STRAIN, SPATIAL PERIODIC BENDING AND CONTACT STRESS** *A. NIJHUIS[1], R. P. POMPE VAN MEERDERVOORT[1], F. LIU[2], H. J. G. KROOSHOOP[1], Y. MYOSHI[1], W. A. J. WESSEL[1];* [1]UNIVERSITY OF TWENTE, [2]ASIPP, HEFEI, CHINA.

08:30 2LB-02 **WITHDRAWN**

08:45 2LB-03 **DESIGN OF THE ITER PF COIL** *B. LIM[1], F. SIMON[1], Y. ILIN[1], C. GUNG[1], J. SMITH[2], Y. HSU[3], C. LUONGO[1], C. JONG[1], N. MITCHELL[1];* [1]ITER ORGANIZATION, [2]GENERAL ATOMICS, [3]GENERAL ATOMICS.

09:00 2LB-04 **DEVELOPMENT OF THE JOINTS FOR ITER CENTRAL SOLENOID** *N. N. MARTOVETSKY;* LLNL/ORNL.

09:45 2LB-05 **PERFORMANCE QUALIFICATION OF THE ITER TF MAGNET CONDUCTORS** *M. C. JEWELL[1], T. BOUTBOUL[2], K. KIM[3], A. KRIVYKH[4], N. MARTOVETSKY[5], K. OKUNO[6], Y. WU[7], A. VOSTNER[1], D. BESSETTE[1], A. DEVRED[1], N. MITCHELL[1];* [1]ITER ORGANIZATION, [2]FUSION FOR ENERGY (F4E), [3]NATIONAL FUSION RESEARCH INSTITUTE (NFRI), [4]KURCHATOV INSTITUTE, [5]ORNL US-ITER PROJECT OFFICE, [6]JAPAN ATOMIC ENERGY AGENCY (JAEA), [7]INSTITUTE OF PLASMA PHYSICS, CHINESE ACADEMY OF SCIENCES (ASIPP).

09:30 2LB-06 **SIMULATION OF THE INTERSTRAND COUPLING LOSSES IN A FULL-SIZE ITER CABLE-IN-CONDUIT CONDUCTOR** *E. P. A. VAN LANEN, A. NIJHUIS;* UNIVERSITY OF TWENTE.

09:15 2LB-07 **PREPARATION OF PF1/6 AND PF2 CONDUCTOR PERFORMANCE QUALIFICATION SAMPLES** *L. RECCIA[1], S. TURTÙ[1], G. POLLI[1], L. AFFINITO[1], A. DELLA CORTE[1], P. DECOOL[2], D. BESSETTE[3], A. DEVRED[3], A. VOSTNER[3], T. BOUTBOUL[4];* [1]ENEA, [2]CEA, [3]ITER, [4]F4E.

2MA: 111 BI-2212 AND BI-2223 WIRES AND TAPES I *BLUE* KEN MARKEN (LANL) AND ERIC HELLSTROM (APPLIED SUPERCONDUCTIVITY CENTER)

08:00 2MA-01 ***(INVITED)*** **RECENT R&D PROGRESS ON DI-BSCCO WIRES WITH HIGH CRITICAL CURRENT PROPERTIES** *T. NAKASHIMA, S. KOBAYASHI, T. KAGIYAMA, K. YAMAZAKI, M. KIKUCHI, S. YAMADE, E. SHIZUYA;* SUMITOMO ELECTRIC INDUSTRIES, LTD..

08:30 2MA-02 **LOCAL CURRENT TRANSPORT PROPERTIES IN 200A-CLASS BI-2223 MULTI-FILAMENTARY TAPES FABRICATED BY THE CONTROLLED OVER PRESSURE PROCESS** *T. KISS[1], K. HIGASHIKAWA[1], Y. HONDA[1], M. INOUE[1], M. KIKUCHI[2], S. KOBAYASHI[2], K. HAYASHI[2], K. SATO[2];* [1]KYUSHU UNIVERSITY, [2]SUMITOMO ELECTRIC INDUSTRIES, LTD..

08:45 2MA-03 **PROGRESS IN REDUCING AC LOSSES OF BI2223 TAPES WITH INTERFILAMENTARY RESISTIVE BARRIERS** *R. INADA[1], Y. OKUMURA[1], T. MAKIHARA[1], Y. NAKAMURA[1], A. OOTA[1], C. LI[2], P. ZHANG[2];* [1]TOYOHASHI UNIVERSITY OF TECHNOLOGY, [2]NORTHWEST INSTITUTE FOR NONFERROUS METAL RESEARCH.

09:00 2MA-04 **DEVELOPMENT OF A TEXTURED-POWDER BI-2212 CONDUCTOR** *K. DAMBORSKY, F. LU, P. MCINTYRE, N. POGUE, D. RAHMANI;* TEXAS A&M UNIVERSITY.

09:15 2MA-05 **CONNECTIVITY ISSUES IN MELT CAST PROCESSED BI2212 BULK MATERIALS** *M. O. RIKEL[1], S. ELSCHNER[2], A. HASENHUETL[1], M. KLEIN[1], J. BOCK[1];* [1]NEXANS SUPERCONDUCTORS, [2]UNIVERSITY OF APPLIED SCIENCE (MANNHEIM).

09:30 2MA-06 **PROCESSING ISSUES FOR BI^{2}SR^{2}CACU^{2}OX/AGMG ROUND WIRE: LENGTH, INSULATION AND PRE-ANNEALING EFFECTS** *X. LIU[1], F. HUNTE[1], J. SCHWARTZ[1], W. NACHTRAB[2], T. WONG[2];* [1]NCSU, [2]SUPERCON, INC.

09:45 2MA-07 **NUMERICAL INVESTIGATION OF THE QUENCH BEHAVIOR OF BI^{2}SR^{2}CACU^{2}OX WIRE** *D. ARBELAEZ[1], S. O. PRESTEMON[1], D. R. DIETDERICH[1], A. GODEKE[1], L. YE[2], F. HUNTE[2], J. SCHWARTZ[2];* [1]LAWRENCE BERKELEY NATIONAL LABORATORY, [2]NORTH CAROLINA STATE UNIVERSITY.

2MB: 117 HTS FLUX PINNING AND DYNAMICS I *BLUE PRE-FUNC.* MASASHI MIURA (LOS ALAMOS NATIONAL LABORATORY) AND MIKE OSOFSKY (NRL)

08:00 2MB-01 ***(INVITED)*** **MAGNETIC FIELD-ORIENTATION INDEPENDENCE OF LARGE BASAL PLANE CRITICAL CURRENTS IN RBCO FILMS WITH CORRELATED PINNING NANOSTRUCTURE** *D. K. CHRISTEN[1], Y. L. ZUEV[2], S. WEE[1], A. GOYAL[1], C. CANTONI[1], C. TARANTINI[3];* [1]OAK RIDGE NATIONAL LABORATORY, [2]UNIVERSITY OF TENNESSEE, [3]FLORIDA STATE UNIVERSITY NHMFL.

08:30 2MB-02 **PINNING PROPERTIES BAZRO3-YBA^{2}CU^{3}O7-X THIN FILMS DEPOSITED BY PLD AND MOD** *A. AUGIERI[1], V. GALLUZZI[1], A. ANGRISANI ARMENIO[1], A. MANCINI[1], A. RUFOLONI[1], A. VANNOZZI[1], S. GAUDIO[1], G. CELENTANO[1], E. SILVA[2], N. POMPEO[2], T. PETRISOR[3], L. CIONTEA[3];* [1]ENEA, [2]UNIVERSITÀ ROMA TRE, [3]CLUJ NAPOCA UNIVERSITY.

08:45 2MB-03 **^{3}D LANDSCAPE OF BAZRO3 NANORODS IN YBA^{2}CU^{3}O7-Δ FILMS** *R. L. S. EMERGO[1], F. J. BACA[2], J. Z. WU[1], T. J. HAUGAN[3], P. N. BARNES[3];* [1]UNIVERSITY OF

KANSAS, [2]UNIVERSITY OF KANSAS AND AIR FORCE RESEARCH LABORATORY, [3]AIR FORCE RESEARCH LABORATORY.

09:00 2MB-04 **VORTEX DYNAMICS IN NANOSTRUCTURED TFA-GROWN YBCO FILMS STUDIED BY AC SUSCEPTIBILITY** *E. BARTOLOME[1], A. PALAU[2], T. PUIG[2], A. LLORDES[2], M. GISBERT[2], X. OBRADORS[1];* [1]ESCOLA UNIVERSITARIA SALESIANA DE SARRIÀ, [2]INSTITUT DE CIÈNCIA DE MATERIALS DE BARCELONA-CSIC.

09:15 2MB-05 **FORMATION OF BYZO NANOPANCAKES IN HTS YBA[2]CU[3]O7-Δ FILMS AND THEIR EFFECT ON CRITICAL CURRENT DENSITY AND NONLINEAR MICROWAVE RESPONSE** *V. S. FLIS, V. L. SVETCHNIKOV, O. A. KALENYUK, O. L. KASATKIN, V. O. MOSKALIUK, A. I. REBIKOV, C. G. TRETIATCHENKO, V. M. PAN;* G.V.KURDYUMOV INSTITUTE FOR METAL PHYSICS.

09:30 2MB-06 **COOPERATIVE BEHAVIOR OF THE RANDOM AND CORRELATED PINNING IN ER123 FILMS WITH COLUMNAR DEFECTS** *S. AWAJI[1], M. NAMBA[1], K. WATANABE[1], H. KAI[2], M. MUKAIDA[2], S. OKAYASU[3];* [1]INSTITUTE FOR MATERIALS RESEARCH, TOHOKU UNIVERSITY, [2]KYUSHU UNIVERSITY, [3]JAPAN ATOMIC ENERGY AGENCY.

09:45 2MB-07 **FOCUSED ION BEAM ENGINEERED NANOSTRUCTURES AS PROMISING TOOLS FOR IMPROVING AND CONTROLLING FLUX PINNING IN YBCO FILMS GROWN BY CHEMICALS SOLUTION DEPOSITION METHODS** *C. M. MONTON, A. PALAU, J. ZABALETA, R. F. LUCCAS, X. GRANADOS, N. MESTRES, X. OBRADORS, T. PUIG;* ICMAB-CSIC.

10:00 2MB-08 WITHDRAWN

2MC: 102 NB3SN PERFORMANCE *CONGRESSIONAL* LOREN GOODRICH (NIST) AND LESZEK MOTOWIDLO (SUPRAMAGNETICS, INC.)

08:00 2MC-01 ***(INVITED)*** **PROGRESS WITH NB[3]SN CONDUCTORS FOR FUSION AND PARTICLE ACCELERATOR APPLICATIONS** *J. A. PARRELL[1], Y. ZHANG[1], M. B. FIELD[1], S. HONG[2], Y. HUANG[1], H. MIAO[1], M. MEINESZ[1];* [1]OXFORD SUPERCONDUCTING TECHNOLOGY, [2]HJC ENTERPRISES.

08:30 2MC-02 **HIGH CURRENT NB[3]SN WIRE DEVELOPED THROUGH THE CONDUCTOR DEVELOPMENT PROGRAM OF DOE** *D. R. DIETDERICH[1], M. G. T. MENTINK[2], A. GODEKE[1];* [1]LAWRENCE BERKELEY NATIONAL LABORATORY, [2]LAWRENCE BERKELEY NATIONAL LABORATORY AND UNIVERSITY OF TWENTE.

08:45 2MC-03 **COARSE NB[3]SN GRAIN FORMATION AND PHASE SEQUENCE DURING THE REACTION OF A HIGH SN CONTENT INTERNAL TIN STRAND** *C. E. SCHEUERLEIN[1], I. PONG[1], M. DI MICHIEL[2], L. OBERLI[1], G. ARNAU[1], R. FLÜKIGER[3], F. BUTA[4], L. BOTTURA[1];* [1]CERN, GENEVA, [2]ESRF, GRENOBLE, [3]UNIVERSITY OF GENEVA AND CERN, [4]UNIVERSITY OF GENEVA.

09:00 2MC-04 **PROGRESS OF NB3SN CONDUCTOR FABRICATION AT HYPER TECH RESEARCH** *X. PENG[1], J. PHILLIPS[1], M. RINDFLEISCH[1], M. TOMSIC[1], E. GREGORY[2], M. D. SUMPTION[3], E. W. COLLINGS[3];* 1HYPER TECH RESEARCH INC., [2]SUPERGENICS 1 LLC, [3]THE OHIO STATE UNIVERISTY.

09:15 2MC-05 **NB3SN SUPERCONDUCTORS MADE BY AN ECONOMICAL TUBULAR PROCESS** *E. GREGORY[1], X. PENG[2], M. TOMSIC[2], M. D. SUMPTION[3], A. GHOSH[4];* [1]SUPERGENICS 1 LLC, 2HYPER TECH RESEARCH INC., [3]THE OHIO STATE UNIVERISTY, [4]BROOKHAVEN NATIONAL LABORATORY.

09:30 2MC-06 **PROGRESS OF NB[3]SN CONDUCTOR DEVELOPMENT FOR HIGH FIELD APPLICATIONS** *T. PYON, H. KANITHI;* LUVATA WATERBURY, INC..

09:45 2MC-07 **TRANSPORT, MAGNETIC, AND MICROSTRUCTURE STUDIES FOR ROD-IN-TUBE AND TUBE TYPE NB[3]SN STRANDS OPTIMIZED FOR DIFFERENT OPERATIONAL REGIMES** *D. M. PUTNAM[1], M. D. SUMPTION[1], X. PENG[2], M. TOMSIC[2], T. COLLINGS[1];* [1]THE OHIO STATE UNIVERSITY, [2]HYPER TECH RESEARCH, INC..

10:30 POSTER SESSIONS

2LP1A: 263 ACCELERATOR MAGNETS - OTHER I *REGENCY* BERNARDO BORDINI (CERN) AND YASUHIRO MAKIDA (KEK)

10:30 2LP[1]A-01 / 1 **MAGNETIC FIELD SHIMMING AND THE FIELD MEASUREMENT ISSUE ON THE 130-POLE SUPERCONDUCTING UNDULATOR** *J. C. JAN, C. S.*

HWANG, C. M. WU, F. Y. LIN, C. H. CHANG; NATIONAL SYNCHROTRON RADIATION RESEARCH CENTER.

10:30 2LP1A-02 / 2 WITHDRAWN

10:30 2LP1A-03 / 3 **FEASIBILITY OF SHORT-PERIOD SUPERCONDUCTING UNDULATORS USING ^{2}G YBCO HTS TAPES*** *S. KIM, C. L. DOOSE, M. S. JASKI, M. T. KASA;* ARGONNE NATIONAL LABORATORY.

10:30 2LP1A-04 / 4 **DESIGN OF NB^{3}SN-BASED SHORT PERIOD MODEL HELICAL UNDULATOR** *M. MAJOROS, M. D. SUMPTION, E. W. COLLINGS;* THE OHIO STATE UNIVERSITY.

10:30 2LP1A-05 / 5 **A DESIGN CONCEPT FOR A PLANAR SUPERCONDUCTING UNDULATOR FOR THE APS** *Y. IVANYUSHENKOV[1], M. ABLIZ[1], K. BOERSTE[1], T. BUFFINGTON[1], D. CAPATINA[1], C. DOOSE[1], Q. HASSE[1], M. JASKI[1], M. KASA[1], S. KIM[1], R. KUSTOM[1], N. MEZENTSEV[2], E. MOOG[1], V. SYROVATIN[2], E. TRAKHTENBERG[1], I. VASSERMAN[1], J. XU[1];* [1]ARGONNE NATIONAL LABORATORY, [2]BUDKER INSTITUTE OF NUCLEAR PHYSICS.

2LP1B: 264 ACCELERATOR MAGNETS - OTHER II *REGENCY* PASQUALE FABBRICATORE (ISTITUTO NAZIONALE DI FISICA NUCLEARE) AND CRISTIAN BOFFO (BABCOCK NOELL GMBH)

10:30 2LP1B-01 / 6 **DESIGN OF A SUPERCONDUCTING MAGNET SYSTEM FOR THE AEGIS EXPERIMENT AT CERN** *A. DUDAREV, M. DOSER, D. PERINI, H. TEN KATE;* CERN.

10:30 2LP1B-02 / 7 **CONCEPTUAL DESIGN OF A SUPERCONDUCTING SOLENOID SYSTEM FOR THE SUPER OMEGA MUON BEAM LINE AT J-PARC** *Y. MAKIDA[1], T. OGITSU[1], T. ADACHI[2], Y. IKEDO[1], K. SHIMOMURA[1], Y. MIYAKE[1], N. KAWAMURA[1], P. STRASSER[1], A. KODA[1], K. NAKAHARA[1], T. NAKAMOTO[1], K. SASAKI[1];* [1]KEK (HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION), [2]THE UNIVERSITY OF TOKYO.

10:30 2LP1B-03 / 8 **SUPERCONDUCTING SOLENOID MAGNETS FOR THE COMET EXPERIMENT** *M. YOSHIDA[1], T. NAKAMOTO[1], T. OGITSU[1], K. TANAKA[1], A. YAMAMOTO[1], M. AOKI[2], Y. KUNO[2], A. SATO[2];* [1]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION, KEK, [2]OSAKA UNIVERSITY.

10:30 2LP1B-04 / 9 **QUENCH PROTECTION OF CURVED SOLENOIDS FOR HIGH INTENSITY MUON BEAMLINE** *T. ADACHI[1], Y. IKEDO[2], Y. MAKIDA[2], M. YOSHIDA[2], K. SASAKI[2], T. NAKAMOTO[2], T. OGITSU[2], A. YAMAMOTO[2], Y. MIYAKE[2], A. SATO[3], Y. KUNO[3];* [1]THE UNIVERSITY OF TOKYO, [2]KEK, [3]OSAKA UNIVERSITY.

10:30 2LP1B-05 / 10 **MODEL SUPERCONDUCTING HELICAL COOLING CHANNEL SOLENOIDS** *M. J. LAMM[1], N. ANDREEV[1], V. S. KASHIKHIN[1], V. V. KASHIKHIN[1], A. V. MAKAROV[1], M. A. TARTAGLIA[1], K. YONEHARA[1], M. YU[1], A. V. ZLOBIN[1], R. P. JOHNSON[2], S. A. KAHN[2];* [1]FERMILAB, [2]MUONS, INC..

10:30 2LP1B-06 / 11 **PROGRESS ON FABRICATION OF A MUCOOL COUPLING MAGNET** *L. WANG[1], H. PAN[2], H. WU[2], X. GUO[2], F. XU[2], S. ZHENG[2], D. LI[3], M. GREEN[3], S. VIROSTEK[3], M. ZISMAN[3];* [1]SHANGHAI INSTITUTE OF APPLIED PHYSICS,CAS, [2]INSTITUTE OF CRYOGENICS AND SUPERCONDUCTIVITY TECHNOLOGY, HIT, [3]LAWRENCE BERKELEY NATIONAL LABORATORY, BERKELEY CA 94720, USA.

10:30 2LP1B-07 / 12 **THE RESISTANCE AND STRENGTH OF SOFT SOLDER SPLICES BETWEEN CONDUCTORS FOR MICE SUPERCONDUCTING COILS** *H. PAN[1], H. WU[1], M. A. GREEN[2], D. DIETDERRICH[2], H. HIGLEY[2], F. XU[1], D. TAM[2], L. WANG[3], S. ZHENG[1];* [1]INSTITUTE OF CRYOGENICS AND SUPERCONDUCTIVE TECHNOLOGY, HIT, HARBIN, CHINA, [2]LAWRENCE BERKELEY NATIONAL LABORATORY, [3]SHANGHAI INSTITUTE OF APPLIED PHYSICS, SHANGHAI, CHINA..

10:30 2LP1B-08 / 13 WITHDRAWN

2LP1C: 262 SRF CAVITIES - LARGE SCALE *REGENCY* JOEL FUERST (ANL) AND AL ZELLER (MICHIGAN STATE UNIV.)

10:30 2LP1C-01 / 14 **THE CAVITIES FOR SUPERCONDUCTING CW LINAC OF PROJECT X** *I. GONIN, T. KHABILOULINE, A. SAINI, N. SOLYAK, V. YAKOVLEV;* FERMILAB.

10:30 2LP1C-02 / 15 **CAVITY PERFORMANCE AND SURFACE CHARACTERIZATION USING REPLICA TECHNIQUE** *G. WU, M. GE, D. BURKE, L. COOLEY;* FERMILAB.

10:30 2LP1C-03 / 16 **THE RF PERFORMANCE OF CAVITIES MADE FROM DEFECTIVE NIOBIUM MATERIAL DETERMINED BY EDDY CURRENT SCANNING** *G. WU[1], L. COOLEY[1], A. BRINKMANN[2], W. SINGER[3], X. SINGER[3];* [1]FERMILAB, [2]DESY, [3]DESY.

10:30 2LP1C-04 / 17 **ULTRA-GRADIENT TEST CAVITY FOR TESTING SRF WAFER SAMPLES** *P. MCINTYRE[1], N. POGUE[1], C. REECE[2], A. SATTAROV[1];* [1]TEXAS A&M UNIVERSITY, [2]JEFFERSON NATIONAL LABORATORY.

10:30 2LP1C-05 / 18 **CALCULATIONS WITH FLUENT FOR THE CRYOGENIC RADIATION LOSS OF A SUPERCONDUCTING RF MODULE** *M. CHANG, C. WANG, M. LIN;* NATIONAL SYNCHROTRON RADIATION RESEARCH CENTER.

10:30 2LP1C-06 / 19 WITHDRAWN

10:30 2LP1C-07 / 20 **RESIDUAL RESISTANCE DATA FROM CAVITY PRODUCTION PROJECTS AT JEFFERSON LAB** *G. CIOVATI[1], R. GENG[1], J. MAMMOSSER[2], J. SAUNDERS[2];* [1]JEFFERSON LAB, [2]OAK RIDGE NATIONAL LABORATORY.

10:30 2LP1C-08 / 21 **DESIGN AND TESTING OF MAGNETIC SHIELDING FOR SRF CAVITIES PROXIMAL TO FOCUSING SOLENOIDS IN REA3 CRYOMODULES AT NSCL** *J. DELAUTER, S. CHOUHAN, J. BIERWAGEN, S. BRICKER, C. COMPTON, J. DEKAMP, K. ELLIOTT, W. HARTUNG, M. HODEK, M. JOHNSON, O. KESTER, T. KOLE, L. POPIELARSKI, J. POPIELARSKI, N. VERHANOVITZ, J. WLODARCZAK, X. WU, A. ZELLER;* NATIONAL SUPERCONDUCTING CYCLOTRON LAB - MICHIGAN STATE UNIVERSITY.

10:30 2LP1C-09 / 22 WITHDRAWN

2MP1A: 240 MEASUREMENTS I: HTS CRITICAL CURRENTS *REGENCY* FRASER DOUGLAS (NIST-BOULDER) AND DAVID CHRISTEN (OAK RIDGE NATIONAL LABORATORY)

10:30 2MP1A-01 / 23 **EDGE-BARRIER PINNING IN SELF FIELD SUPERCONDUCTING THIN FILMS** *W. A. JONES[1], P. N. BARNES[1], M. J. MULLINS[1], F. J. BACA[2], R. L. S. EMERGO[3], J. L. WU[3], T. J. HAUGAN[1];* [1]AIR FORCE RESEARCH LABORATORY, WPAFB, OHIO, 45433 USA, [2]LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NEW MEXICO, 87545 USA, [3]UNIVERSITY OF KANSAS, LAWRENCE, KANSAS, 66045 USA.

10:30 2MP1A-02 / 24 **CRITICAL CURRENT DENSITIES OF MOCVD TAPES FOR DIFFERENT CURRENT DIRECTIONS** *M. WEIGAND[1], S. C. SPELLER[2], G. M. HUGHES[2], N. A. RUTTER[1], S. LOZANO-PEREZ[2], S. SAHONTA[1], C. R. M. GROVENOR[2], J. H. DURRELL[1];* [1]UNIVERSITY OF CAMBRIDGE, [2]UNIVERSITY OF OXFORD.

10:30 2MP1A-03 / 25 **COMPARISON OF CURRENT LIMITING DEFECTS IN YBA[2]CU[3]O 7-X AND BA(FE 1-X COX)AS2 FILMS AND BULK BI[2]SR[2]CA[1]CU[2]O8 FILAMENTS** *D. ABRAIMOV[1], P. LI[1], R. FEENSTRA[2], X. LI[3], M. RUPICH[3], F. KAMETANI[1], S. LEE[4], C. EOM[4], J. JIANG[1], J. WEISS[1], E. HELLSTROM[1], D. C. LARBALESTIER[1];* [1]NATIONAL HIGH MAGNETIC FIELD LABORATORY, [2]OAK RIDGE NATIONAL LABORATORY, [3]AMERICAN SUPERCONDUCTORS CORPORATION, [4]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, UNIVERSITY OF WISCONSIN.

10:30 2MP1A-04 / 26 **INVESTIGATION ON THE IN-SITU HIGH TEMPERATURE RESISTANCE MEASUREMENT OF MONO-FILAMENT BI-2223/AG TAPES AT VARIOUS OXYGEN PARTIAL PRESSURES** *K. HUANG, T. QU, Z. HAN, P. ZENG;* TSINGHUA UNIVERSITY.

10:30 2MP1A-05 / 27 **THICKNESS DEPENDENCE OF CRITICAL CURRENTS OF SM1+XBAXCU[3]OY COATED CONDUCTORS INVESTIGATED BY POLARIZED-RAMAN SCATTERING SPECTROSCOPY** *G. KIM[1], W. JO[1], H. S. HA[2], S. S. OH2, D. Y. PARK[3], H. CHEONG[3];* [1]EWHA WOMANS UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE (KERI), [3]SOGANG UNIVERSITY.

10:30 2MP1A-06 / 28 **JOSEPHSON EFFECT AND ANDREEV REFLECTION STUDIES ON 122 IRON PNICTIDE SINGLE CRYSTALS** *X. ZHANG[1], S. R. SAHA[1], N. P. BUTCH[1], K. KIRSHENBAUM[1], J. PAGLIONE[1], R. L. GREENE[1], I. TAKEUCHI[1], Y. S. OH[2], Y. LIU[2], L. Q. YAN[2], K. H. KIM[2];* [1]UNIVERSITY OF MARYLAND, COLLEGE PARK, USA, [2]SEOUL NATIONAL UNIVERSITY, SEOUL, REPUBLIC OF KOREA.

10:30 2MP1A-07 / 29 **PERFORMANCES OF TRAPPED MAGNETIC FIELD IN SUPERCONDUCTING BULK MAGNETS ACTIVATED BY PULSED FIELD MAGNETIZATION** *T. OKA[1], H. YAMAZAKI[1], H. SEKI[1], J. OGAWA[1], S. FUKUI[1], T. SATOH[1], K. YOKOYAMA[2];* [1]NIIGATA UNIVERSITY, [2]ASHIKAGA INSTITUTE OF TECHNOLOGY.

2MP1B: 227 MEASUREMENTS II: GENERAL *REGENCY* LANCE COOLEY (FERMILAB) AND GEORGE LEVIN (AFRL)

10:30 2MP1B-01 / 30 **DETECTION OF FINE PECULIARITIES OF THE HEAT CAPACITY OF YBACUO THIN FILMS BY IMAGING OF THEIR S/N PHASE TRANSITION BY A HIGHLY SENSITIVE SFCO-TECHNIQUE, USING A WELL FOCUSED LASER BEAM AS A PROBE** *S. GEVORGYAN[1], G. KARAPETYAN[1], H. SHIRINYAN[2], S. MURADYAN[1], G. GEVORGYAN[1], A. POLYANSKII[3];* [1]YEREVAN STATE UNIVERSITY, FACULTY OF PHYSICS, ARMENIA, [2]NAS OF ARMENIA, INSTITUTE FOR PHYSICAL RESEARCHES, ARMENIA, [3]NHMF LABORATORY, FLORIDA STATE UNIVERSITY, TALLAHASSEE, USA.

10:30 2MP1B-02 / 31 **PRECURSOR TO SUPERCONDUCTIVITY FINE EFFECTS: THEIR CRUCIAL ROLE FOR TRUE UNDERSTANDING OF THE NATURE OF SUPERCONDUCTIVITY** *S. GEVORGYAN, V. GEVORGYAN;* YEREVAN STATE UNIVERSITY, FACULTY OF PHYSICS, ARMENIA.

10:30 2MP1B-03 / 32 WITHDRAWN

10:30 2MP1B-04 / 33 **NUMERICAL INVESTIGATION ON APPLICABILITY OF INDUCTIVE METHOD/PERMANENT MAGNET METHOD TO JC-MEASUREMENT IN HTS THIN FILM** *T. TAKAYAMA, A. KAMITANI, K. HATTORI, A. SAITO, S. OHSHIMA;* YAMAGATA UNIVERSITY.

10:30 2MP1B-05 / 34 **HIGH-PERFORMANCE SIMULATION OF SHIELDING CURRENT DENSITY IN HTS BY CONSTITUTIVE-RELATION RELAXATION METHOD** *A. KAMITANI[1], T. TAKAYAMA[1], S. IKUNO[2];* [1]YAMAGATA UNIVERSITY, [2]TOKYO UNIVERSITY OF TECHNOLOGY.

10:30 2MP1B-06 / 35 **WITHDRAWN**

10:30 2MP1B-07 / 36 **STRENGTH OF THE PHONON-COUPLING MODE IN LA2-XSRXCUO4, BI^{2}SR^{2}CACU^{2}O8+X AND YBA^{2}CU^{3}O6+X: AN ESTIMATION FROM THE ARPES-NODAL MEASUREMENTS.** *H. S. RUIZ, A. BADÍA-MAJÓS;* UNIVERSIDAD DE ZARAGOZA–C.S.I.C..

10:30 2MP1B-08 / 37 **MAPPING OF THE TRANSVERSAL RESISTIVITY MATRIX MEASURED ON NBTI AND NB^{3}SN SUPERCONDUCTING STRANDS** *V. CORATO, L. MUZZI, U. BESI VETRELLA, C. FIAMOZZI ZIGNANI, A. DELLA CORTE;* ENEA.

10:30 2MP1B-09 / 38 **WITHDRAWN**

10:30 2MP1B-10 / 39 **SAMPLE LENGTH EFFECT ON MAGNETIZATION MEASUREMENTS OF STATE OF THE ART NB^{3}SN WIRES** *B. BORDINI[1], D. BESSETTE[2], L. BOTTURA[1], A. DEVRED[1], M. JEWELL[2], D. RICHTER[1], C. SENATORE[3];* [1]CERN, [2]ITER-IO, [3]UNIVERSITY OF GENEVA.

2MP1C: 226 MEASUREMENTS III: COATED CONDUCTORS *REGENCY* JAMES COULTER (LOS ALAMOS NATIONAL LABORATORY) AND XAVIER GRANADOS (ICMAB-CSIC)

10:30 2MP1C-01 / 40 **MEASUREMENT OF TRANSPORT CHARACTERISTICS IN HTS CONDUCTORS BY USING HTS CURRENT TRANSFORMER** *S. KAWABATA, T. HIRAYAMA, Y. KIRIHARA;* KAGOSHIMA UNIVERSITY.

10:30 2MP1C-02 / 41 **EXPERIMENTAL CHARACTERIZATION OF THE ELECTRICAL RESISTANCE OF COATED CONDUCTORS AT HIGH CURRENT DENSITIES AND VARIABLE TEMPERATURE** *C. LACROIX[1], J. COULOMBE[2], F. SIROIS[2], F. ROY[3], B. DUTOIT[3], J. CAVE[1];* [1]IREQ - HYDRO-QUEBEC, [2]ECOLE POLYTECHNIQUE DE MONTREAL, [3]ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE.

10:30 2MP1C-03 / 42 **NON-DESTRUCTIVE TESTING OF EACH LAYER IN GDBCO IBAD-PLD COATED CONDUCTOR BY USING A HIGH-SPEED SCANNING LASER OBSERVATION SYSTEM** *T. HATO, S. ADACHI, T. MACHI, N. CHIKUMOTO, M. YOSHIZUMI, S. LEE, K. TANABE;* SRL-ISTEC.

10:30 2MP1C-04 / 43 **DETECTION OF CRITICAL CURRENT DENSITY DISTRIBUTION OF YBCO COATED CONDUCTORS BY PERMANENT MAGNET METHOD** *S. OHSHIMA[1], K. UMEZU[1], K. HATTORI[1], H. YAMADA[1], A. SAITO[1], T. TAKAYAMA[1], A. KAMITANI[1], Y. TAKANO[2], T. SUZUKI[2], M. YOKOO[2], S. IKUNO[3];* [1]YAMAGATA UNIVERSITY, [2]TOHOKU SEIKI INDUSTRIES, [3]TOKYO UNIVERSITY OF TECHNOLOGY.

10:30 2MP1C-05 / 44 **SCREENING OF AXIAL DC MAGNETIC FIELDS BY USING SUPERCONDUCTING LOOPS OF SECOND GENERATION COATED**

CONDUCTORS WITHOUT JOINTS *J. F. FAGNARD[1], M. DIRICKX[1], B. VANDERHEYDEN[2], P. VANDERBEMDEN[2], G. LEVIN[3];* [1]SUPRATECS, CISS DEPARTMENT, ROYAL MILITARY ACADEMY, B-1000 BRUSSELS, BELGIUM, [2]SUPRATECS, DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, UNIVERSITY OF LIEGE, B-4000 LIEGE, BELGIUM, [3]PROPULSION DIRECTORATE, AIR FORCE RESEARCH LABORATORY, WRIGHT-PATTERSON AFB, OHIO 45433, USA.

10:30 2MP1C-06 / 45 **CURRENT AND FIELD DISTRIBUTION IN MEANDERED COATED CONDUCTORS FOR ROEBEL CABLES** ***J. EMHOFER[1],*** *HENGSTBERGER[1], M. EISTERER[1], H. W. WEBER[1], S. TERZIEVA[2], W. GOLDACKER[2], R. A. BADCOCK[3], AND N. J. LONG[3], [1]VIENNA UNIVERSITY OF TECHNOLOGY, ATOMINSTITUT, AUSTRIA [2]KARLSRUHE INSTITUTE OF TECHNOLOGY, INSTITUT FUER TECHNISCHE PHYSIK, GERMANY [3]INDUSTRIAL RESEARCH LTD, LOWER HUTT, NEW ZEALAND*

10:30 2MP1C-07 / 46 **ANGULAR DEPENDENCE OF THE CRITICAL CURRENT IN COATED CONDUCTORS: COMPARISON OF TRANSPORT AND MAGNETISATION MEASUREMENTS** *F. HENGSTBERGER, M. CHUDY, H. W. WEBER;* ATOMINSTITUT, VIENNA UNIVERSITY OF TECHNOLOGY.

10:30 2MP1C-08 / 47 **SPATIAL HOMOGENEITY IN 600 A/CM-W CLASS GDBA^{2}CU^{3}O7-Δ COATED CONDUCTOR OBTAINED BY PLD PROCESS** *A. MATSEKH[1], M. INOUE[1], T. KISS[1], Y. IIJIMA[2], T. SAITOH[2], T. IZUMI[3];* [1]KYUSHU UNIVERSITY, [2]FUJIKURA LTD., [3]SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC.

10:30 2MP1C-09 / 48 WITHDRAWN

10:30 2MP1C-10 / 49 **ELECTRICAL AND MAGNETIC CHARACTERIZATION OF BSCCO AND YBCO HTS TAPES FOR FAULT CURRENT LIMITER APPLICATION** *J. S. LAMAS[1], C. A. BALDAN[2], C. Y. SHIGUE[2], A. SILHANEK[3], V. MOSHCHALKOV[3];* [1]UNIVERSITY OF GENT, [2]UNIVERSIDADE SÃO PAULO, USP, BRAZIL, [3]UNIVERSITY OF LEUVEN.

2MP1D: 232 SRF CAVITIES - MATERIALS I *REGENCY* ZUHAWN SUNG (ASC/NHMFL/FSU) AND THOMAS PROLIER (ARGONNE NATIONAL LABORATORY)

10:30 2MP1D-01 / 50 WITHDRAWN

10:30 2MP1D-02 / 51 **RESTORATION OF MAXIMUM GRADIENT BY LASER RE-MELTING A CAVITY PIT** *M. GE, G. WU, J. RUAN, T. H. NICOL, L. D. COOLEY;* FERMI NATIONAL ACCELERATOR LABORATORY.

10:30 2MP1D-03 / 52 **PROCESSING ADVANCES SUGGESTED BY RESULTS OF SINGLE-CELL SUPERCONDUCTING RF CAVITY RESEARCH AT FERMILAB** *L. COOLEY[1], D. BICE[1], M. CHAMPION[1], C. COOPER[1], H. EDWARDS[1], M. GE[1], C. GINSBURG[1], E. HARMS[1], J. OZELIS[1], A. ROMANENKO[1], A. ROWE[1], D. SERGATSKOV[1], G. WU[1], S. GERBICK[2], M. KELLEY[2];* [1]FERMILAB, [2]ARGONNE NATIONAL LABORATORY.

10:30 2MP1D-04 / 53 **CHARACTERIZATION OF FIELD PENETRATION IN SUPERCONDUCTING MULTI-LAYERS SAMPLES** *C. Z. ANTOINE[1], S. BERRY[1], M. AURINO[2], J. JACQUOT[2], J. VILLEGIER[2], G. LAMURA[3], A. ANDREONE[4];* [1]CEA, IRFU/SACM, [2]CEA, INAC, [3]CNR-SPIN-GE, [4]CNR-SPIN-NA.

10:30 2MP1D-05 / 54 **MIGRATION OF QUENCH LOCATION IN SRF CAVITY** *D. A. SERGATSKOV, M. GE, G. WU, J. P. OZELIS, L. D. COOLEY;* FERMILAB.

10:30 2MP1D-06 / 55 WITHDRAWN

10:30 2MP1D-07 / 56 **EFFECTS OF MATERIAL PROPERTIES ON THE ELASTOPLASTIC BUCKLING OF AN SRF CAVITY UNDER EXTERNAL PRESSURE** *M. LIN, C. WANG, L. CHANG, M. YEH;* NATIONAL SYNCHROTRON RADIATION RESEARCH CENTER.

10:30 2MP1D-08 / 57 **SEARCH FOR SUPERCONDUCTIVITY IN NANOSTRUCTURES: DOPED CARBON NANOTUBES, MGB2 BASED NANOSTRUCTURES AND FULLERIDE NANOCOMPOSITES FOR LIGHTWEIGHT WIRES** *A. A. ZAKHIDOV[1], A. KUZNETSOV[1], A. HOWARD[1], M. LIMA[1], U. GOSKUN[1], E. CASTILLO MARTINEZ[1], J. CARRETERO GONZALEZ[1], J. REPPERT[2], K. YANG[2], A. RAO[2], D. PROBER[3], L. PFEFFERLE[3], M. SALAMON[1], R. BAUGHMAN[1];* [1]UNIVERSITY OF TEXAS AT DALLAS, [2]CLEMSON UNIVERSITY, [3]YALE UNIVERSITY.

2MP1E: 207 NB3AL *AMBASSADOR* ERIC HELLSTROM (APPLIED SUPERCONDUCTIVITY CENTER) AND CARMINE SENATORE (UNIVERSITY OF GENEVA)

10:30 2MP1E-01 / 61 **ATTEMPT TO FABRICATE LONG LENGTH NB^{3}AL WIRE BY METASTABLE SOLID-SOLUTION-STRAND RESTACKING METHOD** *N.*

BANNO[1], T. TAKEUCHI[1], K. NAKAGAWA[2]; [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]HITACHI CABLE LTD..

10:30 2MP1E-02 / 62 **DEVELOPMENT OF TA-MATRIX NB^{3}AL STRAND AND CABLE FOR HIGH-FIELD ACCELERATOR MAGNET APPLICATION** *K. TSUCHIYA[1], A. KIKUCHI[2], T. TAKEUCHI[2], N. BANNO[2], Y. IIJIMA[2], S. NIMORI[2], T. NAKAMOTO[1], Y. KURODA[3], T. TAKAO[3], K. NAKAGAWA[4], E. BARZI[5], R. YAMADA[5];* [1]KEK, [2]NIMS, [3]SOPHIA UNIVERSITY, [4]HITACHI CABLE, LTD., [5]FERMILAB.

10:30 2MP1E-03 / 63 **THE JELLY ROLLED NB/AL COMPOSITE PRECURSOR WITH TANTALUM INTER-FILAMENT MATRIX** *A. KIKUCHI[1], K. NAKAGAWA[2], K. TSUCHIYA[3], T. NAKAMOTO[3], K. SASAKI[3], H. TAKIGAWA[3], T. TAKEUCHI[1], A. YAMAMOTO[3];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]HITACHI CABLE LTD., [3]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION.

10:30 2MP1E-04 / 64 **SUPERCONDUCTING PROPERTIES AND MICROSTRUCTURE OF V^{3}GA WIRES USING HIGH GA CONTENT TIGA3 AND V^{2}GA5 COMPOUNDS** *Y. HISHINUMA[1], A. KIKUCHI[2], T. TAKEUCHI[2], K. MATSUDA[3], H. TANIGUCHI[4], A. NISHIMURA[1];* [1]NATIONAL INSTITUTE FOR FUSION SCIENCE, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [3]UNIVERSITY OF TOYAMA, [4]OSAKA ALLOYING WORKS CO. LTD.

10:30 2MP1E-05 / 65 **V^{3}GA MULTIFILAMENT STRAND BY THE PIT APPROACH** *L. R. MOTOWIDLO, J. DISTIN;* SUPRAMAGNETICS, INC..

10:30 2MP1E-06 / 66 **MODELING OF NB^{3}SN CONDUCTOR DIMENSION CHANGES DURING HEAT TREATMENT** *D. BOCIAN[1], G. AMBROSIO[1], E. BARZI[1], A. BONASIA[2], A. GHOSH[3], A. NOBREGA[1], C. SCHEUERLEIN[2], M. WAKE[4], R. WALSH[5], M. WHITSON[1];* [1]FERMI NATIONAL ACCELERATOR LABORATORY, P.O. BOX 500, BATAVIA, IL 60510-0500, USA, [2]CERN, CH 1211, GENEVA 23, SWITZERLAND, [3]BROOKHAVEN NATIONAL LABORATORY, UPTON, NY 11973, USA, [4]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION (KEK), TSUKUBA, IBARAKI 305-0801 JAPAN, [5]NATIONAL HIGH MAGNETIC FIELD LABORATORY, TALLAHASSEE, FL 32310-3706, USA.

2MP1F: 201 NB3SN PROPERTIES *AMBASSADOR* WILFRIED GOLDACKER (KARLSRUHE) AND DAMIAN HAMPSHIRE (DURHAM UNIVERSITY)

10:30 2MP1F-01 / 67 **DESIGN ASPECTS OF DUAL NB-TA DIFFUSION BARRIERS FOR NB3SN CONDUCTORS** *K. T. HARTWIG[1], S. BALACHANDRAN[1], R. BARBER[2], T. PYON[3], R. GRIFFIN[4];* [1]TEXAS A&M UNIVERSITY, [2]SHEAR FORM, INC., [3]LUVATA WATERBURY, INC., [4]TEXAS A&M UNIVERSITY - QATAR.

10:30 2MP1F-02 / 68 **RESULTS OF INVESTIGATIONS OF 500 KG NB^{3}SN BRONZE STRAND PRODUCED IN RUSSIAN FEDERATION FOR ITER PROJECT** *I. ABDYUKHANOV[1], A. SHIKOV[1], A. VOROBYEVA[1], V. PANTSYRNYY[1], N. BELIAKOV[1], E. DERGUNOVA[1], K. MAREEV[1], M. NASIBULIN[1], S. ZERNOV[2], K. ABRAMUSHIN[3], D. ANISHUK[3];* [1]BOCHVAR RESEARCH INSTITUTE OF INORGANIC MATERIALS, [2]JSC «TVEL», [3]JSC «CHEPETSKY MECHANICAL PLANT».

10:30 2MP1F-03 / 69 **THE EFFECT OF TWIST PITCH ON HYSTERESIS LOSS AND IC OF NB3SN STRANDS FOR ITER** *C. LI[1], S. DU[1], X. LIU[1], Y. FENG[1], P. ZHANG[2], J. LIU[1], C. XIAO[1], J. GUAN[1], X. SUN[1], X. WAN[1];* [1]WESTERN SUPERCONDUCTING TECHNOLOGIES, CO. LTD.,; NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION., [2]WESTERN SUPERCONDUCTING TECHNOLOGIES CO.LTD; NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION; NORTHWEST INSTITUTE FOR NONFERROUS METAL RESEARCH; STATE KEY LAB. OF SOLIDIFICATION PROCESSING, NORTHWESTERN POLYTECHNICAL UNIVERSITY..

10:30 2MP1F-04 / 70 **NB^{3}SN WIRE QUALITY ASSURANCE TESTS FOR THE SERIES-CONNECTED HYBRID MAGNETS** *J. LU[1], K. HAN[1], I. R. DIXON[1], Y. ZHANG[2], M. B. FIELD[2], J. A. PARRELL[2];* [1]NATIONAL HIGH MAGNETIC FIELD LABORATORY, [2]OXFORD INSTRUMENTS SUPERCONDUCTING TECHNOLOGY.

10:30 2MP1F-05 / 71 **CRITICAL CURRENT DENSITY AND MICROSTRUCTURE OF THE HYBRID BRONZE PROCESSED NB^{3}SN CONDUCTOR** *A. KIKUCHI[1], Y. YOSHIDA[1], Y. TANIGUCHI[2], K. TACHIKAWA[3];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]OSAKA ALLOYING WORKS CO. LTD., [3]TOKAI UNIVERSITY.

10:30 2MP1F-06 / 72 **HEAT TREATMENT INFLUENCE ON THE MICROSTRUCTURE AND PERFORMANCE OF INTERNAL-TIN ROUTE NB3SN SUPERCONDUCTING STRAND** *J. LIU[1], X. TANG[2], J. LI[1], T. WANG[1], C. LI[1], C. XIAO[1], J. GUAN[1], X. SUN[1], X. WAN[1], X. LIU[1], Y. FENG[1], P. ZHANG[3];* [1]WESTERN SUPERCONDUCTING TECHNOLOGIES, CO. LTD; NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION, [2]WESTERN SUPERCONDUCTING TECHNOLOGIES, CO. LTD;NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION; NORTHWEST INSTITUTE FOR NONFERROUS METAL RESEARCH, [3]WESTERN SUPERCONDUCTING TECHNOLOGIES, CO. LTD; NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION; NORTHWEST INSTITUTE FOR NONFERROUS METAL RESEARCH; STATE KEY LAB. OF SOLIDIFICATION PROCESSING, NORTHWESTERN POLYTECHNICAL UNIVERSITY.

10:30 2MP1F-07 / 73 **DEVELOPMENT OF NB[3]SN INTERNAL TIN STRANDS WITH ENHANCED CURRENT CAPACITY AND IMPROVED MECHANICAL PROPERTIES** *S. SUDYEV, V. PANTSYRNYY, A. VOROBYEVA, N. BELIAKOV, V. SERGEEV;* BOCHVAR RESEARCH INSTITUTE OF INORGANIC MATERIALS.

10:30 2MP1F-08 / 74 **OBSERVATIONS ON TITANIUM DIFFUSION IN ITT TYPE NB[3]SN SUPERCONDUCTORS** *C. V. RENAUD, JR., W. T. NACHTRAB, T. WONG;* SUPERCON, INC..

10:30 2MP1F-09 / 75 **TEXTURE INFLUENCES ON NB FILAMENT DEFORMATION PERFORMANCE** *S. BALACHANDRAN[1], R. E. BARBER[2], Y. HUANG[3], H. MIAO[3], J. A. PARRELL[3], R. B. GRIFFIN[4], K. T. HARTWIG[1];* [1]TEXAS A&M UNIVERSITY, [2]SHEAR FORM INC, [3]OXFORD INSTRUMENTS- SUPERCONDUCTING TECHNOLOGY, [4]TEXAS A&M UNIVERSITY,QATAR.

10:30 2MP1F-10 / 76 **DEVELOPMENT OF METALLOGRAPHIC PROCEDURES FOR IMAGING CABLE-IN-CONDUIT CONDUCTORS** *M. C. JEWELL[1], P. J. LEE[2], H. BAJAS[3], C. SANABRIA[2], W. STARCH[2], D. C. LARBALESTIER[2];* [1]ITER ORGANIZATION, [2]APPLIED SUPERCONDUCTIVITY CENTER, NATIONAL HIGH MAGNETIC FIELD LABORATORY, FLORIDA STATE UNIVERSITY, [3]ÉCOLE CENTRALE PARIS (ECP).

2MP1G: 200 NB-TI *AMBASSADOR* ERIC GREGORY (SUPERGENICS I LLC) AND PETER LEE (NHMFL, FSU)

10:30 2MP1G-01 / 77 **THE PERFORMANCE OPTIMIZATION OF NBTI SUPERCONDUCTING COMPOSITE WIRE FOR ITER PROJECT** *J. LI[1], P. ZHANG[2], X. LIU[1], Y. FENG[1], T. WANG[1], W. LIU[1], S. DU[1], S. ZHU[1], L. YAN[1], H. GAO[1], G. GRUNBLATT[3], G. HOANG3, C. VERWAERDE[3];* [1]WESTERN SUPERCONDUCTING TECHNOLOGIES CO.,LTD.;NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION, [2]WESTERN SUPERCONDUCTING TECHNOLOGIES CO.,LTD.;NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION;NORTHWEST INSTITUTE FOR NONFERROUS METAL RESEARCH;STATE KEY LAB. OF SOLIDIFICATION PROCESSING, NORTHWESTERN POLYTECHNICAL UNIVERSITY, [3]ALSTOM.

10:30 2MP1G-02 / 78 **TESTING AND ANALYSIS OF THE CRITICAL CURRENT AND MAGNETIZATION FOR NBTI STRAND** *S. ZHU, J. LI, W. LIU, H. GAO, L. YAN, H. XIE, T. WANG, X. LIU, Y. FENG;* WESTERN SUPERCONDUCTING TECHNOLOGIES CO.,LTD;NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION.

10:30 2MP1G-03 / 79 **DIRECT MEASUREMENT OF INTERFILAMENT RESISTANCE IN SUPERCONDUCTING MULTIFILAMENTARY NBTI AND NB[3]SN STRANDS** *C. ZHOU, E. P. A. VAN LANEN, D. VELDHUIS, H. H. J. TEN KATE, M. J. DHALLE, A. NIJHUIS;* UNIVERSITY OF TWENTE.

13:30 ORAL SESSIONS

2EX: 160 TES SIGNALS AND READOUT I *EXECUTIVE* SCOTT PORTER (NASA) AND JOSEPH ADAMS (UNIVERSITY OF MARYLAND)

13:30 2EX-01 ***(INVITED)*** **READ-OUT OF TES BOLOMETERS AND CALORIMETERS** *J. BEYER, D. DRUNG;* PHYSIKALISCH-TECHNISCHE BUNDESANSTALT.

14:00 2EX-02 **CODE-DIVISION SQUID MULTIPLEXING ARCHITECTURES, SIMULATIONS, AND MEASUREMENT RESULTS** *M. D. NIEMACK[1], J. BEYER[2], H. CHO[1], W. DORIESE[1], G. C. HILTON[1], K. D. IRWIN[1], C. D. REINTSEMA[1], D. R.*

SCHMIDT[1], J. N. ULLOM[1], L. R. VALE[1]; [1]NIST, [2]PHYSIKALISCH-TECHNISCHE BUNDESANSTALT (GERMANY).

14:15 2EX-03 **MICROWAVE SQUID MULTIPLEXER READOUT OF AN ARRAY OF CMB POLARIMETERS** *J. A. MATES[1], K. D. IRWIN[1], L. R. VALE[1], G. C. HILTON[1], J. GAO[1], K. W. LEHNERT[2];* [1]NIST, [2]JILA.

14:30 2EX-04 **SINGLE PIXEL CHARACTERIZATION OF TRANSITION-EDGE SENSORS MICROCALORIMETER AND BOLOMETER UNDER AC BIAS.** *L. GOTTARDI[1], J. VAN DER KUUR[1], S. BANDLER[2], M. BRUIJN[1], P. DE KORTE[1], J. R. GAO[3], R. DEN HARTOG[1], R. A. HIJMERING[1], H. HOEVERS[1], P. KHOSROPANAH[1], C. KILBOURNE[2], M. A. LINDEMAN[1], M. PARRAS BORDERIAS[4], M. RIDDER[1];* [1]SRON NATIONAL INSTITUTE FOR SPACE RESEARCH, [2]NASA-GODDARD SPACE FLIGHT CENTER, [3]SRON NATIONAL INSTITUTE FOR SPACE RESEARCH/TU DELFT, [4]INSTITUTO DE CIENCIA DE MATERIALES DE ARAGÓN (CSIC-UNIVERSIDAD DE ZARAGOZA).

14:45 2EX-05 **DEVELOPMENT OF A REAL-TIME PULSE PROCESSING ALGORITHM FOR TES-BASED X-RAY MICROCALORIMETERS** *H. TAN[1], W. HENNIG[1], W. K. WARBURTON[1], W. B. DORIESE[2], C. A. KILBOURNE[3];* [1]XIA LLC, [2]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, [3]NASA/GODDARD SPACE FLIGHT CENTER.

15:00 2EX-06 **ANALYSIS OF SATURATING SIGNALS OF TRASITION-EDGE SENSORS** *N. IYOMOTO;* THE UNIVERSITY OF TOKYO.

15:15 2EX-07 **SMALL-SIGNAL BEHAVIOR OF A TES UNDER AC BIAS** *J. VAN DER KUUR[1], L. GOTTARDI[1], M. PARRA BORDERIAS[2], B. DIRKS[1], P. DE KORTE[1], M. LINDEMAN[1], P. KHOSROPANAH[1], R. DEN HARTOG[1], H. HOEVERS[1];* [1]SRON NATIONAL INSTITUTE FOR SPACE RESEARCH, [2]CSIC - UNIVERSIDAD DE ZARAGOZA.

2EY: 153 SPECIAL SESSION: PROGRESS IN MICROWAVE SQUID AND PARAMETRIC AMPLIFIERS

DIPLOMAT IRFAN SIDDIQI (UNIVERSITY OF CALIFORNIA-BERKELEY) AND JOSE AUMENTADO (NIST)

13:30 2EY-01 **QUANTUM NOISE LIMITED PARAMETRIC AMPLIFICATION IN A LUMPED ELEMENT, LOW-Q JOSEPHSON RESONATOR** *R. VIJAY[1], M. HATRIDGE[2], D. H. SLICHTER[1], J. CLARKE[2], I. SIDDIQI[1];* [1]QUANTUM NANOELECTRONICS LABORATORY, UNIVERSITY OF CALIFORNIA, BERKELEY, [2]UNIVERSITY OF CALIFORNIA, BERKELEY / LAWRENCE BERKELEY NATIONAL LABORATORY.

13:50 2EY-02 **SQUID AMPLIFIERS AND QUANTUM NOISE** *L. SPIETZ, M. LEE, J. AUMENTADO;* NIST.

14:10 2EY-03 **PARAMETRIC RESONATORS FOR MICROWAVE APPLICATIONS** *C. WILSON;* CHALMERS UNIVERSITY.

14:30 2EY-04 **ON-CHIP QUANTUM AMPLIFIER** *A. A. ABDUMALIKOV[1], O. ASTAFIEV[2], A. M. ZAGOSKIN[3], Y. A. PASHKIN[2], Y. NAKAMURA[2], J. TSAI[2];* [1]THE INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH (RIKEN), TSUKUBA, JAPAN, [2]NEC NANO ELECTRONICS RESEARCH LABORATORIES, TSUKUBA, JAPAN, [3]DEPARTMENT OF PHYSICS, LOUGHBOROUGH UNIVERSITY, LOUGHBOROUGH, UK.

14:50 2EY-05 **TOMOGRAPHIC RECONSTRUCTION OF THE WIGNER FUNCTION OF AN ITINERANT MICROWAVE FIELD.** *F. MALLET1, M. CASTELLANOS-BELTRAN[1], H. KU[1], K. IRWIN[2], L. VALE[2], G. HILTON[1], K. LEHNERT[1];* [1]JILA, [2]NIST.

15:10 2EY-06 **TWO-PORT DIRECTIONAL PARAMETRIC AMPLIFIER** *A. KAMAL[1], M. DEVORET[1], J. CLARKE[2];* [1]DEPARTMENTS OF PHYSICS AND APPLIED PHYSICS, YALE UNIVERSITY, [2]DEPARTMENT OF PHYSICS, UNIVERSITY OF CALIFORNIA, BERKELEY AND MATERIALS SCIENCES DIVISION, LAWRENCE BERKELEY NATIONAL LABORATORY.

2EZ: 166 ULF-NMR/MRI AND BIO APPLICATIONS II

HAMPTON MICHELLE ESPY (LANL) AND JAREK WOSIK (UNIVERSITY OF HOUSTON)

13:30 2EZ-01 ***(INVITED)*** **CLINICAL APPLICATION OF AUDITORY EVOKED FIELD FOR DEMENTIA USING UNSHIELDED MEG SYSTEM WITH TWO-DIMENSIONAL GRADIOMETERS** *Y. SEKI[1], A. KANDORI[1], K. OGATA[1], T. MIYASHITA[1], A. MAKI[1], Y. KUMAGAI[2], M. OHNUMA[3], K. KONAKA[4], H. NARITOMI[4];* [1]HITACHI ADVANCED RESEARCH LABORATORY, [2]HITACHI CENTRAL RESEARCH LABORATORY, [3]HITACHI DESIGN DIVISION, [4]NATIONAL CARDIOVASCULAR CENTER.

14:00 2EZ-02 **STUDIES ON HIGHER FUNCTION OF HUMAN BRAINS BY A SQUID SYSTEM IN A SUPERCONDUCTING MAGNETIC SHIELD** *H. OHTA[1], T. MATSUI[1], Y. UCHIKAWA[2];* [1]NICT, [2]TOKYO TENKI UNIVERSITY.

14:15 2EZ-03 **A PORTABLE AND FLEXIBLE HAND-HELD MAGNETIC PROBE SYSTEM BASED ON HTS SQUID FOR STAGING NODAL CANCERS** *A. BRAZDEIKIS, S. SARANGI;* TEXAS CENTER FOR SUPERCONDUCTIVITY, UNIVERSITY OF HOUSTON, HOUSTON, TX 77204.

14:30 2EZ-04 **LIQUID-PHASE DETECTION OF BIOLOGICAL TARGETS WITH MAGNETIC MARKER AND SQUID** *K. ENPUKU, S. CHOSOKABE, H. WATANABE, M. MATSUO, T. YOSHIDA;* KYUSHU UNIVERSITY.

14:45 2EZ-05 **MAGNETORELAXATION (MRX) MEASUREMENTS WITH DC-SQUID GRADIOMETERS** *M. BÜTTNER, F. SCHMIDL, M. SCHIFFLER, P. SEIDEL;* FRIEDRICH-SCHILLER-UNIVERSITÄT JENA.

15:00 2EZ-06 **MULTI-CHANNEL SQUID-BASED ULTRA-HIGH-SENSITIVITY AND HIGH-SPECIFICITY IN-VITRO DETECTIONS FOR BIOMARKERS VIA IMMUNOMAGNETIC REDUCTION** *H. HORNG[1], S. YANG[2], K. HUANG[3], M. CHIU[3], C. HONG[4], H. YANG[5];* [1]NATIONAL TAIWAN NORMAL UNIVERSITY, [2]MAGQU CO., LTD., [3]NATIONAL TAIWAN UNIVERSITY HOSPITAL, [4]NATIONAL CHUNG HSING UNIVERSITY, [5]NATIONAL TAIWAN UNIVERSITY.

15:15 2EZ-07 **SQUID-BASED HARMONIC SPECTROSCOPY OF LIVING CELLS USING NONLINEAR FIELDS** *J. R. CLAYCOMB[1], J. FANG[2], J. H. MILLER, JR.[2];* [1]HOUSTON BAPTIST UNIVERSITY, DEPARTMENT OF MATHEMATICS AND PHYSICS, [2]UNIVERSITY OF HOUSTON, DEPARTMENT OF PHYSICS AND TEXAS CENTER FOR SUPERCONDUCTIVITY.

2LX: 139 MRI, NMR AND HIGH FIELD MAGNETS

EMPIRE KEN-ICHI SASAKI (KEK, HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION) AND KATHLEEN AMM (GE GLOBAL RESEARCH)

13:30 2LX-01 ***(INVITED)*** **ADVANCES IN WHOLE-BODY MRI MAGNETS** *T. COSMUS, M. DHAR, J. VAN DER KOIJK, M. PARIZH;* PHILIPS MEDICAL SYSTEMS.

14:00 2LX-02 **BI-2223 INNERMOST COIL FOR 1.03 GHZ NMR MAGNET** *T. KIYOSHI[1], S. CHOI[1], S. MATSUMOTO[1], K. ZAITSU[2], T. HASE[2], T. MIYAZAKI[2], M. HAMADA[3], M. HOSONO[4], H. MAEDA[5];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]KOBE STEEL, LTD., [3]JAPAN SUPERCONDUCTOR TECHNOLOGY, INC., [4]JEOL LTD., [5]RIKEN.

14:15 2LX-03 **STATUS OF THE NHMFL CICC MAGNET PROGRAM** *M. D. BIRD, T. ADKINS, H. BAI, S. BOLE, K. CANTRELL, J. CHEN, I. R. DIXON, A. V. GAVRILIN, K. HAN, J. LU, T. A. PAINTER, K. D. SMITH, R. P. WALSH, H. W. WEIJERS, Y. ZHAI;* NHMFL - FSU.

14:30 2LX-04 **SERIES-CONNECTED HYBRID OUTSERT COIL AND COLD MASS ENGINEERING DESIGN AND FABRICATION** *T. A. PAINTER, S. BOLE, T. W. ADKINS, I. R. DIXON;* NHMFL.

14:45 2LX-05 **A 2²T COMPACT SUPERCONDUCTING MAGNET SYSTEM AT 4.²K WITH INTEGRATED BI-2212 SOLENOID INSERT COILS** *S. P. G. CHAPPELL[1], Z. MELHEM[1], C. FRIEND[1], A. TWIN[1], Y. B. HUANG[1], H. P. MIAO[1], E. A. YOUNG[2], Y. YANG[2];* [1]OXFORD INSTRUMENTS, [2]UNIVERSITY OF SOUTHAMPTON.

15:00 2LX-06 **LAYER-WOUND YBCO COILS FOR HIGH FIELD MAGNET APPLICATIONS** *U. P. TROCIEWITZ[1], M. DALBAN-CANASSY[1], D. MYERS[1], P. NOYES[2], Y. VIOUCHKOV[2], H. W. WEIJERS[2], D. C. LARBALESTIER[1];* [1]APPLIED SUPERCONDUCTIVITY CENTER - NHMFL, [2]MAGNET SCIENCE & TECHNOLOGY - NHMFL.

2LY: 136 SFCL OTHER TYPES

PALLADIAN MATHIAS NOE (FZK) AND ANTONIO MORANDI (UNIVERSITY OF BOLOGNA)

13:30 2LY-01 ***(INVITED)*** **DEVELOPMENT AND DEPLOYMENT OF SATURATED-CORE FAULT CURRENT LIMITERS IN DISTRIBUTION AND TRANSMISSION SUBSTATIONS** *F. MORICONI, F. DE LA ROSA, F. DARMANN, A. NELSON, L. MASUR;* ZENERGY POWER.

14:00 2LY-02 **PERFORMANCE OF THE 35KV/90MVA SFCL IN LIVE-GRID FAULT CURRENT LIMITING TESTS** *Y. XIN[1], H. HONG[1], J. Z. WANG[1], W. Z. GONG[1], J. Y. ZHANG[1], A. L. REN[1], M. R. ZI[2], Z. Q. QIONG[2], D. J. SI[2], F. YE[2];* [1]INNOPOWER SUPERCONDUCTOR CABLE CO., LTD., [2]YUNNAN POWER GRID, CO..

14:15 2LY-03 **QUENCH PERFORMANCE OF ASSEMBLIES AND MODULES BASED ON HTS COATED CONDUCTORS: FUNCTIONAL TESTS OF CURRENT LIMITATION AND RECOVERY AT FULL POWER** *A. USOSKIN[1], F. MUMFORD[2], A. HANDAZE[1], B. LUKASIK[2], A. RUTT[1], K. SCHLENGA[1], B. PRAUSE[1], H. U. KLEIN[3], D. KRISCHEL[3];* [1]BRUKER HTS GMBH, [2]AREVA T&D TECHNOLOGY CENTRE IN STAFFORD, [3]BRUKER ASC GMBH.

14:30 2LY-04 **SLIMFORMER - SELF-LIMITING TRANSFORMER PILOT PLANT DESIGN, CONSTRUCTION AND TESTS** *I. VAJDA[1], A. HYDE[2], A. GYORE[1], G. NADOR[3], T. TROLLIER[4], B. SAILER[5], R. BOHM[6];* [1]BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS, [2]AREVA T&D TECHNOLOGY CENTRE, [3]CG ELECTRIC SYSTEMS HUNGARY ZRT., [4]AIR LIQUIDE ADVANCED TECHNOLOGIES, [5]BRUKER HTS GMBH, [6]NEXANS SUPERCONDUCTORS GMBH.

14:45 2LY-05 **CONSIDERATIONS ABOUT THE DESIGN OF AN INDUCTIVE-RESISTIVE ELEMENT FOR A MATRIX TYPE SFCL** *A. ALVAREZ, P. SUÁREZ, J. M. CEBALLOS, B. PÉREZ;* UNIV. OF EXTREMADURA.

15:00 2LY-06 **TESTS AND PERFORMANCE ANALYSIS OF CORELESS INDUCTIVE HTS FAULT CURRENT LIMITERS** *J. KOZAK[1], M. MAJKA[1], T. JANOWSKI[2], S. KOZAK[1], G. WOJTASIEWICZ[1], B. KONDRATOWICZ-KUCEWICZ[1];* [1]ELECTROTECHNICAL INSTITUTE, [2]LUBLIN UNIVERSITY OF TECHNOLOGY.

15:15 2LY-07 **CURRENT LIMITING EXPERIMENT OF TRANSFORMER TYPE SUPERCONDUCTING FAULT CURRENT LIMITER WITH REWOUND STRUCTURE USING BSCCO WIRE IN SMALL MODEL POWER SYSTEM** *S. ODA[1], S. NODA[1], H. NISHIOKA[2], M. MORI[2], J. BABA[2], Y. SHIRAI[1];* [1]KYOTO UNIVERSITY, [2]TOKYO UNIVERSITY.

2LZ: 125 FUSION II *CONGRESSIONAL* NICOLAI MARTOVETSKY (LLNL/ORNL) AND LUCA BOTTURA (CERN)

13:30 2LZ-01 **OPERATION AND TEST RESULTS FROM THE SULTAN TEST FACILITY** *P. BRUZZONE, B. STEPANOV, R. WESCHE, M. BAGNASCO, R. HERZOG, C. CALZOLAIO, M. VOGEL;* EPFL-CRPP.

13:45 2LZ-02 **FAST: CONCEPTUAL DESIGN FOR A COMPLETELY SUPERCONDUCTING MAGNET SYSTEM** *A. DI ZENOBIO, A. DELLA CORTE, L. MUZZI, G. POLLI, L. RECCIA, S. TURTÙ, F. CRISANTI, A. CUCCHIARO, A. PIZZUTO, R. VILLARI;* ENEA.

14:00 2LZ-03 ***(INVITED)*** **DESIGN OF JT-60SA MAGNETS AND ASSOCIATED EXPERIMENTAL VALIDATIONS** *L. ZANI1, P. BARABASCHI1, M. PEYROT1, L. MEUNIER1, V. TOMARCHIO1, D. DUGLUE1, P. DECOOL2, A. TORRE2, J. MARECHAL2, A. DI ZENOBIO3, L. MUZZI3, A. CUCCHIARO3, S. TURTU3, S. ISHIDA4, K. YOSHIDA4, K. TSUCHIYA4, K. KIZU4, H. MURAKAMI[4];* [1]FUSION FOR ENERGY, [2]ASSOCIATION EURATOM-CEA, [3]ASSOCIATION EURATOM-ENEA, [4]JAEA.

14:30 2LZ-04 **AC LOSS, INTERSTRAND RESISTANCE AND MECHANICAL PROPERTIES OF AN OPTION-II ITER CICC UP TO 30,000 CYCLES IN THE PRESS** *Y. MIYOSHI[1], Y. ILIN[2], W. ABBAS[1], A. NIJHUIS[1];* [1]UNIVERSITY OF TWENTE, [2]ITER INTERNATIONAL ORGANISATION.

14:45 2LZ-05 **14 MEV NEUTRON IRRADIATION EFFECTS ON NB^3SN STRAND** *A. NISHIMURA[1], T. TAKEUCHI[2], G. NISHIJIMA[3];* [1]NATIONAL INSTITUTE FOR FUSION SCIENCE, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [3]TOHOKU UNIVERSITY.

15:00 2LZ-06 **VALIDATION OF THE [4]C THERMAL-HYDRAULIC CODE AGAINST 25 KA SAFETY DISCHARGE IN THE ITER TOROIDAL FIELD MODEL COIL (TFMC)** *R. ZANINO[1], R. HELLER[2], L. SAVOLDI RICHARD[1];* 1POLITECNICO DI TORINO, 2KARLSRUHE INSTITUTE OF TECHNOLOGY.

15:15 2LZ-07 ***(INVITED)*** **STATUS REPORT OF THE EDIPO PROJECT** *A. PORTONE[1], M. BAGNASCO[2], B. BAKER[1], P. BRUZZONE[2], F. CAU[3], E. FERNANDEZ-CANO[1], E. SALPIETRO[4], B. STEPANOV[2], P. TESTONI[1], E. THEISEN[5], R. WESCHE[2];* [1]FUSION FOR ENERGY, [2]EPFL-CRPP, [3]FUSION FOR ENERGY/EPFL-CRPP, [4]EFDA, [5]BABCOCK-NOELL.

2MX: 110 BI-2212 AND BI-2223 WIRES AND TAPES II *BLUE* TIMOTHY HAUGAN (U.S. AIR FORCE RESEARCH LABORATORY) AND RENE FLÜKIGER (UNIVERSITY OF GENEVA)

13:30 2MX-01 ***(INVITED)*** **IMPROVEMENT ON BI2212 ROUND WIRE AND COIL PERFORMANCE** *Y. HUANG[1], H. MIAO[1], M. MEINESZ[1], S. HONG[2], T. HOLESINGER[3], J.*

PARRELL[1]; [1]OXFORD SUPERCONDUCTING TECHNOLOGY, [2]HJC ENTERPRISES, [3]LOS ALAMOS NATIONAL LAB..

14:00 2MX-02 **LEAKAGE STUDIES IN 2212 ROUND WIRE AND RUTHERFORD CABLES** *E. HELLSTROM[1], T. PATTEN[1], J. JIANG[1], U. TROCIEWITZ[1], D. LARBALESTIER[1], E. BARZI[2], A. GODEKE[3];* [1]APPLIED SUPERCONDUCTIVITY CENTER/NATIONAL HIGH MAGNETIC FIELD LABORATORY, [2]FERMI NATIONAL ACCELERATOR LABORATORY, [3]LAWRENCE BERKELEY NATIONAL LABORATORY.

14:15 2MX-03 **COMPARATIVE STUDIES OF NINE NEW BI-2212 ROUND WIRES** *J. JIANG, D. MYERS, T. SHEN, F. KAMETANI, U. P. TROCIEWITZ, E. E. HELLSTROM, D. C. LARBALESTIER;* NATIONAL HIGH MAGNETIC FIELD LABORATORY, FLORIDA STATE UNIVERSITY.

14:30 2MX-04 **PROGRESS IN HIGH IC, JC BI-2212 ROUND WIRE CONDUCTORS** *T. G. HOLESINGER[1], F. J. BACA[1], J. A. KENNISON[1], J. Y. COULTER[1], K. R. MARKEN[1], H. MIAO[2], M. MEINESZ[2], Y. HUANG[2], J. A. PARRELL[2], S. CAMPBELL[3], V. LOMBARDO[4], E. BARZI[4];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]OXFORD SUPERCONDUCTING TECHNOLOGY, [3]SCI ENGINEERED MATERIALS, INC., [4]FERMI NATIONAL ACCELERATOR LABORATORY.

14:45 2MX-05 **EFFECT OF COOLING RATE ON RESOLIDIFICATION IN PARTIAL MELT PROCESSED BI2212/AG WIRE** *W. T. NACHTRAB[1], X. T. LIU[2], T. WONG[1], J. SCHWARTZ[2];* [1]SUPERCON, INC., [2]NORTH CAROLINA STATE UNIVERSITY.

15:00 2MX-06 **CURRENT TRANSPORT PROPERTIES OF SINGLE FILAMENTS EXTRACTED FROM BI2212 ROUND WIRES** *F. KAMETANI[1], T. SHEN[1], J. JIANG[1], E. HELLSTROM[1], Y. HUANG[2], D. LARBALESTIER[1];* [1]NATIONAL HIGH MAGNETIC FIELD LABORATORY, [2]OXFORD SUPERCONDUCTING TECHNOLOGY.

15:15 2MX-07 **PROCESS OPTIMIZATION FOR ENHANCED JC OF BI-2212 USING METHODS OF STATISTICALLY DESIGNED EXPERIMENTS** *F. BACA[1], T. G. HOLESINGER[1], J. A. KENNISON[1], J. COULTER[1], K. MARKEN[1], V. LOMBARDO[2], E. BARZI[2];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]FERMI NATIONAL ACCELERATOR LABORATORY.

2MY: 113 HTS FLUX PINNING AND DYNAMICS: GENERAL EFFECTS

BLUE PRE-FUNC. AMIT GOYAL (OAK RIDGE NATIONAL LABORATORY) AND JUDITH MACMANUS-DRISCOLL (UNIVERSITY OF CAMBRIDGE)

13:30 2MY-01 **CRITICAL CURRENT VERSUS MAGNETIC-FIELD ORIENTATION IN YBCO THIN FILMS WITH COLUMNAR PINS BY COMPUTER SIMULATIONS OF VORTEX DYNAMICS** *J. P. RODRIGUEZ;* CALIFORNIA STATE UNIVERSITY AT LOS ANGELES.

13:45 2MY-02 **THICKNESS DEPENDENCE AND INFLUENCE OF SELF AND EXTERNAL FIELDS ON THE CRITICAL-CURRENT DENSITY OF COATED CONDUCTORS** *A. SANCHEZ[1], C. NAVAU[1], N. DEL-VALLE[1], D. CHEN[2], J. R. CLEM[3];* [1]UNIVERSITAT AUTONOMA DE BARCELONA, [2]ICREA AND UNIVERSITAT AUTONOMA DE BARCELONA, [3]IOWA STATE UNIVERSITY AND AMES LABORATORY.

14:00 2MY-03 **ELECTRICAL CHARACTERIZATION AND MODELLING OF TECHNICAL SUPERCONDUCTORS FOR USE IN APPLICATIONS WITH MODERATE MAGNETIC FIELDS AND LOWER TEMPERATURES** *A. KUHNERT, M. P. OOMEN, J. RABBERS, T. ARNDT;* SIEMENS AG.

14:15 2MY-04 **CRITICAL CURRENT DENSITY AND TC VARIATIONS IN THE YBCO FILMS OF COATED CONDUCTORS** *P. BERNSTEIN, C. MCLOUGHLIN, Y. THIMONT, J. NOUDEM, C. HARNOIS;* CNRS - CRISMAT ENSICAEN.

14:30 2MY-05 **THE STRAIN DEPENDENCE OF THE CRITICAL CURRENT DENSITY OF $YBA^2CU^3O7-\Delta$ COATED CONDUCTORS AS A FUNCTION OF MAGNETIC FIELD, ANGLE, AND TEMPERATURE** *J. S. HIGGINS, D. HAMPSHIRE;* DURHAM UNIVERSITY.

14:45 2MY-06 **WITHDRAWN**

15:00 2MY-07 **IMPROVEMENT OF CRITICAL CURRENT DENSITIES AND TRAPPED MAGNETIC FIELD IN SINGLE DOMAIN YBCO BY INSULATING INCLUSIONS: CONTROL OF THE PINNING CENTERS SIZE** *N. MOUTALBI[1], J. NOUDEM[2], A. M'CHIRGUI[1];* [1]FACULTY OF SCIENCES, [2]CRISMAT/CNRS, UCBN/ENSICAEN.

15:15 2MY-08 **INVESTIGATION OF DYNAMIC BEHAVIORS OF LOW-LEVEL DISSIPATION AT $YBA^2CU^3O7-\Delta$ GRAIN BOUNDARIES USING LOW-TEMPERATURE NEAR-FIELD SCANNING MICROWAVE MICROSCOPY** *J. WU[1], R. LU[1], C. CHRISTIANSON[1], J. DIZON[1], T. HAUGAN[2], P. BARNES[2], J. BACA[3];* [1]UNIV. OF KANSAS, [2]US AIR FORCE RESEARCH LAB, [3]LOS ALAMOS NATIONAL LAB.

16:00 POSTER SESSIONS

2LP2A: 250 CICC I *REGENCY* WALTER FIETZ (KIT) AND AL ZELLER (MICHIGAN STATE UNIV.)

16:00 2LP2A-01 / 1 WITHDRAWN

16:00 2LP2A-02 / 2 **DESIGN AND MANUFACTURE OF THE SUPERCONDUCTING JOINT FOR THE 40 T HYBRID MAGNET** *Y. TAN;* HIGH MAGNETIC FIELD LABORATORY, CHINESE ACADEMY OF SCIENCES.

16:00 2LP2A-03 / 3 **COMPARISON OF A CONTACT MECHANICS MODEL WITH EXPERIMENTAL RESULTS TO OPTIMIZE THE PREDICTION OF TRANSVERSE LOAD EFFECTS OF LARGE SUPERCONDUCTING CABLE-IN-CONDUIT-CONDUCTOR** *L. CHIESA[1], M. TAKAYASU[2];* [1]TUFTS UNIVERSITY, [2]MIT, PLASMA SCIENCE AND FUSION CENTER.

16:00 2LP2A-04 / 4 **NEUTRON DIFFRACTION STUDY OF THERMAL RESIDUAL STRAIN IN NB^3SN CONDUCTORS** *T. HEMMI[1], S. HARJO[1], K. MATSUI[1], Y. NUNOYA[1], N. KOIZUMI[1], Y. TAKAHASHI[1], H. NAKAJIMA[1], T. ITO[1], K. AIZAWA[1], H. SUZUKI[1], S. MACHIYA[2], Y. TSUCHIYA[3], K. OSAMURA[4];* [1]JAPAN ATOMIC ENERGY AGENCY, [2]DAIDO UNIVERSITY, [3]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [4]RESEARCH INSTITUTE FOR APPLIED SCIENCES.

16:00 2LP2A-05 / 5 **ROLE OF THE CROSS-SECTION GEOMETRY IN RECTANGULAR NB^3SN CICC PERFORMANCES** *S. TURTÙ[1], L. RECCIA[1], V. CORATO[1], A. DELLA CORTE[1], A. DI ZENOBIO[1], C. FIAMOZZI ZIGNANI[1], L. MUZZI[1], D. BOSO[2];* [1]ENEA, [2]PADOVA UNIVERSITY.

16:00 2LP2A-06 / 6 WITHDRAWN.

16:00 2LP2A-07 / 7 **VIRTUAL TESTING OF NB^3SN STRANDS FOR CIC CONDUCTORS** *D. P. BOSO;* UNIVERSITY OF PADOVA.

2LP2B: 243 FUSION III *REGENCY* LUIGI MUZZI (ENEA) AND NICOLAI MARTOVETSKY (LLNL/ORNL)

16:00 2LP2B-01 / 8 **TEST RESULTS OF TWO ITER POLOIDAL FIELD CONDUCTOR SAMPLES IN SULTAN** *P. BRUZZONE[1], B. STEPANOV[1], R. WESCHE[1], S. TURTÙ[2], V. CORATO[2], A. DEVRED[3], D. BESSETTE[3], A. VOSTNER[3], T. BOUTBOUL[4], S. LELEKHOV[5], Y. WU[6];* [1]EPFL-CRPP, [2]ENEA, [3]ITER, [4]F4E, [5]KURCHATOV INSTITUTE, [6]ASIPP.

16:00 2LP2B-02 / 9 **FROM DESIGN TO DEVELOPMENT PHASE OF THE ITER CORRECTION COILS** *A. FOUSSAT[1], N. DOLGETTA[1], C. JONG[1], P. LIBEYRE[1], N. MITCHELL[1], W. WU[2], L. LIU[2], S. DU[2], X. LIU[2], X. YU[2], S. HAN[2], J. WEI[2], Y. SONG[2];* [1]ITER ORGANIZATION, [2]ACADEMY OF SCIENCE INSTITUTE OF PLASMA PHYSICS.

16:00 2LP2B-03 / 10 **TRANSIENT THERMAL AND FLOW-DYNAMIC ANALYSIS OF ITER MAGNET SYSTEM ON BASIS OF VINCENTA NUMERICAL CODE** *V. BELYAKOV[1], D. BESSETTE[2], I. GORNIKEL[3], V. KALININ[1], M. KAPARKOVA[1], N. MITCHELL[2], D. SHATIL[1], N. SHATIL[1], S. SYCHEVSKYI[1], V. VASILIEV[1];* [1]EFREMOV'S INSTITUTE, ST.PETERSBURG, RUSSIA, [2]ITER ORGANIZATION, CADARACHE, FRANCE, [3]ALPHYSICA, INC..

16:00 2LP2B-04 / 11 **WITHDRAWN**

16:00 2LP2B-05 / 12 **NUMERICAL SIMULATION OF CURRENT DISTRIBUTION IN CABLE-IN-CONDUIT CONDUCTOR FOR ITER TF COIL** *H. KAJITANI[1], H. UEDA[1], A. ISHIYAMA[1], H. MURAKAMI[2], N. KOIZUMI[2], K. OKUNO[2];* [1]WASEDA UNIVERSITY, [2]JAEA.

16:00 2LP2B-06 / 13 **EVALUATION OF EFFECTIVE STRAIN AND N-VALUE OF ITER TF CONDUCTOR SAMPLES** *M. BRESCHI[1], D. BESSETTE[2], A. DEVRED[2], P. RIBANI[1];* [1]UNIVERSITY OF BOLOGNA, [2]ITER I/O, CADARACHE, FRANCE.

16:00 2L02B-07 / 14 WITHDRAWN

16:00 2LP2B-08 / 15 **WINDING SHOP OF THE PF1 COIL DOUBLE PANCAKES** *A. A. MEDNIKOV[1], I. Y. RODIN[1], A. V. PUGACHEV[2], S. A. EGOROV[1];* [1]THE D.V. EFREMOV SCIENTIFIC RESEARCH INSTITUTE OF ELECTROPHYSICAL APPARATUS, [2]FORSS CONSULTING LTD.

16:00 2LP2B-09 / 16 **EFFECT OF MASS FLOW RATE UNBALANCE ON THE INTERPRETATION OF TCS MEASUREMENTS OF ITER TF SHORT SAMPLES** *L. SAVOLDI RICHARD[1], F. BELLINA[2], M. BRESCHI[3], P. RIBANI[3], F. SUBBA[1], R. ZANINO[1];* [1]POLITECNICO DI TORINO, [2]UNIVERSITA' DI UDINE, [3]UNIVERSITA' DI BOLOGNA.

16:00 2LP2B-10 / 17 **TEST RESULT OF A FULL-SIZE NB^{3}SN CONDUCTOR DEVELOPED FOR THE ITER TF COILS** *Y. NUNOYA[1], Y. NABARA[1], M. YOSHIKAWA[1], K. MATSUI[1], T. HEMMI[1], Y. TAKAHASHI[1], T. ISONO[1], N. KOIZUMI[1], H. NAKAJIMA[1], B. STEPANOV[2], P. BRUZZONE[2];* [1]JAPAN ATOMIC ENERGY AGENCY, [2]ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE, CRPP FUSION TECHNOLOGY.

16:00 2LP2B-11 / 18 **DEVELOPMENT OF THE ITER SUPERCONDUCTING MAGNET MANUFACTURING DATABASE** *K. SEO, F. SAVARY, J. KNASTER, R. GALLIX, C. CAPUANO, V. PATEL, M. GARDNER, N. MITCHELL;* ITER ORGANIZATION.

2LP2C: 244 FUSION IV *REGENCY* SIMONETTA TURTÙ (ENEA) AND STEVE GOURLAY (LAWRENCE BERKELEY NATIONAL LABORATORY)

16:00 2LP2C-01 / 19 WITHDRAWN

16:00 2LP2C-02 / 20 **STABILITY MARGIN OF NBTI CIC CONDUCTOR FOR JT-60SA EQUILIBRIUM FIELD COIL** *H. MURAKAMI[1], T. ICHIGE[1], K. KIZU[1], K. TSUCHIYA[1], K. YOSHIDA[1], T. OBANA[2], S. HAMAGUCHI[2], K. TAKAHATA[2], N. YANAGI[2], T. MITO[2], S. IMAGAWA[2];* [1]JAPAN ATOMIC ENERGY AGENCY, [2]NATIONAL INSTITUTE FOR FUSION SCIENCE.

16:00 2LP2C-03 / 21 **INVESTIGATION OF AN OPTIMUM STRUCTURE FOR MECHANICAL BUTT JOINT OF A STACKED HTS CABLE WITH A METAL JACKET** *S. ITO, T. SAKASHITA, H. HASHIZUME;* TOHOKU UNIVERSITY.

16:00 2LP2C-04 / 22 **EXPERIMENTAL EVALUATION OF THE INDUCTANCE AND ITS IMPACT ON THE QUENCH DETECTION OF KSTAR COILS** *H. YONEKAWA, Y. CHU, Y. O. KIM, K. R. PARK, H. K. NA, M. KWON;* NATIONAL FUSION RESEARCH INSTITUTE.

16:00 2LP2C-05 / 23 **REVIEW AND EXPERIMENTAL VERIFICATION ON THE DESIGN OF THE STABILITY AND PROTECTION OF THE KSTAR TF MAGNET** *Y. CHU, Y. KIM, H. YONEKAWA, S. PARK, H. LEE, K. PARK, H. NA;* NATIONAL FUSION RESEARCH INSTITUTE.

16:00 2LP2C-06 / 24 **HYDRAULIC BEHAVIOR OF RECTANGULAR CABLE-IN-CONDUIT CONDUCTOR FOR KSTAR SUPERCONDUCTING MAGNET SYSTEM** *S. PARK, Y. CHU, H. YONEKAWA, Y. KIM, K. KIM, I. WOO, W. HAN, J. HONG, K. PARK, H. NA, M. KWON;* NATIONAL FUSION RESEARCH INSTITUTE.

16:00 2LP2C-07 / 25 **ANALYSIS OF REVERSAL FLOW PHENOMENON OF SUPERCRITICAL HELIUM DUE TO AC LOSS IN THE KSTAR PF COIL AT LOW CURRENT** *H. LEE, Y. PARK, Y. CHU, D. OH, N. SONG, H. PARK, H. YANG;* NATIONAL FUSION RESERCH CENTER.

16:00 2LP2C-08 / 26 **AC LOSS AND TEMPERATURE MARGIN OF CABLE-IN-CONDUIT CONDUCTORS FOR JT-60SA POLOIDAL FIELD COIL** *K. NAKAMURA[1], T. MASUDA[1], K. NISHIMURA[1], T. TAKAO[1], H. MURAKAMI[2], K. YOSHIDA[2];* [1]SOPHIA UNIVERSITY, [2]JAPAN ATOMIC ENERGY AGENCY.

2MP2A: 223 COATED CONDUCTORS: CHARACTERIZATION *REGENCY* TAKANOBU KISU (KYUSHU UNIVERSITY) AND KEIICHI TANABE (SRL-ISTEC)

16:00 2MP2A-02 / 27 **METALLIC ENVELOPES FOR LONG-LENGTH HTS COATED CONDUCTORS: OPTIMAL MEANS AND FUNCTIONALITY** *A. RUTT, M. WASCHULEWSKI, K. SCHLENGA, A. USOSKIN;* BRUKER HTS GMBH.

16:00 2MP2A-03 / 28 **DEVELOPMENT OF A NUMERICAL PROGRAM FOR OPTIMIZATION OF ^{2}G HTS CONDUCTOR** *S. HWANG[1], K. KIM[1], Y. CHOI[1], M. AHN[2], H. KIM[3], H. LEE[1], S. HAHN[4];* [1]KOREA UNIVERSITY, KOREA, [2]KUNSAN NATIONAL UNIVERSITY, KOREA, [3]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, KOREA, [4]FRANCIS BITTER MAGNET LABORATORY (FBML), MIT, USA.

16:00 2MP2A-04 / 29 **MICROSTRUCTURAL AND ELECTRICAL PROPERTIES OF LASER MACHINED ^{2}G HTS TAPES** *J. LEE[1], H. KIM[1], J. SONG[1], M. AHN[2], Y. OH[3], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]KUNSAN NATIONAL UNIVERSITY, KOREA, [3]K-JOINS COMPANY, KOREA.

16:00 2MP2A-05 / 30 **USING N-VALUE ANALYSIS FOR DETERMINATION OF POSITION-DEPENDENT PROPERTY VARIABILITY IN LONG-LENGTH COATED CONDUCTORS** *J. O. WILLIS[1], J. Y. COULTER[1], M. W. RUPICH[2];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]AMERICAN SUPERCONDUCTOR CORPORATION.

16:00 2MP2A-06 / 31 **QUANTIFICATION OF PINNING ENHANCEMENTS IN PRODUCTION COATED CONDUCTORS FABRICATED BY MOCVD / IBAD** *J. Y. COULTER[1], J. E. DACKOW[2], Y. XIE[2], D. W. REAGOR[1], F. BACA[1], T. G. HOLESINGER[1], L. CIVALE[1];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]SUPERPOWER, INC..

16:00 2MP2A-07 / 32 **CHEMICAL AND MICROSTRUCTURAL CHARACTERIZATION OF CE-, HO-, AND NB-DOPED MOCVD YBA^2CU^3O6+X** *Z. CHEN[1], V. A. MARONI[1], D. J. MILLER[1], N. J. ZALUZEC[1], A. J. KROPF[1], T. AYTUG[2], C. CANTONI[2], M. PARANTHAMAN[2];* [1]ARGONNE NATIONAL LABORATORY, [2]OAK RIDGE NATIONAL LABORATORY.

16:00 2MP2A-08 / 33 **EXPERIMENTAL ANALYSIS OF UNEQUAL VOLTAGE DISTRIBUTION ON A SINGLE YBCO COATED CONDUCTOR AFFECTED BY INHOMOGENEOUS CRITICAL CURRENTS IN LIQUID NITROGEN AND SUB-COOLED LIQUID NITROGEN** *S. CHU, J. JANG, S. CHOI, Y. KIM, K. CHANG, T. KO;* YONSEI UNIVERSITY.

12:15 2MP2A-09 **ELECTROMECHANICAL PROPERTY INVESTIGATION OF STRIATED REBCO CC TAPES IN PURE TORSION MODE** *H. SHIN[1], M. J. DEDICATORIA[1], D. HA[2], S. OH[2];* [1]ANDONG NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

2MP2B: 224 COATED CONDUCTORS: JOINTS, ETC. *REGENCY* ROBERT DUCKWORTH (OAK RIDGE NATIONAL LABORATORY) AND MAKOTO TAKAYASU (MIT)

16:00 2MP2B-01 / 34 **DEVELOPMENT OF A SUPERCONDUCTING JOINING TECHNIQUE FOR YBCO COATED CONDUCTORS (CCS) BY MELTING DIFFUSION UNDER A CONTROLLED OXYGEN PARTIAL PRESSURE** *H. KIM[1], J. LEE[1], J. SONG[1], Y. OH[2], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]K-JOINS COMPANY, KOREA.

16:00 2MP2B-02 / 35 **A COMPARISON OF JOINT PROPERTIES BETWEEN $YBA_2CU_3O_{7-X}$ COATED CONDUCTORS WITH DIFFERENT CURVATURE** *H. KIM[1], K. CHANG[1], Y. KIM[1], H. JO[1], K. KIM[2], H. LEE[2], T. KO[1];* [1]YONSEI UNIVERSITY, [2]KOREA UNIVERSITY.

16:00 2MP2B-03 / 36 **EXPERIMENTAL ANALYSIS ON THE JOINT CHARACTERISTICS BETWEEN DOUBLE PANCAKE COILS USING YBCO COATED CONDUCTORS** *K. CHANG[1], H. JO[1], Y. KIM[1], M. AHN[2], T. KO[1];* [1]YONSEI UNIVERSITY, [2]KUNSAN NATIONAL UNIVERSITY.

16:00 2MP2B-04 / 37 **RESISTANCE OF YBCO SOLDER JOINTS** *J. LU, K. HAN, W. R. SHEPPARD, K. W. PICKARD, W. D. MARKIEWICZ;* NATIONAL HIGH MAGNETIC FIELD LABORATORY.

16:00 2MP2B-05 / 38 **A STABILIZER DESIGN OF YBCO COATED CONDUCTOR FOR THE PASSIVE PROTECTION OF A HTS CURRENT LEAD** *K. CHANG[1], S. CHOI[1], Y. KIM[1], M. AHN[2], H. KIM[3], T. KO[1];* [1]YONSEI UNIVERSITY, [2]KUNSAN NATIONAL UNIVERSITY, [3]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

16:00 2MP2B-06 / 39 **CHANGES IN THE THERMAL STABILITY OF [2]G HTS WIRES BY LOCAL MODIFICATION OF THE STABILIZATION LAYER** *L. A. ANGUREL[1], E. MARTÍNEZ[1], J. PELEGRÍN[1], R. LAHOZ[1], G. F. DE LA FUENTE[1], N. ANDRÉS[2], M. P. ARROYO[2], Y. Y. XIE[3], V. SELVAMANICKAM[4];* [1]ICMA (CSIC-UNIVERSITY OF ZARAGOZA), SPAIN, [2]I[3]A, UNIVERSITY OF ZARAGOZA, SPAIN, [3]SUPERPOWER, INC., 450 DUANE AVE., SCHENECTADY, NEW YORK 12304 USA, [4]SUPERPOWER, INC., 450 DUANE AVE., SCHENECTADY, NEW YORK 12304 USA, UNIVERSITY OF HOUSTON, 4800 CALHOUN ROAD, TEXAS 77004, USA.

16:00 2MP2B-07 / 40 **COATED CONDUCTOR RUTHERFORD CABLES (CCRC) FOR HIGH-CURRENT APPLICATIONS: CONCEPT AND PROPERTIES** *S. I. SCHLACHTER, W. GOLDACKER, F. GRILLI, R. HELLER, A. KUDYMOW;* KARLSRUHE INSTITUTE OF TECHNOLOGY, INSTITUTE FOR TECHNICAL PHYSICS, KARLSRUHE, GERMANY.

16:00 2MP2B-08 / 41 **INFLUENCE OF TURN-TO-TURN INSULATION ON QUENCH PROPAGATION IN MULTI-LAYER YBA^2CU^3OX CONDUCTORS AT 77 K AND 4.2 K** *M. PHILLIPS[1], J. SCHWARTZ[2];* [1]DEPARTMENT OF MECHANICAL ENGINEERING, FAMU-FSU COLLEGE OF ENGINEERING & NATIONAL HIGH

MAGNETIC FIELD LABORATORY, [2]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NORTH CAROLINA STATE UNIVERSITY.

2MP2C: 225 COATED CONDUCTORS: STABILITY *REGENCY* JUN LU (NATIONAL HIGH MAGNETIC FIELD LABORATORY) AND JEFFREY WILLIS (LOS ALAMOS NATIONAL LABORATORY)

16:00 2MP2C-01 / 42 **DEGRADATION OF YBCO COATED CONDUCTORS DUE TO OVER-CURRENT PULSE DRIVE** *M. ARAI[1], H. MOMOTARI[1], X. WANG[1], H. UEDA[1], A. ISHIYAMA[1], T. SAITO[2], Y. AOKI[3], M. YAGI[4], T. MACHI[5], N. FUJIWARA[5];* [1]WASEDA UNIVERSITY, [2]FUJIKURA,LTD., [3]SWCC SHOWA CABLE SYSTEMS CO.,LTD., [4]FURUKAWA ELECTRIC CO., LTD., [5]ISTEC.

16:00 2MP2C-02 / 43 **THERMAL CYCLING EFFECT ON YBA[2]CU[3]O7-Δ (YBCO) FILMS** *Y. XU, Z. QIAN, Z. XU, R. BHATTACHARYA;* UES INC.

16:00 2MP2C-03 / 44 **ESTIMATION OF COOLING PERFORMANCE IN CONTACTING BETWEEN BI2223 TAPE AND HIGH THERMAL CONDUCTION COMPOSITE IN CONDUCTION-COOLED SUPERCONDUCTING COIL** *T. TAKAO[1], T. YUHARA[1], D. HACHISUKA[1], T. GOTO[1], A. YAMANAKA[2], A. NISHIMURA[3];* [1]SOPHIA UNIVERSITY, [2]TOYOBO, [3]NIFS.

16:00 2MP2C-04 / 45 **OVER-CURRENT TESTS ON GDBCO COATED CONDUCTORS WITH VARIOUS THICKNESSES OF SILVER STABILIZERS** *J. KIM[1], J. LEE[1], K. KIM[1], D. YANG[1], Y. KIM[2], T. KO[2], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]YONSEI UNIVERSITY, KOREA.

16:00 2MP2C-05 / 46 **OVER CURRENT CHARACTERISTICS IN YBCO COATED CONDUCTORS** *H. MOMOTARI[1], M. ARAI[1], X. WANG[1], H. UEDA[1], A. ISHIYAMA[1], M. OHYA[2], K. OHMATSU[2], N. FUJIWARA[3];* [1]WASEDA UNIVERSITY, [2]SUMITOMO ELECTRIC INDUSTRIES, LTD., [3]INTERNATIONAL SUPERCONDUCTIVITY TECHNOLOGY CENTER.

16:00 2MP2C-06 / 47 **THE CHARACTERISTICS OF THE NORMAL ZONE PROPAGATION BEHAVIORS OF HTS COILS WITHOUT TURN-TO-TURN INSULATION** *T. KADOTA[1], S. KIM[1], H. SANO[1], J. JOO[1], Y. KWON[2], H. KIM[2], Y. JO[2];* [1]OKAYAMA UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

16:00 2MP2C-07 / 48 **THERMAL CONDUCTIVITY OF YBCO COATED CONDUCTORS REINFORCED BY METAL TAPE** *T. NAITO[1], H. FUJISHIRO[1], H. OKAMOTO[2], H. HAYASHI[2], Y. GOSHO[3], N. FUJIWARA[3], Y. SHIOHARA[3];* [1]IWATE UNIVERSITY, [2]KYUSHU ELECTRIC POWER CO., INC., [3]SRL-ISTEC.

16:00 2MP2C-08 / 49 **NUMERICAL AND EXPERIMENTAL ANALYSIS OF QUENCH DEVELOPMENT AND PROPAGATION ON [2]G HTS WIRE** *J. PELEGRÍN[1], L. A. ANGUREL[1], E. MARTÍNEZ[1], Y. Y. XIE[2], V. SELVAMANICKAM[3];* [1]ICMA (CSIC-UNIVERSITY OF ZARAGOZA), SPAIN, [2]SUPERPOWER, INC., 450 DUANE AVE., SCHENECTADY, NEW YORK 12304 USA, [3]SUPERPOWER, INC., 450 DUANE AVE., SCHENECTADY, NEW YORK 12304 USA, UNIVERSITY OF HOUSTON, 4800 CALHOUN ROAD, TEXAS 77004, USA.

16:00 2MP2C-09 / 50 **INVESTIGATION OF THE STABILITY BEHAVIOR OF COATED CONDUCTORS** *O. MÄDER, M. NOE, A. KUDYMOW, W. GOLDACKER;* KIT, KARLSRUHE INSTITUTE FOR TECHNOLOGY.

16:00 2MP2C-10 / 51 **QUENCH PROPAGATION CHARACTERISTIC AND THERMAL STABILITY OF YBCO HTS TAPES** *L. REN, Y. TANG, J. LI, J. SHI;* HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY.

2MP2D: 230 PNICTIDES I *AMBASSADOR* MARIA CIMBERLE (NATIONAL RESEARCH COUNCIL OF ITALY) AND CARLO FERDEGHINI (CNR)

16:00 2MP2D-01 / 61 **PREFER ORIENTATION FESE CRYSTAL GROWTH BY BRIDGMAN METHOD** *C. M. YANG[1], P. W. CHEN[1], J. C. KUO[1], P. DIKO[2], I. G. CHEN[1], M. K. WU[3];* [1]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL CHENG KUNG UNIVERSITY, TAINAN, TAIWAN, [2]NATIONAL CHENG KUNG UNIVERSITY, TAINAN, TAIWAN, [3]INSTITUTE OF PHYSICS, ACADEMIA SINICA, TAIPEI, TAIWAN.

16:00 2MP2D-02 / 62 **LIQUID PHASE EPITAXY OF BETA-PHASE FESE THICK FILMS** *J. Y. WANG[1], X. QI[1], J. C. KUO[1], I. G. CHEN[1], C. M. YANG[1], K. YATES[2], L. COHEN[2];* [1]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL CHENG KUNG UNIVERSITY, [2]DEPARTMENT OF PHYSICS, IMPERIAL COLLEGE, LONDON SW7 [2]BP, UK.

16:00 2MP2D-03 / 63 **ND1-XFEXOF THIN FILMS DEPOSITED BY CHEMICAL VAPOR DEPOSITION AS PRECURSORS FOR THE SYNTHESIS OF NDFEASO1-YFY SUPERCONDUCTING FILMS.** *I. R. CORRALES-MENDOZA, A. CONDE-GALLARDO;* DEPARTAMENTO DE FÍSICA, CENTRO DE INVESTIGACIÓN Y DE ESTUDIOS AVANZADOS DEL IPN, MÉXICO DF, 07300.

16:00 2MP2D-04 / 64 **FE(SEXTE1-X) SUPERCONDUCTING THIN FILMS: COMPOSTION DEPENDENCE AND TRANSPORT PROPERTIES** *J. LALOË, S. HEEDT, H. S. BARNARD, J. S. MOODERA;* MIT.

16:00 2MP2D-05 / 65 **HOMO EPITAXIAL GROWTH OF FE(SETE) FAMILY FILMS** *M. MUKAIDA[1], K. YUKI[1], A. ICHINOSE[2], M. INOUE[1], K. MATSUMOTO[3], Y. YOSHIDA[4], T. KISS[1], R. TERANISHI[1], S. MUNETOH[1];* [1]KYUSHU UNIVERSITY, [2]CRIEPI, [3]KIT, [4]NAGOYA UNIVERSITY.

16:00 2MP2D-06 / 66 **TOWARDS PRACTICAL PNICTIDES: COMBINING LOW PRESSURE SYNTHESIS AND SPARK PLASMA SINTERING OF NDFEASO1-XFX** *A. KURSUMOVIC[1], B. MAIOROV[2], J. H. DURRELL[1], S. HARRINGTON[1], J. L. DRISCOLL[1];* [1]UNIVERSITY OF CAMBRIDGE, [2]LOS ALAMOS NATIONAL LABORATORY.

16:00 2MP2D-07 / 67 **THE ROLE OF PB ADDITION ON THE MICROSTRUCTURE AND SUPERCONDUCTING PROPERTIES OF POLYCRYSTALLINE $SR0.^{6}K0.^{4}FE^{2}AS2$** *L. WANG, Y. QI, Z. ZHANG, D. WANG, X. ZHANG, Z. GAO, Y. MA;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

16:00 2MP2D-08 / 68 **PROPERTIES OF SMFEASO1-XFX TYPE OXIPNICTIDE BULKS AND WIRES MADE VIA SEVERAL ROUTES** *M. MAJOROS[1], M. KANUCHOVA[2], M. D. SUMPTION[1], M. A. SUSNER[1], C. S. MYERS[1], S. D. BOHNENSTIEHL[1], E. W. COLLINGS[1];* [1]THE OHIO STATE UNIVERSITY, [2]TECHNICAL UNIVERSITY OF KOSICE.

16:00 2MP2D-09 / 69 **TRANSPORT PROPERTY OF IRON-BASED SUPERCONDUCTING WIRE USING FESE1-XTEX** *T. OZAKI, K. DEGUCHI, Y. MIZUGUCHI, H. KUMAKURA, Y. TAKANO;* NATIONAL INSTITUTE FOR MATERIALS SCIENCE (NIMS).

2MP2E: 231 PNICTIDES II

AMBASSADOR JEAN-BAPTISTE LALOË (MIT) AND QIANG LI (BROOKHAVEN NATIONAL LABORATORY)

16:00 2MP2E-01 / 69 **PROBLEMS ON THE VALUATION OF THE CRITICAL CURRENT DENSITY ANISOTROPY IN SINGLE CRYSTALS OF THE IRON BASED SUPERCONDUCTOR $BA0.^{5}K0.^{5}FE^{2}AS2$** *M. R. CIMBERLE[1], C. FERDEGHINI[2], M. PUTTI[3], M. TROPEANO[3], A. PROVINO[4], M. PANI[4], P. MANFRINETTI[4];* [1]NATIONAL RESEARCH COUNCIL OF ITALY-IMEM, [2]NATIONAL RESEARCH COUNCIL OF ITALY-SPIN, [3]NATIONAL RESEARCH COUNCIL OF ITALY-SPIN AND PHYSICS DEPARTMENT, [4]NATIONAL RESEARCH COUNCIL OF ITALY-SPIN AND CHEMISTRY DEPARTMENT.

16:00 2MP2E-02 / 70 WITHDRAWN

16:00 2MP2E-03 / 71 **CURRENT-VOLTAGE CHARACTERISTICS OF IRON-PNICTIDE 122 SINGLE CRYSTALS** *K. MULLER[1], S. LAM[1], X. WANG[2], S. DOU[2], G. SUN[3], D. SUN[3], C. LIN[3];* [1]CSIRO, MATERIALS SCIENCE AND ENGINEERING, SYDNEY NSW 2070, AUSTRALIA, [2]INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, WOLLONGONG, NSW 2522, AUSTRALIA, [3]MAX PLANCK INSTITUTE FOR SOLID STATE RESEARCH, HEISENBERGSTRAßE 1, 70569 STUTTGART, GERMANY.

16:00 2MP2E-04 / 72 **ESTIMATIONS OF CRITICAL CURRENT DENSITIES AND SUPER-CURRENT PATH IN IRON-BASED PNICTIDE SUPERCONDUCTORS** *B. NI[1], J. GE[1], E. S. OTABE[2], M. KIUCHI[2], T. MATSUSHITA[2], Z. GAO[3], L. WANG[3], Y. QI[3], X. ZHANG[3], Y. MA[3];* [1]FUKUOKA INSTITUTE OF TECHNOLOGY, [2]KYUSHU INSTITUTE OF TECHNOLOGY, [3]CHINESE ACADEMY OF SCIENCES.

16:00 2MP2E-05 / 73 **AIR-EXPOSURE EFFECTS OF SUPERCONDUCTIVITY IN FE(TE, S)** *K. DEGUCHI[1], Y. MIZUGUCHI[1], S. TSUDA[2], T. YAMAGUCHI[2], Y. TAKANO[1];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, JST-TRIP, UNIVERSITY OF TSUKUBA, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, JST-TRIP.

16:00 2MP2E-06 / 74 **ANION HEIGHT DEPENDENCE OF TC FOR THE FE-BASED SUPERCONDUCTORS** *Y. MIZUGUCHI, Y. TAKANO;* NATIONAL INSTITUTE FOR MATERIALS SCIENCE.

16:00 2MP2E-07 / 75 **CRITICAL PROPERTIES OF POLYCRYSTALLINE $(BA,K)FE^{2}AS2$ SUPERCONDUCTORS PREPARED BY A COMBINED PROCESS OF HIGH TEMPERATURE HEAT TREATMENT AND DEFORMATION** *K.*

TOGANO, A. MATSUMOTO, H. KUMAKURA; NATIONAL INSTITUTE FOR MATERIALS SCIENCE.

16:00 2MP2E-08 / 76 **EFFECTS OF NI AND CO DOPING ON THE PHYSICAL PROPERTIES OF TE SUBSTITUTED BETA FESE SUPERCONDUCTOR** *S. RAI;* JNCASR.

16:00 2MP2E-09 / 77 **STUDY OF UPPER CRITICAL FIELD, MAGNETIZATION HYSTERESIS LOOPS, REMANENT MAGNETIZATION AND THERMO ELECTRIC POWER IN POTASSIUM FLUORIDE DOPED LAOFEAS MULTIBAND SUPERCONDUCTOR** *S. J. SINGH1, S. PATNAIK[1], J. PRAKASH[2], A. K. GANGULI[2];* [1]SCHOOL OF PHYSICAL SCIENCES, JAWAHARLAL NEHRU UNIVERSITY, NEW DELHI, INDIA, [2]DEPARTMENT OF CHEMISTRY, INDIAN INSTITUTE OF TECHNOLOGY, NEW DELHI, INDIA.

16:00 2MP2E-10 / 78 **MAGNETIC CHARACTERIZATION OF BA(FE1-XCOX)^{2}AS2** *S. GAUDIO[1], G. DE MARZI[1], G. CELENTANO[1], A. AUGIERI[1], V. GALLUZZI[1], A. MANCINI[1], A. RUFOLONI[1], A. VANNOZZI[1], A. DELLA CORTE[1], U. GAMBARDELLA[2], J. J. JIANG[3], J. WEISS[3], E. HELLSTROM[3], D. LARBALESTIER[3];* [1]ENEA RESEARCH CENTRE, [2]CNR-SPIN, [3]NATIONAL HIGH MAGNETIC FIELD LABORATORIES.

WEDNESDAY, AUGUST 04, 2010

08:00 ORAL SESSIONS

3EA: 161 TES CHARACTERIZATION *EXECUTIVE* CAROLINE KILBOURNE (NASA GODDARD SPACE FLIGHT CENTER) AND MARK LINDEMAN (SRON)

08:00 3EA-01 ***(INVITED)*** **UNDERSTANDING AND MEASURING HEAT TRANSPORT AND HEAT STORAGE IN LOW-DIMENSIONAL STRUCTURES AT LOW TEMPERATURES** *S. WITHINGTON, D. J. GOLDIE;* UNIVERSITY OF CAMBRIDGE.

08:30 3EA-02 **STUDY OF EXCESS HEAT CAPACITY AND SUPPRESSED KAPITZA CONDUCTANCE IN TES DEVICES** *Y. ZHAO[1], J. A. CHERVENAK[2], W. B. DORIESE[3], S. T. STAGGS[4];* [1]CORNELL UNIVERSITY, [2]NASA GSFC, [3]NIST, BOULDER, [4]PRINCETON UNIVERSITY.

08:45 3EA-03 **ANOMALOUS THERMAL BEHAVIOR IN GAMMA-RAY MICROCALORIMETERS** *R. D. HORANSKY, D. A. BENNET, J. A. BEALL, K. D. IRWIN, J. N. ULLOM;* NIST, BOULDER.

09:00 3EA-04 WITHDRAWN

09:15 3EA-05 **DEVICE CHARACTERIZATION AND READOUT FOR FAST TUNGSTEN OPTICAL TRANSITION EDGE SENSORS** *B. CALKINS, A. E. LITA, N. TOMLIN, S. NAM;* NIST BOULDER.

09:30 3EA-06 **THERMAL PROPERTIES OF SILICON NITRIDE BEAMS BELOW ONE KELVIN** *G. WANG[1], V. YEFREMENKO[1], A. DATESMAN[1], V. NOVOSAD[1], J. PEARSON[1], R. DIVAN[1], J. LEE[1], C. CHANG[2], L. BLEEM[2], A. CRITES[2], J. MEHL[2], S. MEYER[2], J. CARLSTROM[2], J. SAYER[3], J. RUHL[3], J. MCMAHON[4];* [1]ARGONNE NATIONAL LABORATORY, [2]UNIVERSITY OF CHICAGO, [3]CASE WESTERN RESERVE UNIVERSITY, [4]UNIVERSITY OF MICHIGAN.

09:45 3EA-07 **TRANSITION EDGE SENSORS USING A LOW-G SPIDER-WEB-LIKE SIN SUPPORTING STRUCTURE** *P. KHOSROPANAH[1], M. L. RIDDER[1], M. P. BRUIJN[1], M. PARRA-BORDERIAS[2], B. P. F. DIRKS[1], R. A. HIJMERING[1], L. GOTTARDI[1], J. VAN DER KUUR[1], A. M. POPESCU[1], P. A. J. DE KORTE[1], H. F. C. HOEVERS[1], J. R. GAO[1];* [1]SRON NETHERLANDS INSTITUTE FOR SPACE RESEARCH, [2]INSTITUTO DE CIENCIA DE MATERIALES DE ARAGON, CSIC-UNIVERSIDAD DE ZARAGOZA.

3EB: 147 POWER EFFICIENT DIGITAL LOGIC *DIPLOMAT* THEODORE VAN DUZER (UNIVERSITY OF CALIFORNIA) AND HIDEO SUZUKI (ISTEC/SRL)

08:00 3EB-01 ***(INVITED)*** **ENERGY-EFFICIENT SINGLE FLUX QUANTUM TECHNOLOGY** *O. A. MUKHANOV;* HYPRES.

08:30 3EB-02 ***(INVITED)*** **CARRY LOOK-AHEAD ADDER IN RECIPROCAL QUANTUM LOGIC** *A. Y. HERR, Q. P. HERR, A. G. IOANNIDIS, D. L. MILLER, O. T. OBERG, S. B. SHAUCK;* NORTHROP GRUMMAN CORPORATION.

09:00 3EB-03 **REDUCED POWER CONSUMPTION IN SUPERCONDUCTING ELECTRONICS** *T. ORTLEPP[1], O. MIELKE[2], S. ENGERT[1], J. KUNERT[2], H. TOEPFER[1];* [1]ILMENAU UNIVERSITY OF TECHNOLOGY, [2]INSTITUTE FOR PHOTONIC TECHNOLOGY.

09:15 3EB-04 **NO STATIC POWER DISSIPATION BIASING OF RSFQ CIRCUITS** *D. E. KIRICHENKO, A. F. KIRICHENKO, S. SARWANA;* HYPRES.

09:30 3EB-05 **PROGRESS WITH PHYSICALLY AND LOGICALLY REVERSIBLE SUPERCONDUCTING DIGITAL CIRCUITS** *J. REN, V. K. SEMENOV;* SUNY AT STONY BROOK.

09:45 3EB-06 **ADIABATIC QUANTUM FLUX PARAMETRON AS AN ULTRA-LOW-POWER SUPERCONDUCTING LOGIC DEVICE** *N. YOSHIKAWA, D. OZAWA;* YOKOHAMA NATIONAL UNIVERSITY.

3EC: 165 SQUIDS FABRICATION AND CHARACTERIZATION I

HAMPTON PAUL SEIDEL (UNIVERSITY OF JENA) AND ROBIN CANTOR (STAR CRYOELECTRONICS)

08:00 3EC-01 **INVESTIGATION OF LOW-FREQUENCY EXCESS FLUX NOISE IN DC SQUIDS AT MK TEMPERATURES** *D. DRUNG, J. BEYER, J. STORM, M. PETERS, T. SCHURIG;* PTB.

08:15 3EC-02 **ULTRA-SENSITIVE SQUID MICROSUSCEPTOMETER FOR MAGNETIC MEASUREMENTS AT VERY LOW TEMPERATURES AND BROAD BANDWIDTH** *M. J. MARTÍNEZ-PÉREZ[1], J. SESÉ[2], F. LUIS[1], R. CÓRDOBA[2], D. DRUNG[3], T. SCHURIG[3], E. BELLIDO[4], R. DE MIGUEL[2], A. LOSTAO[5], D. RUÍZ-MOLINA[4], C. GÓMEZ-MORENO[2];* [1]INSTITUTO DE CIENCIA DE MATERIALES DE ARAGÓN (ICMA), [2]INSTITUTO UNIVERSITARIO DE INVESTIGACIÓN EN NANOCIENCIA DE ARAGÓN (INA), [3]PHYSIKALISCH-TECHNISCHE BUNDESANSTALT (PTB), [4]CENTRO DE INVESTIGACIÓN EN NANOCIENCIA Y NANOTECNOLOGIA (CIN2, CSIC-ICN), [5]INSTITUTO UNIVERSITARIO DE INVESTIGACIÓN EN NANOCIENCIA DE ARAGÓN (INA) AND FUNDACIÓN ARAGÓN I+D (ARAID).

08:30 3EC-03 **SQUIDS BASED ON SUBMICROMETER-SIZED JOSEPHSON TUNNEL JUNCTIONS FABRICATED IN THE CROSS-TYPE TECHNOLOGY** *M. SCHMELZ[1], R. STOLZ[1], V. ZAKOSARENKO[1], S. ANDERS[1], L. FRITZSCH[1], M. MEYER[2], H. MEYER[1];* [1]IPHT JENA, [2]SUPRACON AG.

08:45 3EC-04 WITHDRAWN

09:00 3EC-05 **MODELLING THE BEHAVIOR OF HTS TERAHERTZ RSQUIDS** *C. M. PEGRUM[1], J. C. MACFARLANE[2], J. DU[3];* [1]FIELDSOLUTIONS AND UNIVERSITY OF STRATHCLYDE, [2]UNIVERSITY OF STRATHCLYDE AND CSIRO MATERIALS SCIENCE & ENGINEERING, [3]CSIRO MATERIALS SCIENCE & ENGINEERING.

09:15 3EC-06 **VOLTAGE BIASED SQUID BOOTSTRAP CIRCUIT-CIRCUIT MODEL AND NUMERICAL SIMULATION** *Y. WANG[1], H. WANG[1], X. XIE1, H. DONG[1], M. JIANG[1], Y. ZHANG[2], H. KRAUSE[2], A. OFFENHÄUSSER[2], M. MÜCK[3];* [1]SHANGHAI INSTITUTE OF MICROSYSTEM AND INFORMATION TECHNOLOGY, CHINESE ACADEMY OF SCIENCES, [2]INSTITUTE OF BIO- AND NANOSYSTEM (IBN-2), RESEARCH CENTER JUELICH (FZJ), [3]INSTITUT FÜR ANGEWANDTE PHYSIK, JUSTUS-LIEBIG-UNIVERSITÄT GIEßEN.

09:30 3EC-07 **NANOSCALE SQUID FOR THE DETECTION OF MAGNETIC NANOPARTICLE MACROSCOPIC-SPIN STATES** *S. K. H. LAM, P. F. VOHRALIK;* CSIRO.

09:45 3EC-08 **THREE DIMENSIONAL ALUMINUM NANOBRIDGE JOSEPHSON JUNCTIONS AND SQUIDS** *E. M. LEVENSON-FALK, R. VIJAY, I. SIDDIQI;* QNL, UC BERKELEY.

3LA: 129 CICC II

EMPIRE IAIN DIXON (NATIONAL HIGH MAGNETIC FIELD LABORATORY) AND REINHARD HELLER (KARLSRUHE INSTITUTE OF TECHNOLOGY)

08:00 3LA-01 ***(INVITED)*** **REVIEW OF DESIGN ASPECTS FOR HIGH CURRENT Nb_3Sn CONDUCTORS** *P. BRUZZONE;* EPFL-CRPP.

08:30 3LA-02 **DIMENSIONAL CHANGES OF Nb_3Sn CONDUCTORS AND TWO CONDUIT ALLOYS DURING REACTION HEAT TREATMENT** *R. P. WALSH, D. M. MCRAE;* NHMFL/FSU.

08:45 3LA-03 **COUPLED MECHANICAL-ELECTRICAL MODELLING OF STRETCHED 45 NB^{3}SN STRAND CICC** *A. TORRE[1], H. BAJAS[2], D. CIAZYNSKI[1], K. WEISS[3], D. DURVILLE[2];* [1]CEA, [2]ÉCOLE CENTRALE DE PARIS, [3]KIT.

09:00 3LA-04 **DESIGN OPTIMISATION OF NB^{3}SN CICCS WITH THE NOVEL NUMERICAL MECHANICAL MODEL CORD; INFLUENCE OF CABLING AND STRAND** *J. QIN[1], L. L. WARNET[2], A. NIJHUIS[3], Y. WU[4];* [1]ENERGY, MATERIALS & SYSTEMS, FACULTY OF SCIENCE AND TECHNOLOGY, UNIVERSITY OF TWENTE, INSTITUTE OF PLASMA PHYSICS, CHINESE ACADEMY OF SCIENCES, [2]DIVISION OF DESIGN, PRODUCTION AND MANUFACTURING,FACULTY OF MECHANICAL ENGINEERING,UNIVERSITY OF TWENTE, [3]ENERGY, MATERIALS & SYSTEMS, FACULTY OF SCIENCE AND TECHNOLOGY, UNIVERSITY OF TWENTE, [4]INSTITUTE OF PLASMA PHYSICS, CHINESE ACADEMY OF SCIENCES.

09:15 3LA-05 **THE EFFECT OF STRAND BENDING ON THE VOLTAGE-CURRENT CHARACTERISTICS OF NB^{3}SN CABLE-IN-CONDUIT CONDUCTORS** *C. FIAMOZZI ZIGNANI, L. MUZZI, A. DELLA CORTE;* ENEA.

09:30 3LA-06 WITHDRAWN

09:45 3LA-07 WITHDRAWN

3LB: 132 SMES AND POWER GEAR *PALLADIAN* TAKAKAZU SHINTOMI (NIHON) AND AL ZELLER (KARLSRUHE INSTITUTE OF TECHNOLOGY)

08:00 3LB-01 **A NOVEL ENERGY STORAGE CONCEPT BASED ON HYDROGEN AND SUPERCONDUCTORS** *M. SANDER, R. GEHRING, M. NOE;* KARLSRUHE INSTITUTE OF TECHNOLOGY.

08:15 3LB-02 **PERFORMANCE ANALYSIS OF A TOROIDAL-TYPE HTS SMES ADOPTED FOR FREQUENCY STABILIZATION** *A. KIM[1], K. KIM[1], J. KIM[1], D. KIM[1], S. HWANG[1], M. PARK[1], I. YU[1], S. KIM[2], K. SIM[2], K. SEONG[2];* [1]CHANGWON NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

08:30 3LB-03 **THERMAL ANALYSIS OF 2.^{5}MJ HTS SMES CONSIDERING THE TIME VARYING MAGNETIZATION LOSS AND EDDY CURRENT LOSS** *S. KIM, K. SIM, H. KIM, J. BAE, K. SEONG;* KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

08:45 3LB-04 **ANALYSIS OF CURRENT DISTRIBUTION IN MULTI-LAMINATED HTS TAPE CONDUCTOR FOR DOUBLE PANCAKE COIL OF SMES** *T. HAMAJIMA[1], N. ATOMURA[1], Y. CHIBA[1], T. YAGAI[1], M. TSUDA[1], K. SHIKIMACHI[2], N. HIRANO[2], S. NAGAYA[2];* [1]TOHOKU UNIVERSITY, [2]CHUBU ELECTRIC POWER CO., INC..

09:00 3LB-05 **DESIGN AND TEST OF A HTS SMES FOR HIGH POWER PULSE OPERATION** *A. BADEL[1], P. TIXADOR[2], M. DELEGLISE[3], P. DEDIÉ[4];* [1]NEEL INSTITUTE - CNRS, [2]GRENOBLE ELECTRICAL ENGINEERING LABORATORY, [3]CNRS, [4]SAINT LOUIS INSTITUTE.

09:15 3LB-06 **COMMERCIAL INDUCTION HEATERS WITH HIGH-TEMPERATURE SUPERCONDUCTOR COILS** *M. RUNDE[1], N. MAGNUSSON[1], C. FÜLBIER[2], C. BÜHRER[2];* [1]SINTEF ENERGY RESEARCH, [2]ZENERGY POWER.

09:30 3LB-07 **TESTING OF POWER SUPPLY FOR A HIGH TEMPERATURE SUPERCONDUCTING DEGAUSSING SYSTEM** *M. PYRYT[1], J. KEPHART[1], B. FITZPATRICK[1], J. OVERBY[1], M. ZAHZAH[2], R. BORUCKI[2], K. WOJCIECH[2];* [1]NAVAL SURFACE WARFARE CENTER - CARDEROCK DIVISION, [2]L-3 COMMUNICATIONS, POWER PARAGON.

3LC: 141 ACCELERATOR MAGNETS - OTHER III *CONGRESSIONAL* PETER WANDERER (BROOKHAVEN NATIONAL LABORATORY) AND GIANLUCA SABBI (LAWERENCE BEREKLEY NATIONAL LABORATORY)

08:00 3LC-01 ***(INVITED)*** **PROGRESS AND PROSPECT OF SUPERCONDUCTING MAGNET SYSTEMS IN J-PARC** *T. OGITSU;* KEK, HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION.

08:30 3LC-02 **SUPERCONDUCTING SOLENOID WITH HIGH MAGNETIC FIELD UNIFORMITY FOR NEW G-2 EXPERIMENT AT THE J-PARC** *K. SASAKI[1], H. IINUMA[1], N. KIMURA[1], T. OGITSU[1], A. YAMAMOTO[1], H. NAKAYAMA[1], T. MIBE[1], N. SAITO[1], T. OBATA[2];* [1]KEK, HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION, [2]NIRS, NATIONAL INSTITUTE OF RADIOLOGICAL SCIENCES.

08:45 3LC-03 **SUPERCONDUCTING SOLENOID MAGNETS FOR THE MUSIC PROJECT** *M. YOSHIDA[1], M. FUKUDA[2], K. HATANAKA[2], Y. KUNO[3], T. OGITSU[1], A. SATO[3], A. YAMAMOTO[1];* [1]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION, KEK, [2]RESEARCH CENTER FOR NUCLEAR PHYSICS, OSAKA UNIVERSITY, [3]OSAKA UNIVERSITY.

09:00 3LC-04 **TEST OF THE NEW CONDUCTION-COOLED SUPERCONDUCTING UNDULATOR FOR ANKA** *C. BOFFO[1], W. A. WALTER[1], T. BAUMBACH[2], S. CASALBUONI[2], S. GERSTL[2], A. GRAU[2], M. HAGELSTEIN[2], D. SEAZ DE JAUREGUI[2];* [1]BABCOCK NOELL GMBH, [2]INSTITUTE FOR SYNCHROTRON RADIATION, KARLSRUHE INSTITUTE OF TECHNOLOGY.

09:15 3LC-05 **TRAINING AND MAGNETIC FIELD MEASUREMENTS OF THE ANKA SUPERCONDUCTING UNDULATOR** *S. CASALBUONI[1], T. BAUMBACH[1], S. GERSTL[1], A. GRAU[1], M. HAGELSTEIN[1], D. SAEZ DE JAUREGUI[1], C. BOFFO[2], J. STEINMANN[2], W. WALTER[2];* [1]INSTITUTE FOR SYNCHROTRON RADIATION, KARLSRUHE INSTITUTE OF TECHNOLOGY, [2]BABCOCK NOELL GMBH.

09:30 3LC-06 **THE RESULTS OF THE MICE SPECTROMETER SOLENOID TESTS** *M. A. GREEN, S. VIRSOSTEK, M. ZISMAN;* LAWRENCE BERKELEY NATIONAL LABORATORY.

09:45 3LC-07 **DESIGN OF A LARGE 5T SUPERCONDUCTING MAGNET FOR POLARIZED TARGET FOR JLAB HALL B 12 GEV UPGRADE CLAS12 DETECTOR** *B. WANG[1], B. WAHRER[1], C. TAYLOR[1], J. ZBASNIK[1], D. DELL'ORCO[1], J. ROSS[1], J. CHEN[1], L. XU[1], H. CHEN[1], B. WAGNER[1], R. PONG[1], T. JUANG[1], M. WANG[1], C. CARTER[1], P. CHENG[1], V. BURKERT[2], L. QUETTIER[2], D. KASHY[2];* [1]WANG NMR INC., [2]JEFFERSON SCIENCE ASSOCIATES, LLC.

3MA: 108 AC LOSSES I

BLUE MINFENG XU (GE GLOBAL RESEARCH CENTER) AND MILAN MAJOROS (THE OHIO STATE UNIVERSITY)

08:00 3MA-01 ***(INVITED)*** **DYNAMIC RESISTANCE OF YBCO COATED CONDUCTORS IN APPLIED AC FIELDS WITH DC TRANSPORT CURRENTS AND DC BACKGROUND FIELDS UP TO 2 T** *R. C. DUCKWORTH, Y. ZHANG, T. HA, M. J. GOUGE;* OAK RIDGE NATIONAL LABORATORY.

08:30 3MA-02 **AC MAGNETIZATION LOSSES IN COPPER-STABILIZED YBCO COATED CONDUCTORS SUBJECTED TO REPEATED MECHANICAL STRESSES** *T. UNO[1], T. OJIMA[1], S. MITSUI[1], T. TAKAO[1], O. TSUKAMOTO[2];* [1]FACULTY OF SCIENCE AND TECHNOLOGY SOPHIA UNIVERSITY, TOKYO, JAPAN, [2]OFFICE OF INDUSTRY AND COMMUNITY LIAISON ENGINEERING YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA, JAPAN.

08:45 3MA-03 **EFFECT OF TAPE GAP AND CABLE RADIUS ON AC LOSS OF IBAD CABLES** *D. N. NGUYEN, S. P. ASHWORTH;* LOS ALAMOS NATIONAL LABORATORY.

09:00 3MA-04 **INNOVATIVE BOLOMETRIC AC LOSS MEASUREMENT OF HTSC FOR POWER APPLICATIONS** *K. SEE, C. C.D., D. S.X.;* UNIVERSITY OF WOLLONGONG.

09:15 3MA-05 **MODEL FOR ELECTROMAGNETIC FIELD ANALYSIS OF SUPERCONDUCTING POWER TRANSMISSION CABLE COMPRISING COATED CONDUCTORS CONSIDERING SPIRAL CABLE STRUCTURE** *N. AMEMIYA[1], K. TAKEUCHI[1], T. NAKAMURA[1], N. FUJIWARA[2];* [1]KYOTO UNIVERSITY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY.

09:30 3MA-06 **MODELING AND ELECTRICAL MEASUREMENT OF TRANSPORT AC LOSS IN HTS-BASED SUPERCONDUCTING COILS FOR ELECTRICAL MACHINES** *M. D. AINSLIE, W. YUAN, Z. HONG, R. PEI, T. J. FLACK, T. A. COOMBS;* UNIVERSITY OF CAMBRIDGE.

09:45 3MA-07 **TRANSPORT AC LOSS MEASUREMENTS IN SUPERCONDUCTING COILS** *J. KIM, C. KIM, G. IYYANI, J. KVITKOVIC, S. V. PAMIDI;* FLORIDA STATE UNIVERSITY.

3MB: 116 PNICTIDES III

BLUE PRE-FUNC. JENS HAENISCH (IFW DRESDEN) AND MARINA PUTTI (CNR-SPIN AND UNIVERSITY OF GENOVA)

08:00 3MB-01 **HIGH TRANSPORT CRITICAL CURRENTS IN THE IRON PNICTIDE SUPERCONDUCTING WIRES AND TAPES** *Y. MA, L. WANG, Y. QI, Z. GAO, D.*

WANG, X. ZHANG; INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

08:15 3MB-02 **FE/BA (FE1-XCOX) 2AS2 BILAYERS AND THEIR SUPERCONDUCTING PROPERTIES** *K. IIDA, J. HAENISCH, R. HUEHNE, T. D. THERSLEFF, M. KIDSZUN, S. HAINDL, A. KAUFFMANN, S. TROMMLER, F. KURTH, L. SCHULTZ, B. HOLZAPFEL;* IFW DRESDEN.

08:30 3MB-03 **GROWTH OF SUPERCONDUCTING NDFEAS(O,F) THIN FILMS BY MOLECULAR BEAM EPITAXY** *H. IKUTA, T. KAWAGUCHI, H. UEMURA, T. OHNO, M. TABUCHI, T. UJIHARA, K. TAKENAKA, Y. TAKEDA;* NAGOYA UNIVERSITY, JST TRIP.

08:45 3MB-04 **TEMPLATE ENGINEERING OF CO-DOPED BAFE^{2}AS2 SINGLE-CRYSTAL THIN FILMS** *S. LEE[1], J. JIANG[2], Y. ZHANG[3], C. W. BARK[1], J. D. WEISS[2], C. TRANTINI[2], C. T. NELSON[3], H. W. JANG[1], C. M. FOLKMAN[1], S. H. BAEK[1], A. POLYANSKII[2], D. ABRAIMOV[2], A. YAMAMOTO[2], J. W. PARK[1], X. Q. PAN[3], E. E. HELLSTROM[2], D. C. LARBALESTIER[2], C. B. EOM[1];* [1]UNIVERSTIY OF WISCONSIN - MADISON, [2]FLORIDA STATE UNIVERSITY, [3]THE UNIVERSITY OF MICHIGAN - ANN ARBOR.

09:00 3MB-05 **JOSEPHSON JUNCTION WITH FE-BASED SUPERCONDUCTOR CO DOPED BAFE^{2}AS2 EPITAXIAL FILM** *T. KATASE[1], Y. ISHIMARU[2], A. TSUKAMOTO[2], H. HIRAMATSU[3], T. KAMIYA[1], K. TANABE[2], H. HOSONO[1];* [1]MATERIALS AND STRUCTURES LABORATORY, TOKYO INSTITUTE OF TECHNOLOGY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY, INTERNATIONAL SUPERCONDUCTIVITY TECHNOLOGY CENTER, [3]FRONTIER RESEARCH CENTER, TOKYO INSTITUTE OF TECHNOLOGY.

09:15 3MB-06 ***(INVITED)*** **SUPERCONDUCTING PROPERTIES OF IRON-CHALCOGENIDE FILMS ON SINGLE CRYSTALLINE AND BUFFERED TECHNICAL SUBSTRATES** *Q. LI[1], W. SI[1], Q. JIE[1], J. ZHU[1], S. SOLOVYOV[1], A. GOYAL[2], V. MATIAS[3];* [1]BROOKHAVEN NATIONAL LABORATORY, [2]OAK RIDGE NATIONAL LABORATORY, [3]LOS ALAMOS NATIONAL LABORATORY.

09:45 3MB-07 **SUPERCONDUCTING PROPERTIES OF FESE FAMILY** *Y. TAKANO;* NATIONAL INSTITUTE FOR MATERIALS SCIENCE (NIMS).

10:30 POSTER SESSIONS

3LP1A: 247 STABILITY HTS I *REGENCY* ANTTI STENVALL (TAMPERE UNIVERSITY OF TECHNOLOGY) AND JUSTIN SCHWARTZ (NCSU)

10:30 3LP1A-01 / 1 **QUENCH BEHAVIOR AND PROTECTION IN CRYOCOOLER-COOLED YBCO PANCAKE COIL FOR SMES** *H. UEDA[1], Y. AOKI1, A. ISHIYAMA[1], K. SHIKIMACHI[2], N. HIRANO[2], S. NAGAYA[2];* [1]WASEDA UNIVERSITY, [2]CHUBU ELECTRIC POWER CO..

10:30 3LP1A-02 / 2 **ANALYSIS OF THE PERFORMANCE OF QUENCH PROTECTION HEATERS FOR YBCO COILS OF VERY HIGH FIELD SUPERCONDUCTING MAGNETS** *A. V. GAVRILIN, W. D. MARKIEWICZ;* NATIONAL HIGH MAGNETIC FIELD LABORATORY - FLORIDA STATE UNIVERSITY.

10:30 3LP1A-03 / 3 **ACTIVE PROTECTION OF AN MGB2 TEST COIL** *D. PARK, S. HAHN, J. BASCUÑÁN, Y. IWASA;* MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

10:30 3LP1A-04 / 4 **QUENCH PROPAGATION IN MAGNESIUM DIBORIDE DOUBLE-HELIX MAGNETS** *P. J. MASSON;* ADVANCED MAGNET LAB.

10:30 3LP1A-05 / 5 **AC LOSSES IN YBCO TOROIDAL COIL FOR DC REACTOR WITH HARMONIC CURRENT OF THREE-PHASE RECTIFIER** *M. TSUDA1, T. HAMAJIMA[1], M. FURUSE[2], S. FUCHINO[2], N. HARADA[3], K. UEDA[3], T. NAKAJIMA[4], K. TAKENAKA[4];* [1]TOHOKU UNIVERSITY, [2]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY, [3]YAMAGUCHI UNIVERSITY, [4]DENRYOKU COMPUTING CENTER, LTD..

10:30 3LP1A-06 / 6 WITHDRAWN

10:30 3LP1A-07 / 7 **EFFECTS OF THE THICKNESS OF A PZT DISC ON AE SIGNALS FROM HTS TAPES DURING QUENCHING IN A MIXED CRYOGEN COOLING SYSTEM** *K. KIM[1], J. SONG[1], K. KIM[1], J. LEE[1], H. KIM[2], J. NA[3], T. KO[3], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, KOREA, [3]YONSEI UNIVERSITY, KOREA.

10:30 3LP1A-08 / 8 **THE DETECTION AND PROTECTION OF A CONDUCTION-COOLED MAGNET FOR A SUPERCONDUCTING PROPERTY MEASUREMENT**

SYSTEM *S. CHOI[1], J. BAE[2], M. SOHN[2], C. PARK[3], J. LEE[4], K. CHOI[5], T. KO[1];* [1]YONSEI UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [3]SEOUL NATIONAL UNIVERSITY, [4]WOOSUK UNIVERSITY, [5]KOREA POLYTECHNIC UNIVERSITY.

10:30 3LP1A-09 / 9 **QUENCH AND RECOVERY CHARACTERISTICS OF PANCAKE COILS WOUND WITH GDBCO COATED CONDUCTOR BY APPLYING VARIOUS INSULATING MATERIALS** *D. YANG[1], Y. CHOI[1], J. KIM[1], K. KIM[1], J. LEE[1], H. KIM[2], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, KOREA.

10:30 3LP1A-10 / 10 **MECHANICAL LOSS AND BOBBIN MATERIALS IN AC SUPERCONDUCTING COIL UNDER AC MAGNETIC FIELD** *T. TAKAO[1], T. MASUDA[1], K. NISHIMURA[1], T. TAKAGI[1], S. FUKUI[2], A. YAMANAKA[3];* [1]SOPHIA UNIVERSITY, [2]NIIGATA UNIVERSITY, [3]TOYOBO.

3MP1A: 209 AC LOSSES II *REGENCY* SASTRY PAMIDI (FLORIDA STATE UNIVERSITY) AND PAUL BARNES (AIR FORCE RESEARCH LABORATORY)

10:30 3MP1A-01 / 11 **TOWARDS FASTER FEM SIMULATION OF THIN FILM SUPERCONDUCTORS: A MULTISCALE APPROACH** *V. M. RODRIGUEZ-ZERMENO[1], N. MIJATOVIC[2], C. TRÆHOLT[2], T. ZIRNGIBL[3], E. SEILER[3], A. B. ABRAHAMSEN[3], N. PEDERSEN[2], M. SØRENSEN[1];* [1]TECHNICAL UNIVERSITY OF DENMARK - DEPARTMENT OF MAHEMATICS, [2]TECHNICAL UNIVERSITY OF DENMARK - DEPARTMENT OF ELECTRICAL ENGINEERING, [3]TECHNICAL UNIVERSITY OF DENMARK - RISØ - MATERIALS RESEARCH DIVISION.

10:30 3MP1A-02 / 12 **STUDY OF YBCO TAPE NON-UNIFORMITY BASED ON THE DISTRIBUTION OF MAGNETIC FIELD IN CURRENT TRANSPORT** *M. SOLOVYOV, F. GÖMÖRY;* IEE SAS.

10:30 3MP1A-03 / 13 **DESIGN OF FERROMAGNETIC PARTS IN POWER DEVICES FROM HIGH TEMPERATURE SUPERCONDUCTORS.** *M. VOJENCIAK, J. SOUC, F. GÖMÖRY;* IEE, SLOVAK ACADEMY OF SCIENCES.

10:30 3MP1A-04 / 14 **NEW APPROACH FOR COMPUTING TOP/BOTTOM AC LOSSES IN COATED CONDUCTOR WINDINGS** *S. BRAULT[1], F. SIROIS[1], F. GRILLI[2];* [1]ECOLE POLYTECHNIQUE DE MONTREAL, [2]KARLSRUHE INSTITUTE OF TECHNOLOGY.

10:30 3MP1A-05 / 15 **WITHDRAWN**

10:30 3MP1A-06 / 16 **YBCO FILMS GROWN ON SAPPHIRE FIBERS BY MAGNETRON SPUTTERING AND MODIFIED TFA-MOD PROCESS** *Y. XU, Z. QIAN, Z. XU, P. HE, R. BHATTACHARYA;* UES INC.

10:30 3MP1A-07 / 17 **EXPERIMENTAL EVALUATION OF POLYGONAL ARRANGEMENT ON AC LOSS IN YBCO ASSEMBLED CONDUCTORS** *J. OGAWA, S. FUKUI, T. OKA, T. SATO, T. ITO, J. SUGISAWA, A. TAMURA;* NIIGATA UNIVERSITY.

10:30 3MP1A-08 / 18 **TRANSPORT AC LOSS CHARACTERISTICS OF A FIVE STRAND YBCO ROEBEL CABLE WITH MAGNETIC SUBSTRATE** *Z. JIANG[1], K. P. THAKUR[1], M. P. STAINES[1], R. A. BADCOCK[1], N. J. LONG[1], R. G. BUCKLEY[1], N. AMEMIYA[2], D. A. CAPLIN[3];* [1]INDUSTRIAL RESEARCH LIMITED, [2]KYOTO UNIVERSITY, [3]IMPERIAL COLLEGE.

3MP1B: 238 HTS MULTILAYERS *REGENCY* ANATOLII POLYANSKII (FSU) AND HIROFUMI YAMASAKI (NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY (AIST))

10:30 3MP1B-01 / 19 **RESONANT BEHAVIOUR OF THE BARRIER OF YBA[2]CU[3]O7 GRAIN BOUNDARY JOSEPHSON JUNCTIONS FABRICATED ON BICRYSTALLINE SUBSTRATES WITH DIFFERENT GEOMETRIES** *M. A. NAVACERRADA;* UNIVERSIDAD POLITÉCNICA DE MADRID.

10:30 3MP1B-02 / 20 **SUPERCONDUCTING SR1-XLAXCUO2 THIN FILMS AND JUNCTIONS** *J. TOMASCHKO[1], V. LECA[1], L. T. CORREDOR[2], M. TURAD[1], R. KLEINER[1], D. KOELLE[1];* [1]PHYSIKALISCHES INSTITUT – CENTER FOR COLLECTIVE QUANTUM PHENOMENA, UNIVERSITÄT TÜBINGEN, AUF DER MORGENSTELLE 14, D-72076 TÜBINGEN, GERMANY, 2PERMANENT ADDRESS: GRUPO DE FISICA DE NUEVOS MATERIALES, DEPARTAMENTO DE FISICA, UNIVERSIDAD NACIONAL DE COLOMBIA, AA 14490, BOGOTA D.C., COLOMBIA.

10:30 3MP1B-03 / 21 **MAGNETIC AND TRANSPORT PROPERTIES OF SUPERCONDUCTING YBA[2]CU[3]O7 AND FERROMAGNETIC LA2/[3]CA1/[3]MNO3**

HETEROSTUCTURES *S. A. FEDOSEEV, A. V. PAN, S. V. PYSARENKO, O. V. SHCHERBAKOVA, S. X. DOU;* ISEM, UNI OF WOLLONGONG.

10:30 3MP1B-04 / 22 **INTEGRATION OF PREDEFINED GAS-PHASE CONDENSATED NANOPARTICLES INTO YBA^{2}CU^{3}O7− X THIN FILMS MULTILAYERS** *M. SPARING, T. D. THERSLEFF, J. HÄNISCH, R. HÜHNE, B. RELLINGHAUS, L. SCHULTZ, B. HOLZAPFEL;* IFW DRESDEN, INSTITUTE FOR METALLIC MATERIALS.

10:30 3MP1B-05 / 23 **TE AND TM -POLARIZED NONLINEAR GUIDED WAVES IN COPLANAR SUPERLATTICE TRANSMISSION LINES** *V. E. GRISHIN[1], L. A. MURAVEY[2];* [1]AUSTRALIAN NATIONAL UNIVERSITY, CANBERRA, [2]RSTU.

10:30 3MP1B-06 / 24 **STIMULATION OF SUPERCONDUCTIVITY IN SUBMOLECULAR STRUCTURES WITH WEAKLY COUPLED SUPERCONDUCTING LAYERS** *V. E. GRISHIN[1], L. A. MURAVEY[2], V. A. CHERENKOV[3];* [1]AUSTRALIAN NATIONAL UNIVERSITY, CANBERRA, AUSTRALIA, [2]RSTU, RUSSIA, [3]VNIIMS, RUSSIA.

10:30 3MP[1]B-07 / 25 **DIFFERENTIAL CONDUCTANCE MEASUREMENTS OF MGB2-BASED JOSEPHSON JUNCTIONS BELOW 1 KELVIN** *S. CARABELLO, J. LAMBERT, J. MLACK, Z. THRAILKILL, R. RAMOS;* DREXEL UNIVERSITY.

3MP1C: 229 REBCO FILMS PINNING *REGENCY* PIETER VERMEIR (GHENT UNIVERSITY) AND TAKANOBU KISS (KYUSHU UNIVERSITY)

10:30 3MP1C-01 / 26 **INTERFACE EFFECTS AND SUPPRESSION OF TC IN LA0.^{7}CA0.^{3}MNO3 - YBA^{2}CU^{3}O7 BILAYERS** *R. WERNER[1], A. RUOSI[2], C. RAISCH[3], B. A. DAVIDSON[4], R. KLEINER[1], D. KOELLE[1];* [1]PHYSIKALISCHES INSTITUT – CENTER FOR COLLECTIVE QUANTUM PHENOMENA, UNIVERSITÄT TÜBINGEN, AUF DER MORGENSTELLE 14, D-72076 TÜBINGEN, GERMANY, [2]DEPT. OF PHYSICS, UNIVERSITY OF NAPLES, [3]INSTITUT FÜR PHYSIKALISCHE UND THEORETISCHE CHEMIE, UNIVERSITÄT TÜBINGEN, AUF DER MORGENSTELLE 8 D-72076 TÜBINGEN, GERMANY, [4]NFM-TASC NATIONAL LABORATORY, AREA SCIENCE PARK, S.S. 14, KM 163.5, I-34012 BASOVIZZA (TS), ITALY.

10:30 3MP1C-02 / 27 **INVESTIGATION OF PURE AND BAHFO3-DOPED (RE)BCO THIN FILMS DEPOSITED BY TFA-MOD** *M. ERBE, J. HÄNISCH, T. THERSLEFF, T. FREUDENBERG, L. SCHULTZ, B. HOLZAPFEL;* IFW DRESDEN.

10:30 3MP1C-03 / 28 **SUPERCONDUCTING PROPERTIES OF CATION COMPOSITION CONTROLLED MOD-Y123 THIN FILMS** *H. KAKU[1], J. SHIMOYAMA[1], T. AKASAKA[1], H. OGINO[1], K. KISHIO[1], T. TANEDA[2];* [1]TOKYO UNIVERSITY, [2]SUMITOMO ELECTRIC INDUSTRIES, LTD..

10:30 3MP1C-05 / 30 **FLUX PINNING PROPERTIES IN YBCO THIN FILMS WITH SELF-ALIGNED MAGNETIC NANOPARTICLE INCLUSIONS** *C. TSAI, Y. ZHU, L. CHEN, H. WANG;* TEXAS A&M UNIVERSITY.

10:30 3MP1C-06 / 31 **OPTIMAL BZO DOPING AND TRANSPORT PROPERTIES IN YBCO THIN FILMS DEPOSITED FROM NANOSTRUCTURED TARGETS ON BUFFERED METAL SUBSTRATES** *H. T. HUHTINEN[1], M. IRJALA[1], P. PATURI[1], L. T. KUHN[2], M. FALTER[3];* [1]UNIVERSITY OF TURKU, [2]TECHNICAL UNIVERSITY OF DENMARK, [3]ZENERGY POWER GMBH.

10:30 3MP1C-07 / 32 **MAGNETIC PINNING PROPERTIES OF HTS FILMS ON MAGNETIC NANO PARTICLE DECORATED SUBSTRATES** *J. RHEE[1], J. YOO[1], K. KWAK[1], H. LEE[1], D. YOUM[1], B. J. PARK[2], Y. H. HAN[2];* [1]KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, [2]KOREA ELECTRIC POWER RESEARCH INSTITUTE.

10:30 3MP1C-08 / 33 **UNDERSTANDING NANOSTRUCTURES IN YBCO THIN FILMS FOR PRACTICAL PROPERTY ENHANCEMENTS** *S. A. HARRINGTON[1], J. DEAN[1], G. ERCOLANO[1], S. C. WIMBUSH[1], M. BIANCHETTI[1], H. WANG[2], J. L. MACMANUS-DRISCOLL[1];* [1]UNIVERSITY OF CAMBRIDGE, [2]TEXAS A&M UNIVERSITY.

10:30 3MP1C-09 / 34 **CORRELATION BETWEEN FLUX PINNING PROPERTY AND INTERFACIAL DEFECTS IN YBA^{2}CU37-Δ / CEO2 MULTILAYER THIN FILMS** *C. TSAI, Y. ZHU, L. CHEN, H. WANG;* TEXAS A&M UNIVERSITY.

10:30 3MP1C-10 / 35 **EFFECT OF IMPURITIES ON THE GROWTH OF CUPRATE FILMS** *C. G. TRETIATCHENKO, V. S. FLIS, V. L. SVETCHNIKOV, V. M. PAN;* INSTITUTE FOR METAL PHYSICS.

3MP1D: 228 SYNTHESIS REBCO FILMS *REGENCY* JAMES GROVES (STANFORD UNIVERSITY) AND DAVID CARDWELL (CAMBRIDGE)

10:30 3MP1D-01 / 36 **WITHDRAWN**

10:30 3MP1D-02 / 37 **CHEMICAL SOLUTION DEPOSITION OF FLUORINE-FREE-YBA^{2}CU^{3}O7-X FILMS PREPARED BY INK PLOTTING** *A. KIRCHNER[1], R. HÜHNE[1], T. D. THERSLEFF[1], J. FEYS[2], I. VAN DRIESSCHE[2], L. SCHULTZ[1], B. HOLZAPFEL[1];* [1]IFW DRESDEN, INSTITUTE FOR METALLIC MATERIALS, HELMHOLTZSTR. 20, 01069 DRESDEN, GERMANY, [2]DEP. INORGANIC AND PHYSICAL CHEMISTRY, GHENT UNIVERSITY, KRIJGSLAAN 281 - S3, 9000 GENT, BELGIUM.

10:30 3MP1D-03 / 38 **OPTIMIZATION OF THE BACEO3 CONCENTRATION IN YBCO FILMS PREPARED BY PULSED LASER DEPOSITION** *M. IRJALA[1], H. HUHTINEN[1], R. JHA[2], V. P. S. AWANA[2], P. PATURI[1];* [1]WIHURI PHYSICAL LABORATORY, DEPARTMENT OF PHYSICS AND ASTRONOMY, FIN-20014 UNIVERSITY OF TURKU, FINLAND, [2]SUPERCONDUCTIVITY DIVISION, NATIONAL PHYSICAL LABORATORY, NEW DELHI-110012, INDIA.

10:30 3MP1D-04 / 39 **PREPARATION OF TI DOPED YBCO THIN FILMS FOR MICROWAVE APPLICATIONS USING TFA-MOD** *Q. LI[1], D. SHI[1], X. ZHU[2], L. WANG[1], S. DOU[1];* [1]INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, [2]KEY LABORATORY OF MATERIALS PHYSICS, INSTITUTE OF SOLID STATE PHYSICS, CHINESE ACADEMY OF SCIENCES.

10:30 3MP1D-05 / 40 **FABRICATION OF YBCO FILMS ON THE LAALO3 (001) SUBSTRATES BY THE FLUORINE-FREE MOD PROCESS** *J. LEE[1], G. SHIN[1], Y. JOO[1], S. MOON[2], S. YOO[1];* [1]DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING, SEOUL NATIONAL UNIVERSITY, KOREA, [2]SUPERCONDUCTOR, NANO & ADVANCED MATERIALS CORPORATION, ANYANG, KOREA.

10:30 3MP1D-06 / 41 **MOMBE GROWTH OF YBA^{2}CU^{3}O7 THIN FILMS WITH C-AXIS, A-AXIS AND 103 ORIENTATIONS ON SRTIO3 SUBSTRATE** *K. ENDO[1], P. BADICA[2], G. UEHARA[1], H. KADO[1];* [1]KANAZAWA INSTITUTE OF TECHNOLOGY, [2]NATIONAL INSTITUTE OF MATERIALS PHYSICS.

10:30 3MP1D-07 / 42 **PREPARATION OF Y123 THICK FILMS BY MOD USING A NEW SOLUTION** *I. YAMAGUCHI, W. KONDO, T. HIKATA, K. KAMIYA, H. MATSUI, M. SOHMA, K. TSUKADA, Y. NAKAGAWA, T. KUMAGAI, T. MANABE;* NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY.

10:30 3MP1D-08 / 43 **THICKNESS DEPENDENCE OF STRUCTURAL AND ELECTRICAL PROPERTIES OF ELECTRON-DOPED SR1-XLAXCUO2 INFINITE-LAYER THIN FILMS GROWN BY PULSED LASER DEPOSITION** *Y. SUN, Y. MA, M. CHEN, J. YANG, H. LI, J. NIE;* BEIJING NORMAL UNIVERSITY.

10:30 3MP1D-09 / 44 **PREPARATION AND CRITICAL CURRENT MEASUREMENTS OF INFRARED PULSED LASER DEPOSITED Y DOPED BSCCO SUPERCONDUCTING FILMS** *J. C. DE VERO, G. S. BLANCA, J. R. VITUG, W. O. GARCIA, R. V. SARMAGO;* NATIONAL INSTITUTE OF PHYSICS, UNIVERSITY OF THE PHILIPPINES- DILIMAN.

10:30 3MP1D-10 / 45 **SYNTHESIS OF FLUORINE-FREE YBCO THIN FILMS: ELUCIDATION OF THE MECHANISM AND INFLUENCE OF PROCESSING PARAMETERS ON EPITAXY** *P. VERMEIR[1], I. CARDINAEL[1], G. POLLEFEYT[2], M. BÄCKER[3], O. BRUNKAHL[3], P. LOMMENS[1], J. SCHAUBROECK[2], K. DE BUYSSER[1], I. VAN DRIESSCHE[1];* [1]GHENT UNIVERSITY, BELGIUM, [2]UNIVERSITY COLLEGE GHENT, BELGIUM, [3]ZENERGY POWER GMBH, GERMANY.

3MP1E: 214 BI-2212 AND BI-2223 WIRES AND TAPES III *AMBASSADOR* PETER MCINTYRE (TEXAS A&M UNIVERSITY) AND RYOJI INADA (TOYOHASHI UNIVERSITY OF TECHNOLOGY)

10:30 3MP1E-01 / 61 WITHDRAWN

10:30 3MP1E-02 / 62 **MICROSTRUCTURE AND CRITICAL CURRENT PROPERTIES OF BI-2212 ROUND WIRES FABRICATED WITH DIFFERENT NOMINAL COMPOSITIONS** *A. MATSUMOTO[1], H. KITAGUCHI[1], H. KUMAKURA[1], Y. HIKICHI[2], T. NAKATSU[2], T. HASEGAWA[2];* [1]NIMS, [2]SHOWA CABLE SYSTEMS CO., LTD..

10:30 3MP1E-03 / 63 **TRANSPORT AND MAGNETIC, AND SEM CHARACTERIZATION OF A NEW KIND OF BI-2212 STRAND DESIGN** *C. MYERS[1], M. SUSNER[1], L. MOTOWIDLO[2], M. D. SUMPTION[1];* [1]CENTER FOR SUPERCONDUCTING AND MAGNETIC MATERIALS, THE OHIO STATE UNIVERSITY, [2]SUPRAMAGNETICS, INC. 214 CANAL STREET PLANTSVILLE, CT 06479.

10:30 3MP1E-04 / 64 WITHDRAWN

10:30 3MP1E-05 / 65 **MODELING OF THE MICROSTRUCTRE-ELECTRICAL BEHAVIOR RELATIONSHIPS IN BI^{2}SR^{2}CACU^{2}O8+X SUPERCONDUCTING ROUND WIRES** *Q. V. LE, J. SCHWARTZ;* NORTH CAROLINA STATE UNIVERSITY.

10:30 3MP1E-06 / 66 **COMPATIBILITY OF BI-2212 WITH SELECTED SILVER ALLOYS** *J. A. KENNISON[1], T. G. HOLESINGER[1], F. J. BACA[1], J. Y. COULTER[1], K. R. MARKEN[1], X. F. LU[2], N. CHEGGOUR[2];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY - BOULDER.

10:30 3MP1E-07 / 67 **INFLUENCE OF CO-INTRODUCTION OF SILVER AND ZIRCONIA AS ARTIFICIAL PINNING CENTERS ON THE CRITICAL CURRENT DENSITIES OF BI2212** *E. CURSINO[1], J. S. GARITAONANDIA[2], D. S. SCHMOOL[3], C. SANTOS[1], A. B. LOPES[4], D. RODRIGUES JR.[1];* [1]ESCOLA DE ENGENHARIA DE LORENA DA UNIVERSIDADE DE SÃO PAULO, SÃO PAULO, BRAZIL, [2]UNIVERSIDAD DEL PAIS VASCO, BILBAO, SPAIN, [3]UNIVERSIDADE DO PORTO, [4]UNIVERSIDADE DE AVEIRO, PORTUGAL.

10:30 3MP1E-08 / 68 **STUDY OF EFFECTS OF DEFORMATION IN BSCCO-2212 WIRES** *E. BARZI[1], M. BOSSERT[1], V. LOMBARDO[1], D. TURRIONI[1], T. G. HOLESINGER[2], F. JAVIER BACA[2];* [1]FERMILAB, [2]LOS ALAMOS NATIONAL LABORATORY.

10:30 3MP1E-09 / 69 **LOSSES IN A BSCCO TAPE WHEN A PLATEAU-LESS CURRENT IMPULSE IS FED INTO IT** *L. FROLEK, J. ŠOUC;* INSTITUTE OF ELECTRICAL ENGINEERING, SLOVAK ACADEMY OF SCIENCES, BRATISLAVA, SLOVAK REPUBLIC.

10:30 3MP1E-10 / 70 **THE DEPENDENCE OF ELECTRICAL AND STRUCTURAL PROPERTIES WITH AGING OF SUPERCONDUCTOR CERAMICS** *C. L. CARVALHO, G. B. TORSONI, V. C. S. REYNOSO;* UNIVERSIDADE ESTADUAL PAULISTA.

3MP1F: 215 BI-2212 AND BI-2223 WIRES AND TAPES IV

AMBASSADOR FRANCISCO BACA (LOS ALAMOS NATIONAL LABORATORY) AND TERRY HOLESINGER (LOS ALAMOS NATIONAL LABORATORY)

10:30 3MP1F-01 / 71 **SYNTHESIS OF HIGH PURITY BI(PB)2223 TAPES WITH HIGH TC ABOVE 115 K** *M. WATANABE[1], J. SHIMOYAMA[1], K. OBATA[1], K. KISHIO[1], S. KOBAYASHI[2], K. HAYASHI[2];* [1]UNIVERSITY OF TOKYO, [2]SUMITOMO ELECTRIC INDUSTRIES, LTD..

10:30 3MP1F-02 / 72 **EXCELLENT LONGITUDINAL UNIFORMITY OF COMMERCIAL BI2223 TAPES CHARACTERIZED BY SCANNING HALL-PROBE MICROSCOPY** *R. INADA[1], S. BABA[1], T. MAKIHARA[1], R. OHTSU[1], S. SAKAMOTO[2], Y. NAKAMURA[1], A. OOTA[1];* [1]TOYOHASHI UNIVERSITY OF TECHNOLOGY, [2]KISARAZU NATIONAL COLLEGE OF TECHNOLOGY.

10:30 3MP1F-03 / 73 **EVALUATION OF SELF-FIELD DISTRIBUTIONS FOR BI2223 TAPES WITH OXIDE BARRIERS CARRYING DC TRANSPORT CURRENT** *T. MAKIHARA[1], R. INADA[1], S. SAKAMOTO[2], Y. NAKAMURA[1], A. OOTA[1], C. LI[3], P. ZHANG[3];* [1]TOYOHASHI UNIVERSITY OF TECHNOLOGY, [2]KISARAZU NATIONAL COLLEGE OF TECHNOLOGY, [3]NORTHWEST INSTITUTE FOR NONFERROUS METAL RESEARCH.

10:30 3MP1F-04 / 74 **THE CONSTRUCTION PROGRESS OF A HIGH−TC SUPERCONDUCTING POWER SUBSTATION IN CHINA** *G. ZHANG1, L. LIN[1], L. XIAO[1], Y. YU[1], S. V. PAMIDI[2], J. SCHWARTZ[3];* [1]INSTITUTE OF ELECTRICAL ENGINEERING,CHINESE ACADEMY OF SCIENCES, [2]CENTER FOR ADVANCED POWER SYSTEM,FSU,USA, [3]NORTH CAROLINA STATE UNIVERSITY,USA.

10:30 3MP1F-05 / 75 **ANISOTROPIC THERMAL CONDUCTIVITY OF SILVER SHEATHED BI2223 SUPERCONDUCTING TAPE** *T. NAITO[1], H. FUJISHIRO[1], J. FUJIKAMI[2];* [1]IWATE UNIVERSITY, [2]SUMITOMO ELECTRIC INDUSTRIES LTD..

10:30 3MP1F-06 / 76 **INCREASE THE CRITICAL CURRENT OF BI-2223/AG SUPERCONDUCTING TAPES BY USING MELTING ASSISTED HIP PROCESS** *T. QU1, K. HUANG1, C. GU1, Z. HAN1, X. SONG2, P. ZENG[1];* [1]TSINGHUA UNIVERSITY, BEIJING 100084, CHINA, [2]INNOVA SUPERCONDUCTOR TECHNOLOGY CO.,LTD., BEIJING, CHINA.

10:30 3MP1F-07 / 77 **INFLUENCE OF MELTING TEMPERATURE AND TIME ON THE NUCLEATION, GRAIN GROWTH, AND CRITICAL CURRENT DENSITY OF AG-BI2212 MULTIFILAMENTARY ROUND WIRE** *T. SHEN, J. JIANG, F. KAMETANI, U. TROCIEWITZ, D. LARBALESTIER, E. HELLSTROM;* FLORIDA STATE UNIVERSITY.

10:30 3MP1F-08 / 78 **INTERPRETATION OF THE MECHANICAL BEHAVIOR OF $BI^2SR^2CACU^2OX$/AGMG ROUND WIRES USING FRACTAL CHARACTERIZATION OF THE ROUGH SURFACES OF INDIVIDUAL FILAMENTS** *X. GOU[1], J. SCHWARTZ[2];* [1]NC STATE UNIVERSITY, US & HOHAI UNIVERSITY, CHINA, [2]NC STATE UNIVERSITY, US.

10:30 3MP1F-09 / 79 **FABRICATION OF BI-2212 COATINGS USING THERMO-SPRAYING** *M. C. MAYORAL[1], J. M. ANDRÉS[1], L. A. ANGUREL[2];* [1]INSTITUTO DE CARBOQUÍMICA, CSIC, SPAIN, [2]ICMA (CSIC-UNIVERSTITY OF ZARAGOZA), SPAIN.

10:30 3MP1F-10 / 80 **ANGULAR, TEMPERATURE AND STRAIN DEPENDENCE OF THE CRITICAL CURRENT OF DI-BSCCO TAPES IN HIGH MAGNETIC FIELDS** *P. SUNWONG, J. S. HIGGINS, D. P. HAMPSHIRE;* DURHAM UNIVERSITY.

13:30 ORAL SESSIONS

3EX: 164 TES LONG-RANGE PROXIMITY EFFECT AND TES CHARACTERIZATION *EXECUTIVE*

GEORGE SEIDEL (BROWN UNIVERSITY) AND THOMAS STEVENSON (NASA)

13:30 3EX-01 ***(INVITED)*** **LONG RANGE PROXIMITY EFFECTS AND WEAK-LINK BEHAVIOR IN SUPERCONDUCTING / NORMAL-METAL BILAYER TESS** *J. E. SADLEIR[1], C. N. BAILEY[2], S. R. BANDLER[2], R. P. BREKOSKY[2], J. R. CLEM[3], J. A. CHERVENAK[2], M. E. ECKART[2], F. M. FINKBEINER[2], R. L. KELLEY[2], C. A. KILBOURNE[2], F. S. PORTER[2], S. J. SMITH[2];* [1]NASA GSFC AND UIUC PHYSICS DEPT., [2]NASA GSFC, [3]AMES LABORATORY AND DEPARTMENT OF PHYSICS AND ASTRONOMY, IOWA STATE UNIVERSITY.

14:00 3EX-02 **MICROSCOPIC MODEL OF A TRANSITION EDGE SENSOR AS A WEAK LINK** *A. KOZOREZOV[1], A. GOLUBOV[2], D. MARTIN[3];* [1]DEPARTMENT OF PHYSICS, LANCASTER UNIVERSITY, UK, [2]DEPARTMENT OF APPLIED PHYSICS, UNIVERSITY OF TWENTE, THE NETHERLANDS, [3]ESA-ESTEC, NOORDWIJK, THE NETHERLANDS.

14:15 3EX-03 **PHYSICS OF PROXIMITY JOSEPHSON SENSOR** *J. VOUTILAINEN, M. A. LAAKSO, T. T. HEIKKILÄ;* AALTO UNIVERSITY SCHOOL OF SCIENCE AND TECHNOLOGY.

14:30 3EX-04 **IMPLICATIONS OF WEAK-LINK EFFECTS ON THE PERFORMANCE OF MO/AU TRANSITION-EDGE SENSORS** *S. J. SMITH[1], C. N. BAILEY[2], S. R. BANDLER[1], R. P. BREKOSKY[3], J. A. CHERVENAK[4], M. E. ECKART[2], F. M. FINKBEINER[5], R. L. KELLEY[4], C. A. KILBOURNE[4], F. S. PORTER[4], J. E. SADLEIR[4];* [1]NASA GSFC AND UNIVERSITY OF MARYLAND, [2]NASA GSFC AND NPP, [3]NASA GSFC AND NORTHRUP GRUMMAN, [4]NASA GSFC, [5]NASA GSFC AND WYLE INFORMATION SYSTEMS.

14:45 3EX-05 **CHARACTERIZATION OF NOISE AND TRANSITION SHAPES IN SUPERCONDUCTING TRANSITION-EDGE SENSORS USING A PULSED LASER DIODE** *D. S. SWETZ, J. N. ULLOM, D. A. BENNETT, W. B. DORIESE, G. C. HILTON, K. D. IRWIN, C. D. REINTSEMA, D. R. SCHMIDT;* NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.

15:00 3EX-06 **CHARACTERIZATION OF TI/AU TRANSITION-EDGE SENSORS USING COMPLEX IMPEDANCE: UNDERSTANDING THE SENSOR, ABSORBER, AND SIN MEMBRANE** *M. A. LINDEMAN[1], B. DIRKS[1], A. G. KOZOREZOV[2], M. P. BRUIJN[1], P. A. J. DE KORTE[1], R. H. DEN HARTOG[1], L. GOTTARDI[1], R. A. HIJMERING[1], H. F. C. HOEVERS[1], J. VAN DER KUUR[1], M. L. RIDDER[1];* [1]SRON NATIONAL INSTITUTE FOR SPACE RESEARCH, SORBONNELAAN 2, UTRECHT 3584 CA, THE NETHERLANDS, [2]DEPARTMENT OF PHYSICS, LANCASTER UNIVERSITY, LANCASTER, LA1 [4]YB, UK.

15:15 3EX-07 **IMPEDANCE MEASUREMENTS FOR NEAR INFRARED-OPTICAL TI/PD AND TI/AU TRANSITION-EDGE SENSORS.** *E. TARALLI[1], C. PORTESI[1], L. LOLLI[1], E. MONTICONE[1], M. RAJTERI[1], I. NOVIKOV[2], J. BEYER[3];* [1]ISTITUTO NAZIONALE DI RICERCA METROLOGICA (INRIM), [2]NOVOSIBIRSK STATE TECHNICAL UNIVERSITY (NSTU), [3]PHYSIKALISCH-TECHNISCHE BUNDESANSTALT (PTB).

3EY: 148 DIGITAL CIRCUITS I *DIPLOMAT* THOMAS ORTLEPP (ILMENAU UNIVERSITY OF TECHNOLOGY) AND HIROTAKA TERAI (NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS LABORATORY)

13:30 3EY-01 ***(INVITED)*** **100-GHZ SINGLE-FLUX-QUANTUM BIT-SERIAL ADDER BASED ON 10-KA/CM2 NIOBIUM PROCESS** *M. TANAKA[1], H. AKAIKE[1], A. FUJIMAKI[1], Y. YAMANASHI[2], N. YOSHIKAWA[2], S. NAGASAWA[3], K. TAKAGI[1], N. TAKAGI[1];* [1]NAGOYA UNIVERSITY, CREST-JST, [2]YOKOHAMA NATIONAL UNIVERSITY, CREST-JST, [3]ISTEC, CREST-JST.

14:00 3EY-02 **HYBRID SEMICONDUCTOR-SUPERCONDUCTOR FAST-READOUT MEMORY FOR DIGITAL RF RECEIVERS** *O. A. MUKHANOV, A. F. KIRICHENKO, T. V. FILIPPOV, S. SARWANA;* HYPRES.

14:15 3EY-03 **DEMONSTRATION OF A 4X4 SFQ SWITCH FABRICATED WITH A 10KA/CM2 NB MULTI-LAYER PROCESS** *M. ITO[1], I. KATAEVA[1], R. KASAGI[1], M. OKADA[1], T. KOKETSU[1], M. TANAKA[1], S. NAGASAWA[2], H. AKAIKE[1], A. FUJIMAKI[1];* [1]NAGOYA UNIVERSITY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY.

14:30 3EY-04 **A COMPARISON OF MULTI-CRITERIA EVALUATION METHODS FOR RSFQ CIRCUIT OPTIMIZATION** *H. R. GERBER[1], F. G. ORTMANN[1], A. VAN DER MERWE[1], C. J. FOURIE[2];* [1]NIOCAD, [2]STELLENBOSCH UNIVERSITY.

14:45 3EY-05 **SINGLE-FLUX-QUANTUM-BASED READOUT SYSTEM FOR AN ARRAY OF SUPERCONDUCTIVE NEUTRON DETECTORS** *S. MIYAJIMA[1], I. NAKANISHI[1], Y. HIGASHI[1], T. KUSUMOTO[1], A. FUJIMAKI[1], K. ARAI[2], Y. AKITA[2], I. YAGI[2], T. ISHIDA[2];* [1]NAGOYA UNIVERSITY, [2]OSAKA PREFECTURE UNIVERSITY.

15:00 3EY-06 **NEW JOSEPHSON-CMOS INTERFACE AMPLIFIER** *D. WEI, S. R. WHITELEY, H. PARK, L. ZHENG, H. KIM, T. VAN DUZER;* UNIVERSITY OF CALIFORNIA.

3EZ: 150 NOVEL DEVICES AND SQIF *HAMPTON* NILS SCHOPOHL (TUEBINGEN) AND ANNA LEESE DE ESCOBAR (SPAWAR SYSTEMS CENTER PACIFIC)

13:30 3EZ-01 **NON-LINEAR MAGNETIC RESPONSE OF SUPERCONDUCTING RF METAMATERIALS** *C. KURTER[1], A. P. ZHURAVEL[2], A. V. USTINOV[3], S. M. ANLAGE[1];* [1]CENTER FOR NANOPHYSICS AND ADVANCED MATERIALS, DEPARTMENT OF PHYSICS, UNIVERSITY OF MARYLAND, COLLEGE PARK, MD 20742-4111 USA, [2]B. VERKIN INSTITUTE FOR LOW TEMPERATURE PHYSICS & ENGINEERING, NATIONAL ACADEMY OF SCIENCES OF UKRAINE, 61164 KHARKOV, UKRAINE, [3]PHYSIKALISCHES INSTITUT, UNIVERSITÄT KARLSRUHE, D-76131 KARLSRUHE, GERMANY.

13:45 3EZ-02 **SCALING OF SQIF PROPERTIES WITH PARALLEL AND SERIES SQUIDS** *J. TALVACCHIO, J. M. MURDUCK, Q. P. HERR, B. A. NECHAY;* NORTHROP GRUMMAN.

14:00 3EZ-03 **LINEAR BI-SQUID ARRAYS FOR ELECTRICALLY SMALL ANTENNAS** *I. I. SOLOVIEV[1], V. K. KORNEV[2], N. V. KLENOV[2], O. A. MUKHANOV[3];* [1]SINP MSU, [2]PHYSICS DEPARTMENT, MSU, [3]HYPRES, INC..

14:15 3EZ-04 **NANOSTRIP THREE-TERMINAL SUPERCONDUCTING DEVICE** *S. PAGANO[1], N. MARTUCCIELLO[2], R. CRISTIANO[3], M. EJRNAES[3], A. CASABURI[3], R. LEONI[4], A. GAGGERO[4], F. MATTIOLI[4], J. C. VILLEGIER[5], P. CAVALIER[5];* [1]DEPT. OF MATEMATICS AND INFORMATICS AND CNR-SPIN SALERNO, UNIVERSITY OF SALERNO, 84084 FISCIANO, ITALY, [2]CNR-SPIN SALERNO, UNIVERSITY OF SALERNO, 84084 FISCIANO, ITALY, [3]CNR-ISTITUTO DI CIBERNETICA "E. CAIANIELLO", 80078 POZZUOLI, ITALY, [4]CNR-ISTITUTO DI FOTONICA E NANOTECNOLOGIE, 00156 ROME, ITALY, [5]INSTITUTE OF NANOSCIENCES AND CRYOGENICS SPSMS, CEA-GRENOBLE - 38054, GRENOBLE-CEDEX 9, FRANCE.

14:30 3EZ-05 **THREE-TERMINAL SUPERCONDUCTING NONEQUILIBRIUM DEVICE WITH A FERROMAGNETIC SCREEN** *I. P. NEVIRKOVETS[1], O. CHERNYASHEVSKYY[2], J. B. KETTERSON[3], A. V. PAN[4];* [1]ISEM UNIVERSITY OF WOLLONGONG, FAIRY MEADOW NSW 2519, AUSTRALIA; DEPARTMENT OF PHYSICS AND ASTRONOMY, NORTHWESTERN UNIVERSITY, EVANSTON IL 60208, USA, [2]DEPARTMENT OF PHYSICS AND ASTRONOMY, NORTHWESTERN UNIVERSITY, EVANSTON IL 60208, USA, [3]DEPARTMENT OF PHYSICS AND ASTRONOMY, AND DEPARTMENT OF ELECTRICAL ENGINEERING & COMPUTER SCIENCE, NORTHWESTERN UNIVERSITY, EVANSTON IL 60208, USA, [4]ISEM UNIVERSITY OF WOLLONGONG, FAIRY MEADOW NSW 2519, AUSTRALIA.

14:45 3EZ-06 **^{3}D ACTIVE DEMAGNETIZATION OF LOW-TEMPERATURE MAGNETIC SHIELDS** *Y. A. POLYAKOV[1], V. K. SEMENOV[1], S. K. TOLPYGO[2];* [1]STONY BROOK UNIVERSITY, [2]HYPRES, INC..

15:00 3EZ-07 **DESIGN AND FABRICATION OF INTEGRATED CRYOGENIC CURRENT COMPARATORS** *C. URANO[1], M. MAEZAWA[1], M. MARUYAMA[1], T. YAMADA[1], T. OE[1], M. HIDAKA[2], T. SATOH[2], S. NAGASAWA[2], K. HINODE[2], S. KIRYU[3], N. KANEKO[1];* [1]AIST, [2]ISTEC, [3]TOKYO CITY UNIV..

3LX: 168 BEARINGS, MAGLEV AND OTHER APPLICATIONS

EMPIRE MOCHIMITSU KOMORI (KYUSHU INSTITUTE OF TECHNOLOGY) AND HIROYUKI OHSAKI (THE UNIVERSITY OF TOKYO)

13:30 3LX-01 **DAMPING OF SUBSYNCHRONOUS WHIRL IN ROTORS WITH HIGH-TEMPERATURE SUPERCONDUCTING BEARINGS** *J. HULL, M. STRASIK, J. MITTLEIDER, C. MCIVER, K. MCCRARY, J. GONDER, P. JOHNSON;* THE BOEING COMPANY.

13:45 3LX-02 **FIELD-DEPLOYABLE FLYWHEEL ENERGY STORAGE WITH HIGH-TEMPERATURE SUPERCONDUCTING BEARINGS** *M. STRASIK, J. HULL, J. MITTLEIDER, J. GONDER, C. MCIVER, K. MCCRARY, P. JOHNSON;* THE BOEING COMPANY.

14:00 3LX-03 **NUMERICAL ANALYSIS AND EXPERIMENTAL MEASUREMENTS OF MAGNETIC BEARINGS BASED ON MGB2 HOLLOW CYLINDERS** *A. MORANDI[1], E. PERINI[2], G. GIUNCHI[2], M. FABBRI[1];* [1]UNIVERSITY OF BOLOGNA, DIE - DEPT. OF ELECTRICAL ENGINEERING, VIALE RISORGIMENTO 2, 40136 BOLOGNA, ITALY, [2]EDISON SPA, R&D DIVISION – FORO BUONAPARTE 31 20121 MILANO - ITALY.

14:15 3LX-04 **DYNAMICS OF A FLYWHEEL WITH SUPERCONDUCTIVE BEARING BASED ON MAGNETIC POTENTIAL WELL (MPW) PHENOMENON** *L. GRYGOR'YEVA;* TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV.

14:30 3LX-05 **TESTS ON A SUPERCONDUCTOR LINEAR MAGNETIC BEARING OF A REAL SCALE MAGLEV VEHICLE** *G. G. SOTELO1, D. H. N. DIAS2, R. DE ANDRADE JR.2, R. M. STEPHAN[2];* [1]FLUMINENSE FEDERAL UNIVERSITY, [2]FEDERAL UNIVERSITY OF RIO DE JANEIRO.

14:45 3LX-06 **TOWARDS AN OPTIMIZED MAGNET-SUPERCONDUCTOR CONFIGURATION IN ACTUAL MAGLEV DEVICES** *N. DEL-VALLE[1], A. SANCHEZ[1], C. NAVAU[1], D. CHEN[2];* [1]UNIVERSITAT AUTONOMA DE BARCELONA, [2]ICREA AND UNIVERSITAT AUTONOMA DE BARCELONA.

15:00 3LX-07 **RECENT UP - SCALING IN HTS BULK MAGNETIC DEVICE TECHNOLOGY** *F. N. WERFEL, U. FLOEGEL-DELOR, R. ROTHFELD, T. RIEDEL, B. GOEBEL, D. WIPPICH, P. SCHIRRMEISTER;* ADELWITZ TECHNOLOGIEZENTRUM GMBH (ATZ).

15:15 3LX-08 **CHARACTERIZATION OF ^{2}G SUPERCONDUCTOR MAGNETIC SHIELDS AT 50 - 77 K** *J. KVITKOVIC[1], P. PATIL[1], S. PAMIDI[1], J. VOCCIO[2];* [1]CENTER FOR ADVANCED POWER SYSTEMS, FLORIDA STATE UNIVERSITY, [2]AMERICAN SUPERCONDUCTOR CORPORATION.

3LY: 169 ACCELERATOR MAGNETS

PALLADIAN HERMAN TEN KATE (CERN) AND GIJS DE RIJK (CERN)

13:30 3LY-01 **DESIGN CHALLENGES FOR A WIDE-APERTURE INSERTION QUADRUPOLE MAGNET** *S. RUSSENSCHUCK, B. AUCHMANN, Y. BONCOMPAGNI, T. SAHNER, G. KIRBY, N. SCHWERG, M. KARPPINEN, D. DUARTE RAMOS, J. CARLOS PEREZ, P. FESSIA;* CERN.

13:45 3LY-02 **MECHANICAL DESIGN AND ANALYSIS OF AN EIGHT-POLE SUPERCONDUCTING VECTOR MAGNET FOR SOFT X-RAY MAGNETIC DICHROISM MEASUREMENTS** *D. ARBELAEZ[1], E. ARENHOLZ[1], A. BLACK[1], S. O. PRESTEMON[1], B. WANG[2], J. CHEN[2];* [1]LAWRENCE BERKELEY NATIONAL LABORATORY, [2]WANG NMR INC..

14:15 3LY-04 **MECHANICAL PERFORMANCE OF THE LARP NB^{3}SN QUADRUPOLE MAGNET LQS01** *P. FERRACIN[1], G. AMBROSIO[2], M. ANERELLA[3], B. BINGHAM[1], R. BOSSERT[2], S. CASPI[1], D. CHENG[1], G. CHLACHIDZE[2], H. FELICE[1], R. HAFALIA[1], R. HANNAFORD[1], W. MUMPER[2], F. NOBREGA[2], S. PRESTEMON[1], G. SABBI[1], J. SCHMALZLE[3], C. SYLVESTER[2], M. TARTAGLIA[2], P. WANDERER[3], A. ZLOBIN[2];* [1]LBNL, [2]FNAL, [3]BNL.

14:30 3LY-05 **FIELD QUALITY OF THE FIRST LARP NB3SN 3.7M-LONG QUADRUPOLE MODEL OF LQ SERIES** *G. VELEV[1], G. AMBROSIO[1], N. ANDREEV[1],*

M. ANERELLA[2], R. BOSSERT[1], S. CASPI[3], G. CHLACHIDZE[1], J. DIMARCO[1], J. ESCALLIER[2], H. FELICE[3], P. FERRACIN[3], V. KASHIKHIN[1], M. LAMM[1], A. NOBREGA[1], E. PREBYS[1], G. SABBI[3], J. SCHMALZLE[2], M. TARTAGLIA[1], P. WANDERER[2], A. ZLOBIN[1]; [1]FNAL, [2]BNL, [3]LBL.

14:45 3LY-06 **THE STUDY OF SINGLE NB^{3}SN QUADRUPOLE COILS USING A MAGNETIC MIRROR STRUCTURE** *G. CHLACHIDZE, N. ANDREEV, E. BARZI, R. BOSSERT, V. KASHIKHIN, V. KASHIKHIN, M. LAMM, F. NOBREGA, I. NOVITSKI, D. ORRIS, M. TARTAGLIA, J. TOMPKINS, D. TURRIONI, R. YAMADA, A. ZLOBIN;* FERMILAB.

15:00 3LY-07 **RADIATION HEAT LOADS TO SUPERCONDUCTING QUADRUPOLES FOR BIGRIPS IN-FLIGHT SEPARATOR AT RIKEN** *K. KUSAKA[1], M. OHTAKE[1], T. OHNISHI[1], A. YOSHIDA[1], K. YOSHIDA[1], T. KUBO[1], Y. YANO[1], M. NOBUTOKI[2], H. ITO[3], N. KAKUTANI[3], T. TSUCHIHASHI[3], K. SATO[3];* [1]RIKEN NISHINA CENTER FOR ACCELERATOR-BASED SCIENCE, [2]TAIYO-NIPPON-SANSO, [3]TOSHIBA.

15:15 3LY-08 **STATUS OF SUPERCONDUCTING MAGNET SYSTEM FOR THE J-PARC NEUTRINO BEAM LINE** *T. NAKAMOTO[1], Y. FUJII[1], N. KIMURA[1], Y. MAKIDA[1], T. NAKADAIRA[1], T. OGITSU[1], T. OKAMURA[1], K. SASAKI[1], B. PARKER[2], P. WANDERER[2];* [1]KEK, [2]BNL.

3LZ: 138 TRANSFORMERS I *CONGRESSIONAL* KYEONGDAL CHOI (KOREA POLYTECHNIC UNIVERSITY) AND S. WILLIAM SCHWENTERLY (OAK RIDGE NATIONAL LABORATORY)

13:30 3LZ-01 **TEST RESULTS OF 60 KVA CURRENT LIMITING TRANSFORMER WITH FULL RECOVERY UNDER LOAD** *A. BERGER, M. NOE, W. GOLDACKER, A. KUDYMOW;* KARLSRUHE INISTITUTE OF TECHNOLOGY (KIT).

13:45 3LZ-02 **NOVEL 3-PHASE SELF-LIMITING TRANSFORMER WITH TRANSFORMING MAGNETIC FLUX APPLYING PERFECT CLOSED YBCO WIRE LOOPS** *J. KOSA;* KECSKEMET COLLEGE FACULTY OF MECHANICAL ENGINEERING AND AUTOMATION.

14:00 3LZ-03 **DEVELOPMENT OF A 1 MVA 3-PHASE SUPERCONDUCTING TRANSFORMER USING YBCO ROEBEL CABLE** *N. GLASSON[1], M. STAINES[1], R. BUCKLEY[1], M. PANNU[2];* [1]INDUSTRIAL RESEARCH LIMITED, [2]WILSON TRANSFORMER COMPANY.

15:00 3LZ-04 **PROGRESS IN DEVELOPMENT OF SUPERCONDUCTING FAULT CURRENT LIMITING TRANSFORMER (SFCLT)** *N. HAYAKAWA, H. KOJIMA, F. ENDO, H. OKUBO;* NAGOYA UNIVERSITY.

14:15 3LZ-05 **CURRENT LIMITING AND RECOVERY CHARACTERISTICS OF 2 MVA CLASS SUPERCONDUCTING FAULT CURRENT LIMITING TRANSFORMER (SFCLT)** *H. KOJIMA, M. KOTARI, T. KITO, N. HAYAKAWA, F. ENDO, H. OKUBO;* NAGOYA UNIVERSITY.

14:45 3LZ-06 **DEVELOPMENT OF A REBCO SUPERCONDUCTING TRANSFORMER WITH CURRENT LIMITING FUNCTION** *M. IWAKUMA[1], A. TOMIOKA[1], T. OTONARI[1], T. OGATA[1], S. SATO[1], H. HAYASHI[2], H. OKAMOTO[2], Y. IIJIMA[3], T. SAITOH[3], Y. AOKI[4], T. KOIZUMI[4], T. HASEGAWA[4], N. FUJIWARA[5], Y. GOSHO[5], Y. YAMADA[5], T. IZUMI[5], Y. SHIOHARA[5];* [1]KYUSHU UNIVERSITY, [2]KYUSHU ELECTRIC POWER CO. INC., [3]FUJIKURA LTD., [4]SHOWA CABLE SYSTEMS CO., LTD., [5]ISTEC.

15:15 3LZ-07 **SURFACE FLASHOVER VOLTAGE OF CYLINDRICAL G10 UNDER AC AND DC VOLTAGES AT ROOM AND CRYOGENIC TEMPERATURES.** *H. RODRIGO, W. BAUMGARTINGER, G. H. HELLER, D. G. CROOK, S. L. RANNER;* FLORIDA STATE UNIVERSITY.

3MX: 103 HTS: MECHANICAL PROPERTIES *BLUE* ARNO GODEKE (LAWRENCE BERKELEY NATIONAL LABORATORY) AND DAMIAN HAMPSHIRE (DURHAM UNIVERSITY)

13:30 3MX-01 **ELECTRO-MECHANICAL CHARACTERIZATION OF BI-2212 STRANDS** *X. F. LU[1], N. CHEGGOUR[1], T. C. STAUFFER[1], C. C. CLICKNER[1], U. TROCIEWITZ[2], D. MYERS[2], T. G. HOLESINGER[3];* [1]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, BOULDER, CO 80305, [2]NATIONAL HIGH MAGNETIC FIELD LABORATORY, TALLAHASSEE, FL 32310, [3]LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM 87545.

13:45 3MX-02 **INFLUENCE OF THICKNESS OF SUPERCONDUCTING LAYER ON DOUBLE PEAK BEHAVIOR IN STRAIN EFFECT ON CRITICAL CURRENT UNDER MAGNETIC FIELD FOR YBCO COATED CONDUCTORS** *M. SUGANO[1], K. SHIKIMACHI[2], N. HIRANO[2], S. NAGAYA[2];* [1]KYOTO UNIVERSITY, [2]CHUBU ELECTRIC POWER CO..

14:15 3MX-03 **MAGNETIC FIELD AND FIELD-ANGULAR DEPENDENCE OF THE EFFECT OF STRAIN ON CRITICAL CURRENT DENSITY AND FLUX PINNING IN $YBA^2CU^3O7-\Delta$ COATED CONDUCTORS** *J. F. DOUGLAS[1], D. C. VAN DER LAAN[1], T. C. STAUFFER[1], C. C. CLICKNER[1], L. F. GOODRICH[1], M. W. RUPICH[2], Y. Y. XIE[3], A. USOSKIN[4], H. C. FREYHARDT[5], V. SELVAMANICKAM[5];* [1]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, [2]AMERICAN SUPERCONDUCTOR CORPORATION, [3]SUPERPOWER, INC., [4]BRUKER HTS, [5]UNIVERSITY OF HOUSTON.

14:00 3MX-04 **ORIGIN OF THE REVERSIBLE STRAIN EFFECT ON CRITICAL CURRENT DENSITY AND FLUX PINNING IN $BI^2SR^2CA^2CU^3OX$ TAPES** *D. VAN DER LAAN[1], F. DOUGLAS[1], C. CLICKNER[1], T. STAUFFER[1], L. F. GOODRICH[1], H. J. N. VAN ECK[2];* [1]NIST, [2]FOM-INSTITUTE FOR PLASMA PHYSICS RIJNHUIZEN.

14:30 3MX-05 **UNUSUAL INTERNAL STRAIN BEHAVIOR EXERTED ON YBCO LAYER IN THE SURROUND CU STABILIZED YBCO COATED CONDUCTOR** *K. OSAMURA[1], S. MACHIYA[2], Y. TSUCHIYA[3], S. HARJO[4], H. SUZUKI[4], T. SHOUBU[4], K. KIRIYAMA[4], M. SUGANO[5];* [1]RESEARCH INSTITUTE FOR APPLIED SCIENCES, [2]DAIDO UNIVERSITY, [3]NATIONAL INSISTUTE FOR MATERIALS SCIENCE, [4]JAPAN ATOMIC ENERGY AGENCY, [5]KYOTO UNIVERSITY.

14:45 3MX-06 **HOOP STRESS TEST OF $GDBA^2CU^3OY$ COATED CONDUCTOR** *G. NISHIJIMA[1], K. MINEGISHI[1], S. AWAJI[1], K. WATANABE[1], T. IZUMI[2], Y. SHIOHARA[2];* [1]INSTITUTE FOR MATERIALS RESEARCH, TOHOKU UNIVERSITY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY, INTERNATIONAL SUPERCONDUCTIVITY TECHNOLOGY CENTER.

15:00 3MX-07 **INFLUENCE OF SHEAR STRAIN ON CURRENT CARRYING CAPABILITIES OF HTSC TAPES** *C. BARTH, K. WEISS, W. GOLDACKER;* KIT, INSTITUTE FOR TECHNICAL PHYSICS, GERMANY.

15:15 3MX-08 **FINITE ELEMENT ANALYSIS OF TORSION EXPERIMENTS ON HTSC TAPES** *K. WEISS[1], W. GOLDACKER[1], M. NANNINI[2];* [1]KIT INSTITUTE FOR TECHNICAL PHYSIC, GERMANY, [2]CEA CADARACHE, FRANCE.

3MY: 235 PNICTIDES IV

BLUE PRE-FUNC. YOSHIHIKO TAKANO (NATIONAL INSTITUTE FOR MATERIALS SCIENCE (NIMS)) AND HIROSHI IKUTA (NAGOYA UNIVERSITY)

13:30 3MY-01 **INFLUENCE OF HEAVY-ION IRRADIATION ON FLUX PINNING AND SUPERFLUID DENSITY IN SINGLE CRYSTALS OF 122 PNICTIDE SUPERCONDUCTORS** *R. PROZOROV[1], M. A. TANATAR[1], P. C. CANFIELD[1], U. WELP[2], W. K. KWOK[2];* [1]AMES LABORATORY, [2]ARGONNE NATIONAL LABORATORY.

13:45 3MY-02 **FLUX PINNING IN FE-BASED ARSENIDE OXIDES WITH THICK BLOCKING LAYERS** *J. SHIMOYAMA, H. OGINO, N. KAWAGUCHI, S. SATO, Y. SHIMIZU, K. MACHIDA, A. YAMAMOTO, K. KISHIO;* UNIVERSITY OF TOKYO.

14:00 3MY-03 **ENHANCED SUPERCONDUCTIVITY IN FESE1-XTEX SYSTEM WITH LI DOPING** *C. YANG[1], P. CHEN[1], S. HUANG[1], I. CHEN[1], X. QI[1], M. WU[2];* [1]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL CHENG KUNG UNIVERSITY, TAINAN, TAIWAN, [2]INSTITUTE OF PHYSICS, ACADEMIA SINICA, TAIPEI, TAIWAN.

14:15 3MY-04 ***(INVITED)*** **UPPER CRITICAL FIELD AND ROLE OF DISORDER ON FE BASED SUPERCONDUCTORS** *M. PUTTI[1], M. TROPEANO[1], I. PALLECCHI[2], G. LAMURA[2], C. FERDEGHINI[2], A. MARTINELLI[2], A. PALENZONA[1], R. CIMBERLE[3], C. TARANTINI[4], A. GUREVICH[4], D. LARBALESTIER[4], H. SHEN[5], N. NEWMAN[5], J. ROWELL[5], H. WEN[6];* [1]CNR-SPIN AND UNIVERSITY OF GENOVA, [2]CNR-SPIN, [3]CNR-IMEM, [4]APPLIED SUPERCONDUCTIVITY CENTER, NHMFL, FSU, [5]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, ASU, [6]INSTITUTE OF PHYSICS, NATIONAL LABORATORY OF CONDENSED MATTERPHYSICS, BEIJING.

14:45 3MY-05 **ENHANCED CRITICAL TEMPERATURE IN EPITAXIAL $FESE0.5TE0.5$ THIN FILMS WITH BIAXIAL COMPRESSIVE STRAIN** *C. FERDEGHINI[1], E. BELLINGERI[1], R. BUZIO[1], A. GERBI[1], D. MARRÈ[2], I. PALLECCHI[1], M. PUTTI[2], A. PALENZONA[2], M. TROPEANO[1], M. CIMBERLE[3];* [1]CNR-SPIN, [2]CNR-SPIN AND UNIVERSITY OF GENOVA, [3]CNR-IMEM.

15:00 3MY-06 **JC SCALING AND ANISOTROPY IN 122 AND 1111 PNICTIDE THIN FILMS** *J. HÄNISCH, K. IIDA, M. KIDSZUN, S. HAINDL, T. D. THERSLEFF, A. KAUFFMANN, F. KURTH, L. SCHULTZ, B. HOLZAPFEL;* IFW DRESDEN, HELMHOLTZSTR. 20, 01069 DRESDEN, GERMANY.

15:15 3MY-07 **HIGH CRITICAL CURRENTS AND STRONG PINNING IN LOW ANISOTROPY BACOXFE2-XAS2 THIN FILMS DUE TO NATURALLY GROWN CORRELATED DEFECTS** *B. MAIOROV[1], T. KATASE[2], H. HIRAMATSU[3], L. CIVALE[1], S. A. BAILY[1], T. G. HOLESINGER[1], H. HOSONO[4];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]MATERIALS AND STRUCTURES LABORATORY, TOKYO INSTITUTE OF TECHNOLOGY, [3]FRONTIER RESEARCH CENTER, TOKYO INSTITUTE OF TECHNOLOGY, [4]FRONTIER RESEARCH CENTER AND MATERIALS AND STRUCTURES LABORATORY, TOKYO INSTITUTE OF TECHNOLOGY AND.

16:00 POSTER SESSIONS

3LP2A: 257 CURRENT LEADS *REGENCY* THOMAS PAINTER (NHMFL) AND AMALIA BALLARINO (CERN)

16:00 3LP2A-01 / 1 **ELECTRICAL CONTACT RESISTANCE OF MULTI-CONTACT CONNECTOR IN SEMI-RETRACTABLE CURRENT LEAD** *Y. CHOI;* KBSI.

16:00 3LP2A-02 / 2 **HTS CURRENT LEADS PREPARED BY THE TFA-MOD PROCESSED YBCO TAPES** *Y. YAMADA;* TOKAI UNIVERSITY.

16:00 3LP2A-03 / 3 **TEST ARRANGEMENT FOR THE W7-X HTS-CURRENT LEAD PROTOTYPE TESTING** *W. H. FIETZ[1], S. FINK[1], M. HEIDUK[1], R. HELLER[1], C. LANGE[1], R. LIETZOW[1], T. MÖHRING[1], P. ROHR[1], M. SÜßER[1], T. RUMMEL[2];* [1]KARLSRUHE INSTITUTE OF TECHNOLOGY, [2]MAX-PLANCK-INSTITUT FÜR PLASMAPHYSIK, TEILINSTITUT GREIFSWALD.

16:00 3LP2A-04 / 4 **TEST RESULTS OF THE HIGH TEMPERATURE SUPERCONDUCTOR PROTOTYPE CURRENT LEADS FOR WENDELSTEIN 7-X** *R. HELLER[1], W. H. FIETZ[1], S. FINK[1], M. HEIDUK[1], A. KIENZLER[1], C. LANGE[1], R. LIETZOW[1], T. MÖHRING[1], P. ROHR[1], T. RUMMEL[2], T. MÖNNICH[2], K. BUSCHER[2];* [1]KARLSRUHE INSTITUTE OF TECHNOLOGY, [2]MAX PLANCK INSTITUTE FOR PLASMA PHYSICS.

16:00 3LP2A-05 / 5 **A STUDY ON THE STACKING METHODS OF HIGH TC SUPERCONDUCTING TAPE WITH RESPECT TO THE SHAPE OF THE COPPER TERMINAL FOR APPLICATIONS OF LARGE CURRENT** *J. JANG, K. CHANG, Y. KIM, J. NA, S. CHOI, S. CHU, T. KO;* YONSEI UNIVERSITY.

16:00 3LP2A-06 / 6 **PERFORMANCE VERIFICATION TEST FOR OPTIMAL LEADS AND HITC LEADS** *C. TAYLOR, B. WANG, H. CHEN, L. XU, B. WAHRER, M. WANG;* WANG NMR INC..

16:00 3LP2A-07 / 7 **CURRENT LEAD DESIGN FOR THE ACCELERATOR PROJECT FOR UPGRADE OF LHC** *J. S. BRANDT, S. CHEBAN, S. FEHER, M. KADUCAK, F. NOBREGA, T. PETERSON;* FERMI NATIONAL ACCELERATOR LABORATORY.

16:00 3LP2A-08 / 8 **DOUBLE PELTIER CURRENT LEAD FOR HEAT LEAK REDUCTION AT THE TERMINALS FOR SUPERCONDUCTING DIRECT CURRENT APPLICATIONS** *T. KAWAHARA[1], T. FUJII[1], M. EMOTO[2], M. HAMABE[1], H. WATANABE[1], J. SUN[1], I. YURY[1], S. YAMAGUCHI[1];* [1]CHUBU UNIVERSITY, [2]NSTIONAL INSTITUTE FOR FUSION SCIENCE.

16:00 3LP2A-09 / 9 **THE DESIGN AND FABRICATION OF A 10 KA HTS CURRENT LEAD PROTOTYPE FOR ITER** *P. BAUER[1], Y. BI[2], A. DEVRED[1], K. DING[2], N. MITCHELL[1], Y. SONG[2], T. ZHOU[2], G. SHEN[2], X. HUANG[2];* [1]ITER ORGANIZATION, [2]ASIPP.

16:00 3LP2A-10 / 10 **HEAT EXCHANGER DESIGN FOR THE 30KA GAS COOLED CURRENT LEADS IN THE ENEA I^2T CICC FACILITY** *G. POLLI, L. AFFINITO, A. DELLA CORTE;* ENEA.

16:00 3LP2A-11 / 11 **4 KA BINARY LEADS WITH REBCO COATED CONDUCTOR** *H. W. WEIJERS, G. M. MILLER, P. D. NOYES;* NHMFL.

3LP2B: 258 HTS BASED MAGNETS I *REGENCY* MICHAEL LAMM (FERMILAB) AND JUSTIN SCHWARTZ (NCSU)

16:00 3LP2B-01 / 12 **PROGRESS ON THE DEVELOPMENT OF A 5 T HTS INSERT MAGNET FOR GHZ CLASS NMR APPLICATIONS** *Y. CHOI[1], D. KIM[1], S. HAHN[2];* [1]KOREA BASIC SCIENCE INSTITUTE, [2]FRANCIS BITTER MAGNET LABORATORY.

16:00 3LP2B-02 / 13 **THE CONSTRUCTION AND TESTING OF HTS COILS FOR 10T SOLENOID** *Y. SHIROYANAGI, W. SAMPSON, A. GHOSH, R. GUPTA;* BROOKHAVEN NATIONAL LABORATORY.

16:00 3LP2B-04 / 15 **ELECTRO-THERMAL SIMULATION AND STABILITY OF TRAPPED FIELD IN MULTI-LAYER YBCO PLATES** *P. J. MASSON;* ADVANCED MAGNET LAB.

16:00 3LP2B-05 / 16 **PERFORMANCES OF HTS COILS IN HIGH MAGNETIC FIELDS AND VARIABLE TEMPERATURES** *F. DEBRAY1, X. CHAUD[1], F. HATANIAN[1], E. MOSSANG[1], P. TIXADOR[2], J. REY[3], H. KITAGUCHI[4];* [1]LABORATOIRE NATIONAL DES CHAMPS MAGNETIQUES INTENSES LNCMI, CNRS, FRANCE, [2]G[2]ELAB/INSTITUT NÉEL, CNRS/GRENOBLE-INP/UJF, FRANCE, [3]CEA-DSM-IRFU-SACM, FRANCE, [4]SUPERCONDUCTING MATERIALS CENTER, NATIONAL INSTITUTE FOR MATERIALS SCIENCE (NIMS), 1-2-1 SENGEN, TSUKUBA 305-0031, JAPAN.

16:00 3LP2B-06 **DEVELOPMENT OF YBA[2]CU[3]O7− Δ COATED CONDUCTOR COIL TECHNOLOGY FOR HEP HIGH FIELD MAGNETS** *E. BARZI, A. BARTALESI, V. LOMBARDO, M. LAMM, D. TURRIONI, A. V. ZLOBIN;* FERMILAB.

3LP2C: 259 HTS BASED MAGNETS II *REGENCY* XIAORONG WANG (LAWRENCE BERKELEY NATIONAL LABORATORY) AND DAN CHENG (LBNL)

16:00 3LP2C-01 / 17 **MAGNETIC FIELD MEASUREMENTS OF AN HTS RETROFIT SYNCHROTRON DIPOLE** *J. F. MURATORE[1], J. ESCALLIER[1], G. GANETIS[1], A. GHOSH[1], R. GUPTA[1], P. HE[1], A. JAIN[1], P. JOSHI[1], P. WANDERER[1], M. CHRISTIAN[2], M. FEE[2];* [1]BROOKHAVEN NATIONAL LABORATORY, [2]HTS-110 LTD, NEW ZEALAND.

16:00 3LP2C-02 / 18 **FABRICATION AND TEST OF HELICAL SOLENOID SHORT MODEL BASED ON YBCO TAPE** *M. YU[1], M. L. LOPES[1], V. LOMBARDO[1], M. A. TARTAGLIA[1], A. V. ZLOBIN[1], E. BARZI[1], N. ANDREEV[1], V. S. KASHIKHIN[1], M. J. LAMM[1], R. P. JOHNSON[2], M. TURENNE[2], S. KAHN[2];* [1]FERMILAB, [2]MUONS INC..

16:00 3LP2C-03 / 19 **EVALUATION OF PULSED-FIELD MAGNETIZATION ON A SUPERCONDUCTING BULK MAGNET SYSTEM USING A 13 K REFRIGERATOR** *K. YOKOYAMA[1], T. OKA[2], K. NOTO[3];* [1]ASHIKAGA INSTITUTE OF TECHNOLOGY, [2]NIIGATA UNIVERSITY, [3]IWATE UNIVERSITY.

16:00 3LP2C-04 / 20 **DESIGN OF A HTS MAGNET FOR THE STUDY OF RESONANT X-RAY SCATTERING** *Y. T. YU[1], S. D. CHEN[2], Z. W. HUANG[3], J. C. JAN[4], C. S. HWANG[4], I. G. CHEN[5], C. H. DU[6];* [1]GRADUATE PROGRAM FOR SCIENCE AND TECHNOLOGY OF ACCELERATOR LIGHT SOURCE, NATIONAL CHIAO-TUNG UNIVERSITY,TAIWAN, [2]DEPARTMENT OF ELECTORPHYSICS COLLEGE OF SCIENCE, NATIONAL CHIAO-TUNG UNIVERSITY,TAIWAN, [3]DEPARTMENT OF PHYSICS, NATIONAL TSING HUA UNIVERSITY HSINCHU 30043, TAIWAN, [4]NATIONAL SYNCHROTRON RADIATION RESEARCH CENTER, [5]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL CHENG KUNG UNIVERSITY,TAIWAN, [6]DEPARTMENT OF PHYSICS, TAMKANG UNIVERSITY,TAIWAN.

16:00 3LP2C-05 / 21 **EXPERIMENTAL TEST AND NUMERICAL ANALYSIS TO ESTIMATE FOR PERMISSIBLE TRANSPORT CURRENT CONSIDERING PROTECTION OF HIGH-TC SUPERCONDUCTING TAPES IN ADIABATIC CONDITION** *Y. KIM[1], D. PARK[2], K. CHANG[1], M. AHN[3], T. KO[1];* [1]YONSEI UNIVERSITY, [2]MESSACHUSETTS INSTITUTE OF TECHNOLOGY, [3]KUNSAN NATIONAL UNIVERSITY.

16:00 3LP2C-06 / 22 **SMES DESIGN USING HTS RIBBONS** *J. G. REY1, P. TIXADOR2, T. LACREVISSE1, M. BRUCHON1, J. GHELLER1, O. LOUCHARD1, O. LOUCHARD[1];* [1]CEA, [2]UJF GRENOBLE 1.

3MP2A: 217 FLUX PINNING AND DYNAMICS: GENERAL II *REGENCY* SUNG-HUN WEE (OAK RIDGE NATIONAL LABORATORY) AND ADRIAN CRISAN (UNIVERSITY OF BIRMINGHAM)

16:00 3MP2A-01 / 23 **AC SUSCEPTIBILITY STUDIES OF ANISOTROPY IN SM-123 SUPERCONDUCTORS** *N. SAKAMOTO, T. AKUNE;* KYUSHU-SANGYO UNIVERSITY.

16:00 3MP2A-02 / 24 **EFFECTS OF NEUTRON IRRADIATION ON AN ISOLATED GRAIN BOUNDARY IN MOD COATED CONDUCTORS** *T. D. WITHNELL[1], H. W. WEBER[1], M. WEIGAND[2], J. H. DURRELL[2], S. C. SPELLER[3], G. M. HUGHES[3], C. R. M. GROVENOR[3];* [1]ATOMINSTITUT, VIENNA UNIVERSITY OF TECHNOLOGY, [2]DEPT. MATERIAL SCIENCE, UNIVERSITY OF CAMBRIDGE, [3]DEPARTMENT OF MATERIALS, UNIVERSITY OF OXFORD.

16:00 3MP2A-03 / 25 WITHDRAWN

16:00 3MP2A-04 / 26 **OBSERVATION OF PERIODIC RESISTANCE PEAKS IN $BI^2SR^2CACU^2O8+D$ (BI-2212) STACKS** *S. KIM;* JEJU NATIONAL UNIVERSITY.

16:00 3MP2A-05 / 27 **THE MAGNETIC PROPERTIES OF SIC-MGB2 COMPOSITE SUPERCONDUCTOR** *K. SONG[1], S. KANG[1], R. KO[2], C. PARK[3];* [1]CHONBUK NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [3]SEOUL NATIONAL UNIVERSITY.

16:00 3MP2A-06 / 28 **MAGNETIC SHIELDING PROPERTIES OF MGB2 BULK SAMPLES OF DIFFERENT GEOMETRIES** *R. GERBALDO[1], G. GHIGO[1], L. GOZZELINO[1], F. LAVIANO[1], G. LOPARDO[1], B. MINETTI[1], A. AGOSTINO[2], E. MEZZETTI[1];* [1]DEPARTMENT OF PHYSICS, POLITECNICO DI TORINO, TORINO, ITALY, [2]DEPARTMENT OF GENERAL AND ORGANIC CHEMISTRY, UNIVERSITÀ DI TORINO, TORINO, ITALY.

16:00 3MP2A-07 / 29 **EFFECTS OF SINTERING TEMPERATURE ON SUPERCONDUCTING PROPERTIES OF MG^2SI DOPED MGB2 WIRES** *G. LIANG, H. FANG, .. NEELEY, J. HILL, J. BURK;* SAM HOUSTON STATE UNIVERSITY.

16:00 3MP2A-08 / 30 **OPTIMIZATION OF HEAT TREATMENT PROFILES APPLIED TO NANOMETRIC-SCALE NB^3SN WIRES WITH CU-SN ARTIFICIAL PINNING CENTERS** *D. RODRIGUES JR., L. B. S. DA SILVA, C. A. RODRIGUES, N. F. OLIVEIRA JR., C. B. NUNES;* ENGINEERING SCHOOL OF LORENA - UNIVERSITY OF SÃO PAULO.

16:00 3MP2A-09 / 31 **INVESTIGATION OF THE STRAIN EFFECTS ON THE SUPERCONDUCTING PROPERTIES OF NBTI WIRES IN HYDROSTATIC PRESSURES UP TO 1 GPA** *J. M. S. ORR, D. P. HAMPSHIRE;* DURHAM UNIVERSITY.

16:00 3MP2A-10 / 32 **SYNTHESIS AND CHARACTERISTICS OF MGB2 BULKS WITH DIFFERENT DENSITIES** *R. ZENG;* UNIVERSITY OF WOLLONGONG.

3MP2B: 216 HTS FLUX PINNING AND DYNAMICS II *REGENCY* KATHLEEN AMM (GE GLOBAL RESEARCH) AND JUDY WU (UNIV. OF KANSAS)

16:00 3MP2B-01 / 33 **ON THE STUDY OF THE MATCHING FIELDS IN PATTERNED YBCO THIN FILM** *A. K. GHOSH[1], E. HOLLMANN[2], R. WORDENWEBER[2];* [1]DEPARTMENT OF PHYSICS, JADAVPUR UNIVERSITY, KOLKATA 700032, INDIA, [2]INSTITUTE FOR BIO AND NANOSYSTEM II, FORSCHUNSZENTRUM JULICH, 52425 JUILCH, GERMANY.

16:00 3MP2B-02 / 34 **NEUTRON IRRADIATION EFFECTS OF HIGH TEMPERATURE SUPERCONDUCTORS** *T. AOKI[1], H. UEDA[1], A. ISHIYAMA[1], N. MIYAHARA[2], N. KASHIMA[3], S. NAGAYA[3];* [1]WASEDA UNIVERSITY, [2]NATIONAL INSTITUTE OF RADIOLOGICAL SCIENCES, [3]CHUBU ELECTRIC POWER COMPANY.

16:00 3MP2B-03 / 35 **ENHANCEMENT OF INTRAGRAIN CRITICAL CURRENT DENSITY IN BI-BASED SUPERCONDUCTOR BY SELF-ASSEMBLED TWO-DIMENSIONAL NANOPLANE DEFECTS** *H. TANAKA[1], H. YOSHIKAWA[2], C. TSURUTA[2], Y. MATSUI[2], S. KISHIDA[3];* [1]YONAGO NATIONAL COLLEGE OF TECHNOLOGY, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [3]TOTTORI UNIVERSITY.

16:00 3MP2B-04 / 36 **ENHANCED FLUX PINNING IN YBCO THIN FILMS USING NB-BASED DOUBLE PEROVSKITE** *G. ERCOLANO, M. BIANCHETTI, J. MACMANUS-DRISCOLL;* UNIVERSITY OF CAMBRIDGE.

16:00 3MP2B-05 / 37 **IN-FIELD CURRENT TRANSPORT PROPERTIES OF 600A-CLASS $GDBA^2CU^3O7-\Delta$ COATED CONDUCTOR UTILIZING IBAD-MGO TEMPLATE** *M. INOUE[1], R. MIYOSHI[1], R. FUGER[1], K. HIGASHIKAWA[1], T. KISS[1], S. AWAJI[2], M. NAMBA[2], K. WATANABE[2], Y. IIJIMA[3], T. SAITOH[3], T. IZUMI[4];* [1]KYUSHU UNIVERSITY, [2]TOHOKU UNIVERSITY, [3]FUJIKURA LTD., [4]SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC.

16:00 3MP2B-06 / 38 WITHDRAWN

16:00 3MP2B-07 / 39 **FIELD ANGLE DEPENDENCE OF CRITICAL CURRENT DENSITY IN YGDBCO COATED CONDUCTORS** *M. KIUCHI1, Y. TAKAHASHI[1], T. KOIDA[1], E. S. OTABE[1], T. MATSUSHITA[1], M. MIURA[2], T. IZUMI[2], Y. SHIOHARA[2], T. KATO[3];* [1]KYUSHU INSTITUTE OF TECHNOLOGY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC, [3]JAPAN FINE CERAMICS CENTER.

16:00 3MP2B-08 / 40 **LOW-TEMPERATURE PINNING BEHAVIOUR OF MOD YBCO COATED CONDUCTORS** *N. M. STRICKLAND, E. F. TALANTSEV, J. A. XIA, N. J. LONG, C. HOFFMANN;* INDUSTRIAL RESEARCH LTD.

16:00 3MP2B-09 / 41 **EFFECT OF OXYGEN DEPLETION ON THE PINNING STRENGTH OF YBA^{2}CU^{3}OX THIN FILMS WITH NANO-INCLUSIONS** *E. CIMPOIASU[1], J. FELDMANN[1], T. HAUGAN[2], C. VARANASI[3], G. LEVIN[2], P. BARNES[2];* [1]US NAVAL ACADEMY, ANNAPOLIS, MD, [2]AIR FORCE RESEARCH LABORATORY, WRIGHT-PATTERSON AFB, OH, [3]US ARMY RESEARCH OFFICE, RESEARCH TRIANGLE, NC.

3MP2C: 204 MGB2 WIRES II *REGENCY* RENE FLÜKIGER (UNIVERSITY OF GENEVA) AND SHI XUE DOU (UNIVERSITY OF WOOLONGONG)

16:00 3MP2C-01 / 42 **MICROSTRUCTURE OF MGB2 WIRES RESULTING BY THE INFILTRATION PROCESS** *L. SAGLIETTI, A. FIGINI ALBISETTI, E. PERINI, G. GIUNCHI;* EDISON SPA.

16:00 3MP2C-02 / 43 **COMPARISON ON EFFECTS OF B^{4}C, AL^{2}O3 AND SIC DOPING ON THE PERFORMANCE OF MGB2 CONDUCTORS** *J. VILJAMAA[1], P. KOVÁČ[1], M. KULICH[1], T. MELIŠEK[1], M. REISSNER[2];* [1]INSTITUTE OF ELECTRICAL ENGINEERING, SLOVAK ACADEMY OF SCIENCES, [2]INSTITUTE OF APPLIED AND TECHNICAL PHYSICS, VIENNA UNIVERSITY OF TECHNOLOGY.

16:00 3MP2C-03 / 44 **CHEMICAL STABILITY OF EX SITU MGB2 POWDER IN TUBE CONDUCTORS** *A. KARIO[1], R. NAST[2], W. HÄßLER[1], C. RODIG[1], M. SCHUBERT[1], B. RINGSDORF[2], S. I. SCHLACHTER[2], W. GOLDACKER[2], M. HERRMANN[1], B. HOLZAPFEL[1], L. SCHULTZ[1];* [1]INSTITUTE FOR METALLIC MATERIALS, IFW DRESDEN, [2]KARLSRUHE INSTITUTE OF TECHNOLOGY, INSTITUTE FOR TECHNICAL PHYSICS.

16:00 3MP2C-04 / 45 **IMPROVED CRITICAL CURRENT DENSITIES IN EX-SITU PROCESSED MGB2 TAPES SHEATHED WITH VARIOUS METALS USING POWDERS TREATED IN ORGANIC ACID SOLUTIONS** *H. FUJII, K. OZAWA, H. KUMAKURA;* NIMS.

16:00 3MP2C-05 / 46 **MICROSTRUCTURE IN HIGH-DENSITY MGB2 WIRES PREPARED BY AN INTERNAL MG DIFFUSION METHOD** *Y. SHIMADA[1], Y. KUBOTA[1], S. HATA[1], K. IKEDA[1], H. NAKASHIMA[1], A. MATSUMOTO[2], K. TOGANO[2], J. HUR[2], H. KUMAKURA[2];* [1]KYUSHU UNIVERSITY, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE.

16:00 3MP2C-06 / 47 **PINNING AND CONNECTIVITY MGB2 THIN FILMS AND PIT STRANDS** *M. A. SUSNER, M. D. SUMPTION, E. W. COLLINGS;* THE OHIO STATE UNIVERSITY.

16:00 3MP2C-07 / 48 **EFFECT OF GRAIN SIZE ON THE PROPERTIES OF MGB2 WIRES DOPED WITH CARBON** *H. FANG, B. WIGGINS, T. NEELEY, J. HILL, G. LIANG;* SAM HOUSTON STATE UNIVERSITY.

16:00 3MP2C-08 / 49 **IN-FIELD CRITICAL CURRENT DENSITY OF MGB2 WIRES DOPED WITH SIC AND RARE-EARTH OXIDE** *H. FANG, B. WIGGINS, T. NEELEY, J. HILL, G. LIANG;* SAM HOUSTON STATE UNIVERSITY.

16:00 3MP2C-09 / 50 **EFFECTS OF THE SIZE OF THE DOPED SIC NANOPARTICLES ON THE CRITICAL CURRENT DENSITY OF THE TI-SHEATHED MGB2 SUPERCONDUCTING WIRES** *G. LIANG, H. FANG, S. KEITH, C. HOYT;* SAM HOUSTON STATE UNIVERSITY.

3MP2D: 202 MGB2 WIRES III *REGENCY* MIKE SUMPTION (THE OHIO STATE UNIVERSITY) AND SONJA SCHLACHTER (KARLSRUHE INSTITUTE OF TECHNOLOGY)

16:00 3MP2D-01 / 51 **CABLING OPTIONS OF MGB2 FINE WIRES** *A. FIGINI ALBISETTI[1], L. SAGLIETTI[1], G. RIPAMONTI[1], E. BASSANI[2], A. DI ZENOBIO[3], S. TURTÙ[3], A. DELLA CORTE[3], G. GIUNCHI[1];* [1]EDISON S.P.A., [2]CNR-IENI - LECCO, [3]ENEA - FRASCATI.

16:00 3MP2D-02 / 52 **COMPARATIVE STUDY OF MGB2 WIRES MADE FROM DIFFERENT BORON POWDERS** *J. KIM[1], A. MATSUMOTO[2], S. CHOI[2], S. DOU[3], M. RINDFLESICH[4], M. TOMSIC[4], H. KUMAKURA[2];* [1]NATIONAL INSTITUTE FOR MATERIALS SCINECE, UNIVERSITY OF WOLLONGONG, [2]NATIONAL INSTITUTE FOR MATERIALS SCINECE, [3]UNIVERSITY OF WOLLONGONG, [4]HYPER TECH RESEARCH INCORPORATED.

16:00 3MP2D-03 / 53 **STUDY OF THE MGB2 GRAIN SIZE ROLE IN EX-SITU MULTIFILAMENTARY WIRES WITH THIN FILAMENTS** *A. MALAGOLI, V. BRACCINI, C. BERNINI, M. VIGNOLO, G. ROMANO, M. PUTTI, C. FERDEGHINI;* CNR-SPIN.

16:00 3MP2D-04 / 54 **COMPARISON OF MGB2 WIRES PRODUCTION TECHNOLOGIES AND INFLUENCE OF DIFFERENT PRODUCTION CONDITIONS** *O. TKACHENKO[1], A. ZALESKI[1], A. J. MORAWSKI[2], T. CETNER[2], D. GAJDA[3], M. RINDFLEISCH[4], M. TOMSIC[4], M. CHUDY[5], M. EISTERER[5], H. WEBER[5];* [1]INSTITUTE OF LOW TEMPERATURE AND STRUCTURE RESEARCH PAS, [2]INSTITUT OF HIGH PRESSURE PHYSICS PAS, [3]INTERNATIONAL LABORATORY OF HIGH MAGNETIC FIELDS AND LOW TEMPERATURE, [4]HYPERTECH RESEARCH, INC., [5]ATOMINSTITUTE, TU WIEN.

16:00 3MP2D-05 / 55 **JC ENHANCEMENT OF THE CU ADDITION MGB2 MULTIFILAMENTARY WIRES SYNTHESIZED WITH LOW TEMPERATURE DIFFUSION PROCESS FOR FUSION APPLICATIONS** *Y. HISHINUMA[1], A. KIKUCHI[2], T. TAKEUCHI[2], S. YAMADA[1], A. SAGARA[1];* [1]NATIONAL INSTITUTE FOR FUSION SCIENCE, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE.

16:00 3MP2D-06 / 56 **APPLICATIONS OF PRESSURE AND TEMPERATURE TREATMENT TO INCREASE CRITICAL CURRENT OF THE MGB2 WIRES AND TAPES AT HIGH MAGNETIC FIELDS** *A. J. MORAWSKI[1], T. CETNER[1], M. RINDFLEISCH[2], M. TOMSIC[2], A. ZALESKI[3], D. GAJDA[4], A. KARIO[5], O. TKACHENKO[3];* [1]INSTITUT OF HIGH PRESSURE PHYSICS PAS, [2]HYPERTECH RESEARCH, INC., [3]INSTITUTE OF LOW TEMPERATURE AND STRUCTURE RESEARCH PAS, [4]INTERNATIONAL LABORATORY OF HIGH MAGNETIC FIELDS AND LOW TEMPERATURE, [5]LEIBNIZ INSTITUTE FOR SOLID STATE AND MATERIALS RESEARCH.

16:00 3MP2D-07 / 57 **ENHANCEMENT OF THE CRITICAL CURRENT DENSITY IN MGB2 SUPERCONDUCTORS FABRICATED BY CUBIC ANVIL HOT PRESSING** *K. KISHIMOTO, S. CHONO, O. MIURA;* TOKYO METROPLITAN UNIVERSITY.

16:00 3MP2D-08 / 58 **EFFECT OF THE POWDER STRAIN STATE ON THE MECHANICAL PROPERTIES OF MGB2 TAPES** *M. MALACHEVSKY[1], A. SERQUIS[1], G. SERRANO[1], J. MORALES ARIAS[1], G. GIUNCHI[2], E. PERINI[2];* [1]CENTRO ATOMICO BARILOCHE AND INSTITUTO BALSEIRO, 8400 BARILOCHE, ARGENTINA, [2]EDISON SPA, R&D DIVISION, 20121 MILAN, ITALY.

3MP2E: 205 A15 MECHANICAL PROPERTIES *AMBASSADOR* ARNO GODEKE (LAWRENCE BERKELEY NATIONAL LABORATORY) AND NAJIB CHEGGOUR (NIST)

16:00 3MP2E-01 / 61 **PERFORMANCE CHARACTERIZATION OF RUSSIAN ITER Nb_3Sn STRANDS** *V. PANTSYRNYY[1], A. VOROBYEVA[1], R. VASILYEV[1], N. KOZLENKOVA[1], A. NIJHUIS[2];* [1]BOCHVAR INSTITUTE OF INORGANIC MATERIALS (VNIINM), MOSCOW, RUSSIA, [2]UNIVERSITY OF TWENTE, ENSCHEDE, THE NETHERLANDS.

16:00 3MP2E-02 / 62 **3D MODEL OF Nb_3Sn WIRE AND STRAIN-BASED EXPLANATION OF THE SUPERCONDUCTING BEHAVIOR** *J. CHEN, K. HAN;* NATIONAL HIGH MAGNETIC FIELD LABORATORY.

16:00 3MP2E-03 / 63 **MICROSTRUCTURE AND MECHANICAL CHARACTERISTIC OF INDUSTRIAL TIN BRONZE FOR Nb_3Sn SUPERCONDUCTING WIRES** *A. KIKUCHI[1], H. TANIGUCHI[2], Y. YOSHIDA[1], S. SAEKI[2], Y. MONJU[2], Y. MIZUTA[2], T. MIZUTA[2];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]OSAKA ALLOYING WORKS CO. LTD..

16:00 3MP2E-04 / 64 **ELASTIC STRAIN AND CRITICAL CURRENT DEGRADATION UNDER TRANSVERSE COMPRESSION IN DIFFERENT Nb_3Sn STRAND TYPES** *F. BUTA[1], C. SCHEUERLEIN[2], M. DI MICHIEL[3], B. SEEBER[1], A. FERREIRA[1], R. FLUKIGER[1];* [1]UNIVERSITY OF GENEVA, GENEVA, SWITZERLAND, [2]EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN), GENEVA, SWITZERLAND, [3]EUROPEAN SYNCHROTRON RADIATION FACILITY (ESRF), GRENOBLE, FRANCE.

16:00 3MP2E-05 / 65 **THREE-DIMENSIONAL STRAIN MODEL FOR VARIOUS KINDS OF Nb_3Sn WIRES** *H. OGURO[1], S. AWAJI[2], K. WATANABE[2], G. NISHIJIMA[2], T. ISHIGAKI[1];* [1]IBARAKI UNIVERSITY, [2]TOHOKU UNIVERSITY.

16:00 3MP2E-06 / 66 **CRITICAL CURRENT PARAMETERIZATION OF Nb_3Sn STRAND FOR ITER TF MAGNETS** *S. PARK, C. LEE, H. CHOI, W. PARK, S. OH, K. KIM;* NATIONAL FUSION RESEARCH INSTITUTE.

16:00 3MP2E-07 / 67 WITHDRAWN

16:00 3MP2E-08 / 68 **FUNDAMENTAL EVALUATIONS OF TRANSVERSE LOAD EFFECTS OF Nb_3Sn STRANDS USING FINITE ELEMENT ANALYSIS.** *T. WANG[1], L.*

CHIESA[1], M. TAKAYASU[2]; [1]TUFTS UNIVERSITY, [2]MIT, PLASMA SCIENCE AND FUSION CENTER.

16:00 3MP2E-09 / 69 WITHDRAWN

3MP2F: 206 HTS MECHANICAL PROPERTIES *AMBASSADOR* DANKO VAN DER LAAN (NIST) AND MARC DHALLÉ (UNIV. TWENTE)

16:00 3MP2F-01 / 70 **MECHANICAL PROPERTIES OF DY123 LOW POROSITY BULK SUPERCONDUCTOR AT LIQUID NITROGEN TEMPERATURE** *A. MURAKAMI[1], K. OTAKA[1], T. MIURA[1], A. IWAMOTO[2];* [1]FACULTY OF SCIENCE AND TECHNOLOGY, HIROSAKI UNIVERSITY, [2]NATIONAL INSTITUTE FOR FUSION SCIENCE.

16:00 3MP2F-02 / 71 **EXPERIMENTAL STUDY OF TWISTING HTS TAPES** *J. PIENKOS, B. FITZPATRICK, J. KEPHART, M. PYRYT, P. FERRARA;* NAVAL SURFACE WARFARE CENTER - CARDEROCK DIVISION.

16:00 3MP2F-03 / 72 **TRANSPORT PROPERTY AND BENDING STRAIN SENSITIVITY OF HTS TAPES DUE TO PUMPING AND PRESSURIZATION OF LIQUID NITROGEN** *H. SHIN, M. J. DEDICATORIA;* ANDONG NATIONAL UNIVERSITY.

16:00 3MP2F-04 / 73 **STUDY ON NANO-MECHANICAL PROPERTIES OF HEAT-TREATED YBCO COATED CONDUCTORS (CCS) USING NANO-INDENTATION TECHNIQUE** *Y. CHOI[1], J. LEE[1], H. KIM[1], D. YANG[1], C. LEE[2], S. KIM[2], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]KOOKMIN UNIVERSITY, KOREA.

16:00 3MP2F-05 / 74 **TENSILE TESTS OF BI-2212 AG ALLOY CLAD ROUND HIGH TC SUPERCONDUCTING WIRES** *R. P. WALSH[1], U. P. TROCIEWITZ[2], H. W. WEIJERS[1], D. M. MCRAE[1], D. MYERS[2], Y. VIOUCHKOV[1];* [1]NHMFL/FSU, [2]ASC/NHMFL.

3MP2G: 203 MECHANICAL PROPERTIES OF NON-SC COMPONENTS *AMBASSADOR* RODGER BOSSERT (FERMI NATIONAL ACCELERATOR LABORATORY) AND ROBERT WALSH (NHMFL/FSU)

16:00 3MP2G-01 / 75 **RESIDUAL STRESS ANALYSIS OF INSULATION COATINGS FOR MAGNET TECHNOLOGIES** *D. GUNEY;* YILDIZ TECHNICAL UNIVERSITY.

16:00 3MP2G-02 / 76 **MECHANICAL PROPERTIES OF NON-SUPERCONDUCTING COMPONENTS IN YBCO AND NB^3SN COMPOSITES** *K. HAN;* NATIONAL HIGH MAGNETIC FIELD LABORATORY.

16:00 3MP2G-03 / 77 **NANOCOMPOSITE INSULATION FOR HTS DEVICES** *J. K. WALSH[1], P. E. FABIAN[1], M. W. HOOKER[1], M. LIZOTTE[1], E. TUNCER[2], I. SAUERS[2];* [1]COMPOSITE TECHNOLOGY DEVELOPMENT, [2]OAK RIDGE NATIONAL LABORATORY.

16:00 3MP2G-04 / 78 **DESIGN AND TESTING OF CANDIDATE ITER TF COIL INSULATIONS** *M. HOOKER, J. K. WALSH, N. A. MUNSHI;* CTD.

16:00 3MP2G-05 / 79 **EFFECT OF SOLDERING DEFECTS ON STRENGTH OF HTS LAP JOINTS** *R. HOLTZ;* NAVAL RESEARCH LABORATORY.

16:00 3MP2G-06 / 80 **MEASUREMENT OF 77K STRESS-STRAIN RESPONSE OF EPOXY-IMPREGNATED HTS STACKS** *R. HOLTZ, P. PAO;* NAVAL RESEARCH LABORATORY.

19:30 POSTER SESSIONS

3EP3A: 302 MICROWAVE II *EXHIBIT HALL* TAKASHI NOGUCHI (NATIONAL ASTRONOMICAL OBSERVATORY OF JAPAN) AND HAMED MAJEDI (INSTITUTE FOR QUANTUM COMPUTING, UNIVERSITY OF WATERLOO)

19:30 3EP3A-01 / 81 **EXAMINATION FOR IMPROVEMENT OF POWER HANDLING CAPABILITY OF SUPERCONDUCTING FILTERS USING MULTI-LAYERED MICROSTRIP LINE RESONATORS** *Y. ENDO, S. ONO, M. UNO, T. SAITO, A. SAITO, K. NAKAJIMA, S. OHSHIMA;* YAMAGATA UNIVERSITY.

19:30 3EP3A-02 / 82 **DEVELOPMENT OF TRIMMING TECHNIQUE FOR SUPERCONDUCTING TUNABLE FILTERS** *T. SAITO, S. ONO, M. UNO, Y. ENDO, A. SAITO, K. NAKAJIMA, S. OHSHIMA;* YAMAGATA UNIVERSITY.

19:30 3EP3A-03 / 83 **RELIABILITY OF SUSPENDED BRIDGES ON SUPERCONDUCTING MICROSTRIP FILTERS USING MEMS SWITCHES** *J. VARGAS[1], Y. HIJAZI[1], A. BOGOZI[2], J. NOEL[3], Y. VLASOV[3], G. LARKINS[3];* [1]UNIVERSIDAD DEL TURABO, [2]WRIGHT-PATTERSON AIR FORCE BASE, [3]FIU.

19:30 3EP3A-04 / 84 **NONLINEAR PHENOMENA IN SUPERCONDUCTING YBACUO MICROWAVE RESONATORS** *G. BACHAR, O. SHTEMPLUCK, E. BUKS;* TECHNION - IIT.

19:30 3EP3A-05 / 85 **EIGHT-WAY MATCHED SUPERCONDUCTING AC POWER DISTRIBUTION** *O. T. OBERG;* UNIVERSITY OF MARYLAND COLLEGE PARK.

19:30 3EP3A-06 / 86 **AN L-BAND HTS DUPLEXER FOR COMMUNICATION APPLICATIONS** *Y. HE, J. WANG, Q. ZHANG, Y. BIAN, C. LI, X. ZHANG, H. LI;* INSTITTUTE OF PHYSICS, CHINESE ACADEMY OF SCIEMCES.

19:30 3EP3A-07 / 87 **THE USE OF LOWPASS FILTERS AS IMPEDANCE INVERTERS FOR HIGHLY MINIATURIZED BANDSTOP FILTER DESIGNS** *P. D. LAFORGE[1], R. R. MANSOUR[2], M. YU[3];* [1]UNIVERSITY OF REGINA, [2]UNIVERSITY OF WATERLOO, [3]COM DEV.

19:30 3EP3A-08 / 88 **A MINIATURIZED HTS MICROWAVE RECEIVER FRONT-END SUBSYSTEM FOR RADAR AND COMMUNICATION APPLICATIONS** *Y. HE, Y. BIAN, J. GUO, C. LI, H. LI, Q. ZHANG, X. ZHANG;* INSTITTUTE OF PHYSICS, CHINESE ACADEMY OF SCIEMCES.

3EP3B: 306 MIXED SIGNAL CIRCUITS II *EXHIBIT HALL* PAUL DRESSELHAUS (NIST) AND ALAN KADIN (HYPRES, INC.)

19:30 3EP3B-01 / 89 **EXPERIMENTAL ANALYSIS OF THE BIAS CURRENT DEPENDENT GRAY ZONES OF QUASI-ONE-JUNCTION SQUIDS** *T. ORTLEPP[1], S. MIYAJIMA[2], A. BOZBEY[3], A. FUJIMAKI[2];* [1]ILMENAU UNIVERSITY OF TECHNOLOGY, [2]NAGOYA UNIVERSITY, [3]TOBB ECONOMY AND TECHNOLOGY UNIVERSITY ANKARA.

19:30 3EP3B-02 / 90 **GRAY ZONE MEASUREMENTS OF JOSEPHSON JUNCTIONS COMPARATOR CELLS WITH DIFFERENT TOPOLOGIES** *B. EBERT[1], O. MIELKE[2], J. KUNERT[2], R. STOTZ[2], T. ORTLEPP[1];* [1]ILMENAU UNIVERSITY OF TECHNOLOGY, [2]INSTITUTE FOR PHOTONIC TECHNOLOGY.

19:30 3EP3B-03 / 91 **CONCEPT OF SUPERCONDUCTING PIPE-LINE A/D CONVERTER** *J. NGANKIO NJILA1, P. FEBVRE2, D. CRETE1, J. MAGE1, B. MARCILHAC[1];* [1]THALES-TRT FRANCE, [2]UNIVERSITÉ DE SAVOIE CHAMBÉRY-ANNECY.

19:30 3EP3B-04 / 92 **SUPERCONDUCTING NEURAL NETWORK SOLVING A COMBINATORIAL OPTIMIZATION PROBLEM** *T. ONOMI, Y. MAENAMI, K. NAKAJIMA;* RESEARCH INSTITUTE OF ELECTRICAL COMMUNICATION, TOHOKU UNIVERSITY.

19:30 3EP3B-05 / 93 **ANALYSIS OF SUPERCONDUCTING ANALOG-TO-DIGITAL CONVERTERS FOR IMPROVED RESOLUTION AND LARGE DYNAMIC RANGE** *P. FEBVRE;* UNIVERSITY OF SAVOIE.

19:30 3EP3B-06 / 94 **LINEARITY OF A DIGITAL SQUID MAGNETOMETER** *I. HAVERKAMP[1], T. ORTLEPP[1], O. MIELKE[2], J. KUNERT[2], R. STOLZ[2], H. G. MEYER[2], H. TOEPFER[1];* [1]ILMENAU UNIVERSITY OF TECHNOLOGY, [2]INSTITUTE OF PHOTONIC TECHNOLOGY.

19:30 3EP3B-07 / 95 **PERFORMANCE ANALYSIS OF A SUPERCONDUCTING ANALOG-TO-DIGITAL CONVERTER BASED ON HIGH LEVEL CIRCUIT DESCRIPTION** *T. HADDAD, T. ORTLEPP, H. TOEPFER;* ILMENAU UNIVERSITY OF TECHNOLOGY.

19:30 3EP3B-08 / 96 **PHYSICAL SENSITIVITY OF SUPERCONDUCTOR ADCS** *V. K. SEMENOV;* STONY BROOK UNIVERSITY.

3EP3C: 325 NANO SQUID AND SQUID MICROSCOPY *EXHIBIT HALL* PER MAGNELIND (LOS ALAMOS NATIONAL LABORATORY) AND AKIRA TSUKAMOTO (CSIRO)

19:30 3EP3C-01 / 97 **NOISE PERFORMANCE OF NIOBIUM NANO-SQUIDS IN APPLIED MAGNETIC FIELDS** *E. J. ROMANS[1], S. ROZHKO[1], L. YOUNG[1], L. HAO[2], D. C. COX[2], J. C. GALLOP[2];* [1]UNIVERSITY COLLEGE LONDON, [2]NATIONAL PHYSICAL LABORATORY.

19:30 3EP3C-02 / 98 **READOUT OF NANOSQUID SENSORS USING A SQUID AMPLIFIER** *F. RUEDE[1], C. AßMANN[1], J. BEYER[1], D. DRUNG[1], J. GALLOP[2], L. HAO[2], O. KAZAKOVA[2], T. SCHURIG[1];* [1]PTB CRYOSENSORS, BERLIN, GERMANY, [2]NATIONAL PHYSICAL LABORATORY, TEDDINGTON, UK.

19:30 3EP3C-03 / 99 **A CRYO-COOLED SCANNING SQUID MICROSCOPE FOR IMAGING HIGH-FREQUENCY MAGNETIC FIELDS** *C. P. VLAHACOS[1], J. MATTHEWS[2], F. C. WELLSTOOD[3];* [1]NASA GODDARD SPACE FLIGHT CENTER, CRYOGENICS AND FLUIDS BRANCH, CODE 552, GREENBELT, MD 20771, [2]PHYSICAL OPTICS CORPORATION, 20600 GRAMERCY PLACE, TORRANCE, CA 90501-1821,

[3]CENTER FOR NANOPHYSICS AND ADVANCED MATERIALS, DEPARTMENT OF PHYSICS, UNIVERSITY OF MARYLAND, COLLEGE PARK, MD 20742.

19:30 3EP3C-04 / 100 **OBSERVATION OF POLYCRYSTALLINE SOLAR CELL USING A LASER-SQUID MICROSCOPE** *Y. NAKATANI[1], K. OTANI[1], X. Y. KONG[1], T. MAKI[1], T. HAYASHI[2], H. ITOZAKI[1];* [1]OSAKA UNIVERSITY, [2]SENDAI NATIONAL COLLEGE OF TECHNOLOGY.

19:30 3EP3C-05 / 101 **EVALUATION OF A STM-SQUID PROBE MICROSCOPE** *N. WATANABE[1], T. HAYASHI[2], M. TACHIKI[1], D. HE[1], H. ITOZAKI[3];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]SENDAI NATIONAL COLLEGE OF TECHNOLOGY, [3]OSAKA UNIVERSITY.

3EP3D: 317 NOVEL JUNCTIONS *EXHIBIT HALL* NATHAN NEWMAN (ARIZONA STATE UNIVERSITY) AND ALAN KLEINSASSER (JPL)

19:30 3EP3D-01 / 102 **ANALYSIS OF POSSIBLE QUANTUM METASTABLE STATES IN BALLISTIC GRAPHENE-BASED JOSEPHSON JUNCTIONS** *J. G. LAMBERT, S. CARABELLO, Z. THRAILKILL, R. C. RAMOS;* DREXEL UNIVERSITY.

19:30 3EP3D-02 / 103 **PROPERTIES INVESTIGATION OF GRAPHENE-BASED JOSEPHSON JUNCTIONS** *C. PORTESI, E. MONTICONE, M. BRUNA, S. BORINI, E. TARALLI, M. RAJTERI;* INRIM.

19:30 3EP3D-03 / 104 **RESONANCE EFFECTS ON COHERENT FLUX-FLOW OF BI-2212 INTRINSIC JOSEPHSON JUNCTIONS** *K. NAKAJIMA, M. ISOBE, T. CHIBA, H. YAMADA;* YAMAGATA UNIVERSITY.

19:30 3EP3D-04 / 105 **CONTROL OF CRITICAL CURRENT OF INTRINSIC JOSEPHSON JUNCTIONS DUE TO SPIN INJECTION** *A. IRIE, N. ARAKAWA, G. OYA;* UTSUNOMIYA UNIVERSITY.

19:30 3EP3D-05 / 106 **RAMP-TYPE JUNCTIONS OF UNDERDOPED AND OVERDOPED LA_{2-X}SR_{X}CUO_{4}** *G. -. KOREN, T. KIRZHNER;* TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY.

19:30 3EP3D-06 / 107 **ENHANCED PROPERTIES OF INTRINSICALLY SHUNTED NB/AL-ALOX-NB JOSEPHSON JUNCTIONS** *V. LACQUANITI, N. DE LEO, M. FRETTO, A. SOSSO, D. ANDREONE, M. BELOGOLOVSKII;* INRIM.

19:30 3EP3D-07 / 108 **JOSEPHSON JUNCTIONS WITHOUT PAIRS?** *A. M. KADIN;* HYPRES, INC..

19:30 3EP3D-08 / 109 **PI JOSEPHSON JUNCTIONS WITH MAGNETIC MULTILAYER BARRIERS** *J. W. A. ROBINSON[1], G. B. HALÁSZ[1], A. I. BUZDIN[2], M. G. BLAMIRE[1];* [1]DEPARTMENT OF MATERIAL SCIENCE, UNIVERSITY OF CAMBRIDGE, PEMBROKE STREET, CAMBRIDGE CB2 [3]QZ, UK, [2]INSTITUT UNIVERSITAIRE DE FRANCE, PARIS AND CPMOH, UMR 5798, UNIVERSITY BORDEAUX I, 33405 TALENCE, FRANCE.

3EP3E: 299 QUANTUM COMPUTING II *EXHIBIT HALL* DAVID PAPPAS (NIST) AND MARK JOHNSON (D-WAVE SYSTEMS, INC.)

19:30 3EP3E-01 / 110 **METASTABLE SUPERCONDUCTING QUBIT** *A. J. KERMAN;* MIT LINCOLN LABORATORY.

19:30 3EP3E-02 / 111 **EVOLUTION OF TWO-LEVEL QUANTUM SYSTEM UNDER DETERMINED EXPOSURE** *N. V. KLENOV, A. V. SHARAFIEV, S. V. BAKURSKY, V. K. KORNEV, N. G. PUGACH;* MOSCOW STATE UNIVERSITY.

19:30 3EP3E-03 / 112 **DEUTERATED ALUMINUM OXIDE FOR SUPERCONDUCTING CIRCUITS** *K. OSBORN[1], M. KHALIL[1], M. STOUTIMORE[1], S. GLADCHENKO[1], G. RUBLOFF[2], C. MUSGRAVE[3], F. WELLSTOOD[2], C. LOBB[2];* [1]LABORATORY FOR PHYSICAL SCIENCES, [2]UNIVERSITY OF MARYLAND, COLLEGE PARK, [3]UNIVERISTY OF COLORADO, BOULDER.

19:30 3EP3E-04 / 113 **BARRIER DEFECT ANALYSIS USING JOSEPHSON JUNCTION RESONATORS** *M. STOUTIMORE[1], M. KHALIL[1], C. LOBB[1], F. WELLSTOOD[1], K. OSBORN[2];* [1]UNIVERSITY OF MARYLAND, COLLEGE PARK, [2]LABORATORY FOR PHYSICAL SCIENCES.

19:30 3EP3E-05 / 114 **FIRST ORDER PHASE TRANSITION AND CIRCUIT QUANTUM ELECTRODYNAMICS OF A QUANTUM ISING MODEL IN A SUPERCONDUCTING CIRCUIT** *L. TIAN;* UNIVERSITY OF CALIFORNIA, MERCED.

19:30 3EP3E-06 / 115 **LOCALIZATION OF METAL-INDUCED GAP STATES AT THE METAL-INSULATOR INTERFACE: ORIGIN OF FLUX NOISE IN SQUIDS AND SUPERCONDUCTING QUBITS** *S. CHOI, D. LEE, J. CLARKE, S. G. LOUIE;* THE UNIVERSITY OF CALIFORNIA.

19:30 3EP3E-07 / 116 **MICROWAVE DISPERSION AND RESONANT INTERACTION IN A TRAVELING-WAVE JOSEPHSON PARAMETRIC AMPLIFIER** *H. R. MOHEBBI, A. H. MAJEDI;* UNIVERSITY OF WATERLOO, INSTITUTE FOR QUANTUM COMPUTING.

3EP3F: 326 SQUID NDE AND OTHER SQUID APPLICATIONS *EXHIBIT HALL* RONNY STOLZ (IPHT JENA) AND FREDERICK WELLSTOOD (UNIVERSITY OF MARYLAND)

19:30 3EP3F-01 / 117 **TWO CHANNEL HTS SQUID GRADIOMETER SYSTEM FOR DETECTION OF METALLIC CONTAMINANTS IN A LITHIUM ION BATTERY** *S. TANAKA[1], T. AKAI[1], M. TAKAMOTO[1], Y. KITAMURA[1], Y. HATSUKADE[1], T. OHTANI[2], S. SUZUKI[1];* [1]TOYOHASHI UNIVERSITY OF TECHNOLOGY, [2]ADVANCE FOOD TECHNOLOGY CO., LTD..

19:30 3EP3F-02 / 118 **NON-DESTRUCTIVE EVALUATION OF DEEP-LYING DEFECTS IN MULTILAYER CONDUCTORS USING HTS SQUID GRADIOMETER** *J. KAWANO, T. HATO, S. ADACHI, Y. OSHIKUBO, A. TSUKAMOTO, K. TANABE;* INTERNATIONAL SUPERCONDUCTIVITY TECHNOLOGY CENTER.

19:30 3EP3F-03 / 119 **HTS-RF-SQUID MICROSCOPE FOR METALLIC CONTAMINANT DETECTION** *M. TAKEMOTO, T. AKAI, Y. KITAMURA, Y. HATSUKADE, S. TANAKA;* TOYOHASHI UNIVERSITY OF TECHNOLOGY.

19:30 3EP3F-04 / 120 **MODEL BASED INVERSE SOLUTION OF SQUID NDE USING A NEW NUMERICAL MODEL FOR THE EXTRACTION OF FLAW-INDUCED CURRENT INTERACTIONS** *F. SARRESHTEDARI, S. RAZMKHAH, N. HOSSEINI, K. MEHRANY, H. KOKABI, J. SCHUBERT, M. BANZET, M. FARDMANESH;* SHARIF UNIVERSITY OF TECHNOLOGY.

19:30 3EP3F-05 / 121 **SQUID SUSCEPTOMETER FOR SMALL-SCALE SAMPLES AT LOW TEMPERATURES** *A. KIRSTE, M. PETERS, T. SCHURIG;* PHYSIKALISCH-TECHNISCHE BUNDESANSTALT (PTB).

19:30 3EP3F-06 / 122 **PHASE-DIFFUSION IN SWITCHING PROCESS OF UNDERDAMPED JOSEPHSON JUNCTIONS** *X. TAN, C. PAN, Y. YU;* NANJING UNIVERSITY.

19:30 3EP3F-07 / 123 **ROTATING AXIAL HTS SQUID GRADIOMETER WITH AN ON-AXIS SQUID READ-OUT SCHEME** *K. E. LESLIE, K. BLAY, R. A. BINKS, P. CUSACK, J. DU;* CSIRO.

19:30 3EP3F-08 / 124 **IMAGING OF ELECTRIC CURRENTS BY ULTRASONOGRAPHY AND SQUID MAGNETOMETRY** *D. OYAMA[1], M. HIGUCHI[1], Y. ADACHI[1], J. KAWAI[1], G. UEHARA[1], H. KADO[1], K. KOBAYASHI[2];* [1]KANAZAWA INSTITUTE OF TECHNOLOGY, [2]IWATE UNIVERSITY.

19:30 3EP3F-09 / 125 **A SIMPLE TEMPERATURE SENSOR WITH NANOKELVIN SENSITIVITY FROM 250-1000MK** *W. A. HOLMES, K. I. PENANEN;* JET PROPULSION LABORATORY/CALTECH.

19:30 3EP3F-10 / 126 **A NON-DESTRUCTIVE BEAM MONITORING SYSTEM BASED ON AN LTS-SQUID** *R. GEITHNER[1], R. NEUBERT[1], W. VODEL[1], M. SCHWICKERT[2], H. REEG[2], R. VON HAHN[3], P. SEIDEL[1];* [1]FRIEDRICH-SCHILLER-UNIVERSITÄT JENA, GERMANY, [2]GESELLSCHAFT FÜR SCHWERIONENFORSCHUNG (GSI) DARMSTADT, GERMANY, [3]MAX-PLANCK-INSTITUT FÜR KERNPHYSIK HEIDELBERG, GERMANY.

3EP3G: 308 SYSTEM INTEGRATION AND PACKAGING *EXHIBIT HALL* ROBERT SCHWALL (NIST) AND IGOR VERNIK (RAYTHEON BBN TECHNOLOGIES)

19:30 3EP3G-01 / 127 **MAGNETIC FIELD PROVISION FOR MILLIKELVIN EXPERIMENTAL ENVIRONMENTS INCORPORATING AN ULTRA-HIGH VACUUM CAPABILITY** *A. TWIN, H. AGRAWAL, G. BATEY, J. BURGOYNE, J. BROWN, M. CUTHBERT, T. FOSTER, H. JONES, S. KINGSLEY, C. KING, A. J. MATTHEWS, R. MORRIS, G. TELEBERG, K. TIMMS;* OXFORD INSTRUMENTS NANOSCIENCE.

19:30 3EP3G-02 / 128 **YBCO CURRENT LEADS IN A CRYOCOOLED SUPERCONDUCTING ELECTRONICS SYSTEM** *R. J. WEBBER, J. DELMAS, V. DOTSENKO;* HYPRES, INC..

19:30 3EP3G-03 / 129 **CRYOGENIC TEST-BED APPLIED TO 9K NBN RSFQ DEVICES OPERATION** *M. AURINO[1], S. BOUAT[1], E. BAGGETTA[1], V. MICHAL[1], D. RENAUD[2], C.*

BORNIER[3], M. LAINE[3], J. VILLEGIER[1]; [1]CEA-INAC, [2]CEA-LETI, [3]ID3 SEMICONDUCTORS.

19:30 3EP3G-04 / 130 **COMPARISON OF RANGE CALCULATIONS FOR GSM SIGNALS USING CRYOGENICALLY COOLED RECEIVER SYSTEM MODELS AGAINST LINE-OF-SIGHT PROPAGATION CONSTRAINTS** *A. M. LEESE DE ESCOBAR[1], M. DE ANDRADE[1], T. GATHMAN[1], D. GUPTA[2];* [1]SPAWAR SYSTEMS CENTER PACIFIC, [2]HYPRES, INC..

19:30 3EP3G-05 / 131 **ADVANCES IN CRYOPACKAGING OF SUPERCONDUCTOR DIGITAL SYSTEMS** *V. DOTSENKO, J. DELMAS, R. WEBBER, J. TANG, S. GOSWAMI, D. GUPTA;* HYPRES, INC..

19:30 3EP3G-06 / 132 **ADVANCES IN LARGE-SCALE HIGH-FREQUENCY 'PULSE-TUBE' COOLERS FOR HTS APPLICATIONS** *P. SPOOR;* CFIC-QDRIVE.

3EP3H: 312 TES CALORIMETERS AND TES INSTRUMENTS *EXHIBIT HALL* GENE HILTON (NIST) AND LUCIANO GOTTARDI (SRON NATIONAL INSTITUTE FOR SPACE RESEARCH)

19:30 3EP3H-01 / 133 **FABRICATION OF HIGH PERFORMANCE TRANSITION EDGE SENSOR MICROCALORIMETER KILOPIXEL ARRAYS** *J. A. CHERVENAK[1], C. N. BAILEY[1], S. R. BANDLER[2], R. P. BREKOSKY[1], A. D. BROWN[1], M. E. ECKART[1], F. M. FINKBEINER[3], R. L. KELLY[1], C. A. KILBOURNE[1], F. S. PORTER[1], J. E. SADLIER[1], S. J. SMITH[2];* [1]NASA GSFC, [2]NASA GSFC AND UNIVERSITY OF MARYLAND, [3]NASA GSFC AND WYLE INFORMATION SYSTEMS.

19:30 3EP3H-02 / 134 **TI/AU TRANSITION-EDGE SENSORS COUPLED TO SINGLE MODE OPTICAL FIBERS ALIGNED BY SI V-GROOVE** *L. LOLLI, E. TARALLI, C. PORTESI, M. RAJTERI, E. MONTICONE;* INRIM.

19:30 3EP3H-03 / 135 **INTEGRATION OF THE NANO-HEB DETECTOR ARRAY WITH MSQUIDS** *B. KARASIK, P. DAY, J. KAWAMURA, S. MONACOS, B. BUMBLE, H. LEDUC;* JET PROPULSION LABORATORY/CALTECH.

19:30 3EP3H-04 / 136 **DEVELOPMENT OF LIGHT DETECTOR USING SUPERCONDUCTING THERMOMETER FOR RARE EVENT SEARCH IN SCINTILLATING CAMOO4 CRYSTAL** *S. LEE[1], Y. KIM[2], M. LEE[2], K. LEE[2], Y. JANG[2], W. YOON[2], I. KIM[2], M. KIM[2], J. LEE[2], S. KIM[1], S. MYUNG[1], S. KIM[1], J. CHOI[1], J. LEE[1], H. KIM[3], J. SO[3], Y. KIM[4], J. LEE[4], W. KANG[4];* [1]SEOUL NATIONAL UNIVERSITY, [2]KOREA RESEARCH INSTITUTE OF STANDARDS AND SCIENCE, [3]KYUNGPOOK NATIONAL UNIVERSITY, [4]SEJONG UNIVERSITY.

19:30 3EP3H-05 / 137 **OPTIMIZATION OF A TES ARRAY FOR A PASSIVE VIDEO-RATE THZ SECURITY CAMERA** *G. ZIEGER[1], T. MAY[1], V. ZAKOSARENKO[1], S. ANDERS[1], M. SCHUBERT[1], H. MEYER[1], E. KREYSA[2], E. HEINZ[1];* [1]INSTITUTE OF PHOTONIC TECHNOLOGY, [2]MAX-PLANCK-INSTITUTE FOR RADIO ASTRONOMY.

19:30 3EP3H-06 / 138 **ANALYSIS OF THE CAPABILITIES OF LARGE GAMMA-RAY MICROCALORIMETER ARRAYS FOR NUCLEAR SAFEGUARDS APPLICATIONS** *N. HOTELING[1], A. S. HOOVER[1], M. W. RABIN[1], P. J. KARPIUS[1], M. P. CROCE[1], M. K. BACRANIA[1], J. N. ULLOM[2], D. A. BENNET[2];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.

19:30 3EP3H-07 / 139 **VACUUM LOAD-LOCKED SAMPLE LOADER FOR TES-BASE ALPHA-PARTICLE SPECTROMETER** *V. KOTSUBO[1], R. HORANSKY[1], M. BACRANIA[2], M. CROCE[2], J. ULLOM[1], M. RABIN[2];* [1]NIST, [2]LANL.

19:30 3EP3H-08 / 140 WITHDRAWN

19:30 3EP3H-09 / 141 **FABRICATION AND DEVICE CHARACTERIZATION OF THE FOCAL PLANE ARRAYS FOR THE SPIDER AND BICEP2/KECK CMB POLARIMETERS** *J. A. BONETTI[1], A. D. TURNER[1], M. E. KENYON[1], R. LEDUC[1], A. ORLANDO[2], J. A. BREVIK[2], A. TRANGSRUD[2], R. SUDIWALA[2], H. T. NGUYEN[1], P. K. DAY[1], J. J. BOCK[1], S. R. GOLWALA[2], J. M. KOVAC[3], W. C. JONES[4], C. L. KUO[5];* [1]JPL/CALTECH, [2]CALTECH, [3]HARVARD UNIVERSITY, [4]PRINCETON UNIVERSITY, [5]STANFORD UNIVERSITY.

19:30 3EP3H-10 / 142 **DEVELOPMENT OF SUPERCONDUCTING SILICON DIOXIDE EMBEDDED HEATSINKING LAYERS FOR COMPACT ARRAYS OF X-RAY TES MICROCALORIMETERS** *F. M. FINKBEINER[1], C. N. BAILEY[2], S. R. BANDLER[3], R. P. BREKOSKY[4], A. D. BROWN[5], J. A. CHERVENAK[2], M. E. ECKART[2], R. L. KELLEY[2], D. P. KELLY[5], C. A. KILBOURNE[2], F. S. PORTER[2], C. RAY[5], J. E. SADLEIR[2], S. J. SMITH[3];* [1]NASA/GSFC & WYLE INFORMATION SYSTEMS, INC., [2]NASA/GSFC,

[3]UNIVERSITY OF MARYLAND & NASA/GSFC, [4]NASA/GSFC & NORTHROP GRUMMAN, [5]NASA/GSFC & MEI TECHNOLOGIES, INC..

19:30 3EP3H-11 / 143 **CHARACTERIZATION OF MULTI-ABSORBER TRANSITION-EDGE SENSORS** *S. J. SMITH[1], C. N. BAILEY[2], S. R. BANDLER[1], R. P. BREKOSKY[3], J. A. CHERVENAK[4], M. E. ECKART[2], A. E. EWIN[4], F. M. FINKBEINER[5], R. L. KELLEY[4], C. A. KILBOURNE[4], F. S. PORTER[4], J. E. SADLEIR[6];* [1]NASA GSFC AND UNIVERSITY OF MARYLAND, [2]NASA GSFC AND NPP, [3]NASA GSFC AND NORTHROP GRUMMAN, [4]NASA GSFC, [5]NASA GSFC AND WYLE INFORMATION SYSTEMS, [6]NASA GSFC AND UNIVERSITY OF ILLINOIS.

3EP3J: 314 TES SIGNALS AND READOUT II

EXHIBIT HALL HANS-GEORG MEYER (IPHT JENA) AND DIETMAR DRUNG (PTB)

19:30 3EP3J-01 / 144 **OPTICAL TRANSITION-EDGE SENSORS SINGLE PHOTON PULSES ANALYSIS** *D. ALBERTO[1], M. RAJTERI[2], E. TARALLI[2], L. LOLLI[2], C. PORTESI[2], E. MONTICONE[2], R. GARELLO[3], M. GRECO[4];* [1]UNIVERSITY AND INFN TORINO, DEPT. GENERAL PHYSICS, ITALY & DIP. DI ELETTRONICA, POLITECNICO DI TORINO, TORINO,ITALY, [2]INRIM, TORINO, ITALY, [3]DIP. DI ELETTRONICA, POLITECNICO DI TORINO, TORINO,ITALY, [4]UNIVERSITY AND INFN TORINO, DEPT. GENERAL PHYSICS, ITALY.

19:30 3EP3J-02 / 145 **FREQUENCY DIVISION MULTIPLEXED READOUT OF TES DETECTORS WITH BASEBAND FEEDBACK** *R. H. DEN HARTOG, D. BOERSMA, B. VAN LEEUWEN, R. HOU, P. A. J. DE KORTE, J. VAN DER KUUR, M. P. BRUIJN, L. GOTTARDI, H. F. C. HOEVERS;* SRON.

19:30 3EP3J-03 / 146 **SUPERCONDUCTING L-C FILTER CIRCUITS FOR FREQUENCY DIVISION MULTIPLEXED READOUT OF TES DETECTORS** *M. P. BRUIJN, L. GOTTARDI, R. H. DEN HARTOG, H. F. C. HOEVERS, P. A. J. DE KORTE, J. VAN DER KUUR;* SRON- NETHERLANDS INSTITUTE FOR SPACE RESEARCH.

19:30 3EP3J-04 / 147 **TIME-DIVISION SQUID MULTIPLEXERS WITH REDUCED SENSITIVITY TO EXTERNAL MAGNETIC FIELDS** *G. M. STIEHL[1], H. M. CHO[1], G. C. HILTON[1], K. D. IRWIN[1], J. A. B. MATES[1], C. D. REINTSEMA[1], B. L. ZINK[2];* [1]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, [2]UNIVERSITY OF DENVER.

19:30 3EP3J-05 / 148 **DEVELOPMENT OF MONOLITHIC MICROWAVE INTEGRATED AMPLIFIERS AS READOUT FOR DETECTORS AT 4.2 K** *S. H. WUENSCH[1], D. BRUCH[2], E. CROCOLL[1], I. KALLFASS[2], M. SIEGEL[1];* [1]KARLSRUHE INSTITUTE OF TECHNOLOGY, [2]FRAUNHOFER INSTITUTE FOR APPLIED SOLID STATE PHYSICS (IAF).

3EP3K: 327 ULF-NMR/MRI AND BIO APPLICATIONS III

EXHIBIT HALL SABURO TANAKA (TOYOHASHI UNIVERSITY OF TECHNOLOGY) AND FRANK RUEDE (PTB)

19:30 3EP3K-01 / 150 **A COMPACT SQUID MAGNETOMETER FOR THERMOREMANENT MAGNETIZATION IMMUNOASSAYS** *H. R. CARVALHO, A. C. BRUNO;* CATHOLIC UNIVERSITY OF RIO DE JANEIRO.

19:30 3EP3K-02 / 151 **IMPROVEMENT OF THE SQUID MAGNETOMETER SYSTEMS FOR EXPANDED APPLICATION OF SPINAL CORD EVOKED MAGNETIC FIELD MEASUREMENT** *Y. ADACHI[1], M. MIYAMOTO[1], J. KAWAI[1], G. UEHARA[1], H. OGATA[1], H. KADO[1], S. KAWABATA[2], K. SEKIHARA[3];* [1]KANAZAWA INSTITUTE OF TECHNOLOGY, [2]TOKYO MEDICAL AND DENTAL UNIVERSITY, [3]TOKYO METROPOLITAN UNIVERSITY.

19:30 3EP3K-03 / 152 WITHDRAWN

19:30 3EP3K-04 / 153 **NOISE MODELING FROM HIGH-PERMEABILITY SHIELDS USING KIRCHHOFF EQUATIONS** *H. SANDIN, P. L. VOLEGOV, M. A. ESPY, A. N. MATLASHOV, I. M. SAVUKOV, L. J. SCHULTZ;* LOS ALAMOS NATIONAL LABORATORY.

19:30 3EP3K-05 / 154 **DEVELOPMENT OF MICE BIOMAGNETIC MEASUREMENT SYSTEM BY USING HIGH-TC SQUID MAGNETOMETER** *I. KIM[1], C. LEE[2], Y. LEE[1];* [1]KOREA RESEARCH INSTITUTE OF STANDARDS AND SCIENCE, [2]KOREA RESEARCH INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY.

19:30 3EP3K-06 / 155 **MEASUREMENT OF RAT MAGNETOCARDIOGRAMS BY USING HIGH-TC SQUID MAGNETOMETER** *I. KIM[1], S. AHN[1], C. LEE[2], J. SONG[3], Y. LEE[1];* [1]KOREA RESEARCH INSTITUTE OF STANDARDS AND SCIENCE, [2]KOREA

RESEARCH INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY, [3]CHUNGNAM NATIONAL UNIVERSITY.

19:30 3EP3K-07 / 156 **IMPROVEMENT OF SENSITIVITY IN THE LOW FREQUENCY RANGE FOR SUPERCONDUCTING-MAGNETORESISTIVE MAGNETOMETER** *H. POLOVY[1], R. GUERRERO SANCHEZ[1], M. PANNETIER-LECOEUR[1], C. FERMON[1], S. CARDOSO[2], R. FERREIRA[2], P. P. FREITAS[2];* [1]DSM/IRAMIS/SPEC, CEA SACLAY, 91191 GIF SUR YVETTE CEDEX FRANCE, [2]INSTITUTO DE SISTEMAS E COMPUTADORES – MICROSISTEMAS E NANOTECNOLOGIAS.

19:30 3EP3K-08 / 157 **COMPARISON OF NOISE PERFORMANCE OF THE SQUID BOOTSTRAP CIRCUIT WITH THAT OF THE STANDARD FLUX MODULATION DC SQUID READOUT SCHEME** *Y. ZHANG[1], H. WANG[2], Y. WANG[2], G. ZHANG[2], H. DONG[1], X. XIE[2], M. MÜCK[3], H. KRAUSE[1], A. I. BRAGINSKI[1], A. OFFENHÄUSSER[1], M. JIANG[2];* [1]IBN-2, FORSCHUNGSZENTRUM JÜLICH, [2]SHANGHAI INSTITUTE OF MICROSYSTEM AND INFORMATION TECHNOLOGY, [3]INSTITUT FÜR ANGEWANDTE PHYSIK, JUSTUS-LIEBIG-UNIVERSITÄT GIEßEN.

19:30 3EP3K-09 / 158 **MAGNETIC RESONANCE IMAGING OF HYPERPOLARIZED ^{3}HE DETECTED WITH A HIGH-TC SQUID IN MICROTESLA MAGNETIC FIELD AT LABORATORY ENVIRONMENT** *H. H. CHEN[1], H. C. YANG[2], H. E. HORNG[1], S. H. LIAO[2], S. Y. YANG[3], L. J. CHANG[4], M. J. CHEN[2];* [1]INSTITUTE OF ELECTRO-OPTICAL SCIENCE AND TECHNOLOGY, NATIONAL TAIWAN NORMAL UNIVERSITY, [2]DEPARTMENT OF PHYSICS, NATIONAL TAIWAN UNIVERSITY, [3]MAGQU CO., LTD., [4]NUCLEAR SCIENCE AND TECHNOLOGY DEVELOPMENT CENTER, NATIONAL TSING HUA UNIVERSITY.

3LP3A: 260 BULK SUPERCONDUCTORS *EXHIBIT HALL* TETSUO OKA (NIIGATA UNIVERSITY) AND SOREN PRESTEMON (LAWRENCE BERKLEY NATIONAL LABORATORY)

19:30 3LP3A-02 / 159 **MGB2 SUPERCONDUCTIVE INSERTS : MANUFACTS BETWEEN BULK AND WIRES** *G. GIUNCHI;* EDISON SPA.

19:30 3LP3A-03 / 160 **FABRICATE MGB2 BULKS WITH DIFFERENT MASS DENSITY** *S. ZHOU, R. ZENG, L. LU, S. DOU;* UNIVERSITY OF WOLLONGONG.

19:30 3LP3A-04 / 161 **A NOVEL DESIGNING OF THE THERMALLY ACTUATED MAGNETISATION FLUXPUMP FOR HIGH TEMPERATURE SUPERCONDUCTING BULKS** *Y. YAN[1], C. HSU[1], Z. HONG[1], Y. MURATA[2], W. YUAN[1], W. XIAN[1], T. COOMBS[1];* [1]SUPERCONDUCTIVITY GROUP, ENGINEERING DEPARTMENT, UNIVERISITY OF CAMBRIDGE, [2]HITACHI, LTD, JAPAN.

19:30 3LP3A-05 / 162 **METHODS OF PATTERNING MAGNETIC FIELDS USING BULK SUPERCONDUCTORS** *T. A. COOMBS, Z. HONG, Y. YAN;* CAMBRIDGE UNIVERSITY.

19:30 3LP3A-06 / 163 **MICROSTRUCTURE AND PROPERTIES OF SINGLE GRAINS OF Y-BA-CU-O CONTAINING Y-2411(M) AND Y^2O3** *Y. SHI, A. DENNIS, S. PATHAK, D. CARDWELL;* UNIVERSITY OF CAMBRIDGE.

19:30 3LP3A-07 / 164 **MAGNETIZATION NONLINEARITY OF YBA^2CU^3O7-X ABOVE THE SUPERCONDUCTING TRANSITION TEMPERATURE** *N. D. KUZMICHEV[1], V. V. SLAVKIN[2], E. A. TISHCHENKO[3];* [1]MACHINE-BUILDING INSTITUTE, [2]SARANSK COOPERATIVE INSTITUTE, RUSSIAN UNIVERSITY OF COOPERATION, [3]KAPITZA INSTITUTE OF PHYSICAL PROBLEMS.

19:30 3LP3A-08 / 165 **EVALUATION OF STABILITY IN ACTIVE MAGNETIC LEVITATION USING SPHERICAL HTS BULK FOR INERTIAL NUCLEAR FUSION** *T. WANG, H. UEDA, K. AGATSUMA, A. ISHIYAMA;* WASEDA UNIVERSITY.

19:30 3LP3A-09 / 166 **EVALUATION OF HYSTERESIS LOSS OF A QMG COIL MAGNET FOR PULSED CURRENT** *M. TSUCHIMOTO;* HOKKAIDO INSTITUTE OF TECHNOLOGY.

19:30 3LP3A-10 / 167 **MAGNETIC SHIELDING CHARACTERISTICS OF ARRAYED AND STACKED BULK SUPERCONDUCTORSFOR HIGHER FIELD APPLICATIONS** *Y. TERAO[1], M. SEKINO[1], H. OHSAKI[1], H. TESHIMA[2], M. MORITA[2];* [1]THE UNIVERSITY OF TOKYO, [2]NIPPON STEEL CORPORATION.

19:30 3LP3A-11 / 168 **CONCENTRIC SLITTING OF A RING-SHAPED BULK SUPERCONDUCTOR FOR A REDUCTION IN CIRCUMFERENTIAL INHOMOGENEITY OF THE TRAPPED MAGNETIC FIELD** *M. SEKINO, H. YASUDA, H. OHSAKI;* THE UNIVERSITY OF TOKYO.

3LP3B: 261 NMR MAGNETS / MRI *EXHIBIT HALL* CHANDRA REIS (PHILLIPS) AND STEF WIEGERS (-NULL-)

19:30 3LP3B-01 / 169 **SUPERCONDUCTING MAGNET WITH FOR 400 MHZ NMR** *Q. WANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

19:30 3LP3B-02 / 170 **EVALUATION OF THE SCREENING CURRENT IN A 1.3 GHZ NMR MAGNET USING REBCO** *A. OTSUKA[1], Y. YANAGISAWA[2], T. KIYOSHI[3], H. NAKAGOME[2], H. MAEDA[4], M. TAKEDA[5];* [1]JAPAN SUPERCONDUCTOR TECHNOLOGY INC., [2]CHIBA UNIVERSITY, [3]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [4]RIKEN, [5]KOBE UNIVERSITY.

19:30 3LP3B-03 / 171 **THE OPTIMIZATIONS OF THE THICKNESS OF A HTS BULK AND THE GAP LENGTH BETWEEN STACKED HTS BULK FOR COMPACT NMR MAGNETS USING HTS BULK ANNULI** *M. IMAI[1], S. KIM[1], R. TAKANO[1], J. JOO[1], S. HAHN[2];* [1]OKAYAMA UNIVERSITY, [2]FRANCIS BITTER MAGNET LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

19:30 3LP3B-04 / 172 **DESIGN OF AXIAL SHIM COILS FOR NMR** *Q. WANG, Z. NI;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

19:30 3LP3B-05 / 173 **AN OPTIMAL CONFIGURATION DESIGN OF SUPERCONDUCTING MAGNETS WITH MAGNETIC SHIELDING FOR NMR** *K. YOSHIZAWA, S. NOGUCHI, H. IGARASHI;* HOKKAIDO UNIVERSITY.

19:30 3LP3B-06 / 174 **A 1.1 GHZ LTS/HTS NMR MAGNET - PROGRESS REPORT** *J. BASCUNAN, S. HAHN, D. PARK, Y. IWASA;* MIT - FBML.

19:30 3LP3B-07 / 175 **A NOVEL HIGH PRECISION PROCEDURE FOR COIL MAGNETIC DESIGN** *A. CAPELLUTO, D. DAMIANI, R. MARABOTTO, M. MODICA, D. NARDELLI;* ASG SUPERCONDUCTORS.

19:30 3LP3B-08 / 176 **THE CRYOGENICS OF A THERMOSIPHON-COOLED HTS MRI MAGNET - EXPERIMENTAL RESULTS AND PERFORMANCE LIMITS** *W. STAUTNER, M. XU, E. T. LASKARIS, E. BUDESHEIM, G. CONTE, X. HUANG, K. AMM;* GE GLOBAL RESEARCH.

19:30 3LP3B-09 / 177 **RESEARCH ON STABILITY OF MGB2 SUPERCONDUCTING MAGNET FOR MRI** *D. ZHANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

19:30 3LP3B-10 / 178 **HTS LIMB MRI MAGNET BUILD AND TEST** *M. XU, W. STAUTNER, G. CONTE, E. BUDESHEIM, E. T. LASKARIS, X. HUANG, K. AMM;* GE GLOBAL RESEARCH CENTER.

3LP3C: 255 SMALL TEST COILS AND DEMONSTRATIONS I *EXHIBIT HALL* ALFRED MCINTURFF (TEXAS A&M UNIVERSITY) AND AKIFUMI KAWAGOE (KAGOSHIMA UNIVERSITY)

19:30 3LP3C-01 / 179 **DEVELOPMENT AND TESTING OF BI-2212 INSERT COILS FOR RESEARCH AND HIGH HOMOGENEITY MAGNET APPLICATIONS** *Z. MELHEM[1], S. CHAPPELL[1], P. GHOSHAL[1], A. TWIN[1], S. HONG[2], Y. HUANG[2], H. MIAO[2], M. MEINESZ[2], Y. YANG[3], J. SIMKIN[4];* [1]OXFORD INSTRUMENTS NANONSCIENCE, [2]OXFORD SUPERCONDUCTING TECHNOLOGY, [3]SOUTHAMPTON UNIVERSITY, [4]VECTOR FIELDS SOFTWARE.

19:30 3LP3C-02 / 180 **NO-INSULATION DOUBLE-PANCAKE WINDING FOR A 600 MHZ HTS INSERT IN A 1.3 GHZ LTS/HTS NMR MAGNET** *S. HAHN, D. PARK, J. BASCUÑÁN, Y. IWASA;* MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

19:30 3LP3C-03 / 181 **EXPERIMENTAL DEMONSTRATION OF PERIOD LENGTH SWITCHING FOR SUPERCONDUCTING INSERTION DEVICES** *A. GRAU[1], T. BAUMBACH[1], S. CASALBUONI[1], S. GERSTL[1], M. HAGELSTEIN[1], D. SAEZ DE JAUREGUI[1], C. BOFFO[2], W. WALTER[2];* [1]INSTITUTE OF SYNCHROTRON RADIATION, KARLSRUHE INSTITUTE OF TECHNOLOGY, [2]BABCOCK NOELL GMBH.

19:30 3LP3C-04 / 182 **DISTRIBUTIONS OF SCREENING CURRENTS INDUCED ON COATED CONDUCTORS** *A. MIYAZOE[1], M. SEKINO[1], T. KIYOSHI[2], H. OHSAKI[1];* [1]THE UNIVERSITY OF TOKYO, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE.

19:30 3LP3C-05 / 183 WITHDRAWN

19:30 3LP3C-06 / 184 **INITIAL COOLDOWN CHARACTERISTIC OF CONDUCTION-COOLED HIGH FIELD MAGNET SYSTEM** *Y. CHOI;* KBSI.

19:30 3LP3C-07 / 185 **FABRICATION OF A 10 TESLA CRYOFREE SUPERCONDUCTING MAGNET** *L. YAN;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

3LP3D: 256 SMALL TEST COILS AND DEMONSTRATIONS II *EXHIBIT HALL* TRIFON LASKARIS (GE) AND RAY HAFALIA (LBNL)

19:30 3LP3D-01 / 186 **DEVELOPMENT OF AN MGB2 COIL WOUND WITH A PARALLEL CONDUCTOR COMPOSED OF TWO TAPES WITH INSULATION** *A. KAWAGOE[1], K. MATSUSHIMA[1], Y. YOSHIDOME[1], Y. HAEYAMA[1], S. KAWABATA[1], F. SUMIYOSHI[1], N. YANAGI[2], T. MITO[2], M. KIUCHI[3], S. E. OTABE[3], T. MATSUSHITA[3], M. TAKAHASHI[4], T. WAKUDA[4];* [1]KAGOSHIMA UNIVERSITY, [2]NATIONAL INSTITUTE FOR FUSION SCIENCE, [3]KYUSHU INSTITUTE OF TECHNOLOGY, [4]HITACHI RESEARCH LABORATORY, HITACHI, LTD..

19:30 3LP3D-02 / 187 **A SMALL 1.5 T PERSISTENT CURRENT OPERATING TEST MAGNET USING MGB2 WIRE WITH HIGH JC JOINTS** *X. LI, Z. GAO, D. ZHANG, Y. MA, J. ZHANG, S. DAI, D. XIA, L. LIN, L. XIAO;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

19:30 3LP3D-03 / 188 WITHDRAWN.

19:30 3LP3D-04 / 189 **FABRICATION OF SUBSCALE Y-BA-CU-O RACE-TRACK COILS** *X. WANG, S. CASPI, D. W. CHENG, D. R. DIETDERICH, H. FELICE, P. FERRACIN, A. GODEKE, J. M. JOSEPH, J. LIZARAZO, S. O. PRESTEMON, G. SABBI;* LAWRENCE BERKELEY NATIONAL LABORATORY.

19:30 3LP3D-05 / 190 WITHDRAWN.

19:30 3LP3D-06 / 191 **THE SMC DIPOLE: TECHNICAL ASPECTS OF COIL WINDING, INSTRUMENTATION AND MAGNET ASSEMBLY** *J. C. PEREZ[1], M. BAJKO[1], M. GUINCHARD[1], F. REGIS[1], P. MANIL[2], S. CANFER[3], G. ELLWOOD[3];* [1]CERN, [2]CEA, [3]STFC.

19:30 3LP3D-07 / 192 **CONSTRUCTION OF TAMU3 - A 13 TESLA MODEL DIPOLE TO EVALUATE STRESS-MANAGEMENT IN HIGH FIELD DIPOLE WINDINGS** *A. D. MCINTURFF, R. BLACKBURN, N. DIACZENKO, T. ELLIOTT, T. HOLIK, A. JAISLE, P. MCINTYRE, A. SATTAROV;* TEXAS A&M UNIVERSITY.

3LP3E: 245 STABILITY LTS I *EXHIBIT HALL* ALDO DI ZENOBIO (ENEA) AND SHINSAKU IMAGAWA (NATIONAL INSTITUTE FOR FUSION SCIENCE)

19:30 3LP3E-02 / 194 WITHDRAWN.

19:30 3LP3E-03 / 195 **QUENCH PROPAGATION ANALYSIS AND PROTECTION DESIGN OF A ^{7}T SUPERCONDUCTING MAGNET FOR ANIMAL MRI J. CHEN**[1], X. JIANG[1], D. ZHENG[2], G. CHAI[3]; [1]DEPARTMENT OF ELECTRICAL ENGINEERING,TSINGHUA UNIVERSITY, BEIJING, CHINA, [2]INSTITUTE OF PHYSICS, CHINESE ACADEMY OF SCIENCES, BEIJING, [3]HANGZHOU INNOVATION PARK OF BIOPHAMAR, HANGZHOU

19:30 3LP3E-04 / 196 WITHDRAWN.

19:30 3LP3E-05 / 197 **STUDY ON THE MECHANICAL INSTABILITY OF THE MICE COUPLING MAGNETS** *H. PAN[1], L. WANG[2], H. WU[1], X. GUO[1], S. ZHENG[1], M. GREEN[3];* [1]INSTITUTE OF CRYOGENICS AND SUPERCONDUCTIVITY TECHNOLOGY, HIT, HARBIN150080, CHINA, [2]SHANGHAI INSTITUTE OF APPLIED PHYSICS, SHANGHAI 201204, CHINA, [3]LAWRENCE BERKELEY LABORATORY, BERKELEY CA 94720, USA.

19:30 3LP3E-06 / 198 **MEASUREMENTS OF AC LOSS AND INTERSTRAND CONTACT RESISTANCE IN NB^{3}SN RUTHERFORD CABLES WITH MGO AND S-GLASS CORES** *E. W. COLLINGS[1], M. D. SUMPTION[1], D. R. DIETDERICH[2], A. A. NIJHUIS[3];* [1]THE OHIO STATE UNIVERSITY, [2]THE SUPERCONDUCTING MAGNET GROUP, LAWRENCE BERKELEY NATIONAL LABORATORY (LBNL), [3]LOW TEMPERATURE DIVISION, FACULTY OF APPLIED PHYSICS, UNIVERSITY OF TWENTE, ENSCHEDE, NL.

19:30 3LP3E-08 / 200 **OVERCOMING THE MAGNETO-THERMAL INSTABILITY OF HIGH JC NB^{3}SN WIRES BY CONTROLLING THE CURRENT DISTRIBUTION** *B. BORDINI, L. ROSSI, C. SCHEUERLEIN, E. TAKALA;* CERN.

19:30 3LP3E-09 / 201 **ANALYSIS OF TRANSVERSE RESISTANCE MEASUREMENTS IN NB$_3$SN SUPERCONDUCTING WIRES** *M. BRESCHI[1], V. CORATO[2], A. DELLA CORTE[2], C. FIAMOZZI ZIGNANI[2], L. MUZZI[2], P. RIBANI[3];* [1]UNIVERSITY OF BOLOGNA - DEPARTMENT OF ELECTRICAL ENGINEERING, [2]ENEA, FRASCATI, ITALY, [3]UNIVERSITY OF BOLOGNA.

19:30 3LP3E-10 / 202 **STABILITY TEST RIG FOR EPOXY-IMPREGNATED SUPERCONDUCTING COILS** *A. WU, Y. ZHAO, J. LI, X. HUANG, C. YANG, S. MINE, P. THOMPSON, M. XU, K. AMM, J. PAN, L. CHE;* GE GLOBAL RESEARCH.

3LP3F: 283 SYSTEM STUDIES II *EXHIBIT HALL* JAE-YOUNG YOON (KERI) AND ALFREDO ALVAREZ (UNIV. OF EXTREMADURA)

19:30 3LP3F-01 / 203 **USING OF SUPERCONDUCTING DEVICES OPERATING TOGETHER TO ENSURE THE DYNAMICAL STABILITY OF AN ELECTRIC POWER SYSTEM** *S. KOPYLOV, N. BALASHOV, S. IVANOV, A. VESELOVSKY, V. ZHEMERIKIN;* JOINT INSTITUTION FOR HIGH TEMPERATURES, RAS.

19:30 3LP3F-02 / 204 **TECHNO-ECONOMIC EVALUATION OF HYBRID ENERGY STORAGE TECHNOLOGIES FOR A SOLAR-WIND GENERATION SYSTEM** *L. REN, Y. TANG, J. SHI, J. LI;* HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY.

19:30 3LP3F-03 / 205 **STUDY ON WIND-TURBINE GENERATOR SYSTEM SIZING CONSIDERING OVERCURRENT RELAY COORDINATION WITH SFCL** *H. LEE, G. SON, J. PARK;* YONSEI UNIVERSITY.

19:30 3LP3F-04 / 206 **ANALYSIS OF UNBALANCED THREE-PHASE CURRENT DISTRIBUTION IN HTS POWER CABLE** *J. KIM1, J. KIM[2], M. PARK[2], I. YU[2];* [1]CENTER FOR ADVANCED POWER SYSTEMS, [2]CHANGWON NATIONAL UNIVERSITY.

19:30 3LP3F-05 / 207 **STOCHASTIC METHOD FOR THE OPERATION OF POWER SYSTEMS WITH WIND GENERATORS AND SUPERCONDUCTING MAGNETIC ENERGY STORAGE (SMES)** *J. LEE, J. KIM, S. JOO;* KOREA UNIVERSITY.

19:30 3LP3F-06 / 208 **HIGH-TEMPERATURE SUPERCONDUCTING ENERGY STORAGE SYSTEMS FOR WIND FARMS AND ITS INTEGRATION WITH SMART GRID** *E. LEE;* HARVARD UNIVERSITY.

19:30 3LP3F-07 / 209 WITHDRAWN

19:30 3LP3F-08 / 210 **IMPACTS OF SUPERCONDUCTING CABLES ON THE DYNAMIC RESPONSE OF CURRENT TRANSFORMERS AND PROTECTIVE RELAYING DEVICES** *B. K. JOHNSON[1], N. FISCHER[2], Y. XIA[1];* [1]UNIVERSITY OF IDAHO, [2]SCHWEITZER ENGINEERING LABORATORIES.

3LP3G: 282 SYSTEM STUDIES III *EXHIBIT HALL* WILFRIED GOLDACKER (KARLSRUHE) AND JUN OGAWA (NIIGATA UNIVERSITY)

19:30 3LP3G-01 / 211 **PARAMETER OPTIMIZATION OF SFCL WITH WIND-TURBINE GENERATION SYSTEM CONSIDERING ITS PROTECTIVE COORDINATION** *W. PARK, B. SUNG, J. PARK;* YONSEI UNIVERSITY.

19:30 3LP3G-02 / 212 **FAULT CURRENT CONSTRAINED DECENTRALIZED OPTIMAL POWER FLOW INCORPORATING SUPERCONDUCTING FAULT CURRENT LIMITER (SFCL)** *G. MOON, Y. WI, K. LEE, S. JOO;* KOREA UNIVERSITY.

19:30 3LP3G-03 / 213 **ASSESSMENT OF THE IMPACT OF SFCL ON VOLTAGE SAGS IN POWER DISTRIBUTION SYSTEM** *J. MOON[1], S. YUN[2], S. LIM[3], J. KIM[3];* [1]CHUNGJU NATIONAL UNIVERSITY, [2]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [3]SOONGSIL UNIVERSITY.

19:30 3LP3G-04 / 214 **FEASIBILITY ANALYSIS OF THE POSITIONING OF SUPERCONDUCTING FAULT CURRENT LIMITERS FOR THE SMART GRID APPLICATION USING SIMULINK AND SIMPOWERSYSTEMS** *U. A. KHAN, J. K. SEONG, S. H. LEE, B. W. LEE;* HANYANG UNIVERSITY.

19:30 3LP3G-05 / 215 **OPTIMAL PLACEMENT OF SUPERCONDUCTING FAULT CURRENT LIMITERS IN THE DISTRIBUTION POWER SYSTEM USING DESIGN OF EXPERIMENT METHOD** *S. B. RHEE[1], B. W. LEE[2];* [1]SUNGKYONKWAN UNIVERSITY, [2]HANYANG UNIVERSITY.

19:30 3LP3G-06 / 216 **A TECHNICAL FEASIBILITY STUDY ON HTS CABLE AND SFCL FIELD DEMONSTRATION IN SOUTH KOREA** *B. YANG[1], Y. WON[1], J. CHOI[1], C. JUNG[1], S. LEE[2], J. YOON[2];* [1]KEPCO, [2]KERI.

19:30 3LP3G-07 / 217 **ANALYSIS ON PROTECTION COORDINATION OF HYBRID SFCL WITH PROTECTIVE DEVICES IN A POWER DISTRIBUTION SYSTEM** *S. LIM, J. KIM, I. YOU, J. KIM, M. KIM, S. WANG;* SOONGSIL UNIVERSITY.

19:30 3LP3G-08 / 218 **STUDY ON PROTECTION COORDINATION OF SUPERCONDUCTING FAULT CURRENT LIMITER APPLIED INTO KEPCO GRID** *J. KIM[1], S. LIM[1], J. KIM[1], O. HYUN[2];* [1]SOONGSIL UNIVERSITY, [2]KOREA ELECTRIC POWER RESEARCH INSTITUTE.

3LP3H: 281 SYSTEM STUDIES IV *EXHIBIT HALL* BRIAN JOHNSON (UNIVERSITY OF IDAHO) AND HIROFUMI KASAHARA (CRIEPI)

19:30 3LP3H-01 / 219 **A NOVEL DUAL-FCL CONNECTION FOR NEWLY-ADDED DISTRIBUTED GENERATIONS CONNECTED WITH THE UTILITIES** *Y. ZHANG, R. DOUGAL;* UNIVERSITY OF SOUTH CAROLINA.

19:30 3LP3H-02 / 220 **OPTIMAL DESIGN SPECIFICATION OF 22.9KV HTS FCL APPLIED IN REAL KOREAN POWER SYSTEM** *J. YOON;* KERI.

19:30 3LP3H-03 / 221 **PROTECTIVE RELAY TESTS OF HYBRID SFCLS IN A KOREAN DISTRIBUTION POWER SYSTEM USING RTDS** *S. LEE[1], J. YOON[1], B. LEE[2];* [1]KERI (KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE), [2]KOREA UNIVERSITY.

19:30 3LP3H-04 / 222 **EVALUATION OF THE IMPACT OF SUPERCONDUCTING FAULT CURRENT LIMITERS ON POWER SYSTEM NETWORK PROTECTIONS USING A RTS-PHIL METHODOLOGY** *M. M. DIONE, F. SIROIS;* ECOLE POLYTECHNIQUE DE MONTREAL.

19:30 3LP3H-05 / 223 **IMPACTS OF SUPERCONDUCTING FAULT CURRENT LIMITERS ON THE RECLOSER OPERATION IN DISTRIBUTION ELECTRIC POWER SYSTEMS** *S. B. RHEE[1], B. W. LEE[2];* [1]SUNGKYONKWAN UNIVERSITY, [2]HANYANG UNIVERSITY.

19:30 3LP3H-06 / 224 **PROOF-OF-CONCEPT OF A SMART FAULT CURRENT CONTROLLER WITH A SUPERCONDUCTING COIL FOR THE SMART GRID** *M. AHN[1], T. KO[2];* [1]KUNSAN NATIONAL UNIVERSITY, [2]YONSEI UNIVERSITY.

19:30 3LP3H-07 / 225 **COOPERATION BETWEEN SUPERCONDUCTING FAULT CURRENT LIMITER AND RECLOSING SYSTEM** *Y. S. CHO[1], B. I. JUNG[1], K. H. HA[2], S. G. CHOI[2], H. M. PARK[2], H. S. CHOI[1], D. C. CHUNG[3], J. S. HWANG[4], J. W. HWANG[5];* [1]DEPARTMENT OF ELECTRICAL ENGINEERING, CHOSUN UNIVERSITY, [2]CHOSUN UNIVERSITY, [3]DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, WOOSUK UNIVERSITY, [4]DEPARTMENT OF RENEWABLE ENERGY ELECTRICITY, JEONNAM PROVINCIAL COLLEGE, [5]DEPARTMENT OF ELECTRICAL ENGINEERING, DONGSHIN UNIVERSITY.

19:30 3LP3H-08 / 226 **IMPROVEMENT OF RECLOSER-FUSE OPERATION AND COORDINATION IN POWER DISTRIBUTION SYSTEM WITH SFCL** *M. KIM, S. LIM, J. KIM;* SOONGSIL UNIVERSITY.

3LP3J: 265 VERY HIGH FIELD MAGNETIC MAGNETS / DETECTOR MAGNETS *EXHIBIT HALL* GUEORGUI VELEV (FNAL) AND PAOLO FERRACIN LAWERENCE BEREKLEY NATIONAL LABORATORY)(

19:30 3LP3J-01 / 227 **STRESS ANALYSIS AND QUENCH ANALYSIS ON A LARGE ROOM SPLIT-GAP HIGH MAGNETIC FIELD SUPERCONDUCTING MAGNET SYSTEM** *Q. WANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

19:30 3LP3J-02 / 228 **JOINT DESIGN AND TEST FOR THE SCH** *H. BAI, T. ADKINS, S. BOLE, E. MARKS, G. MILLER, P. NOYES, T. A. PAINTER, R. STANTON, H. W. WEIJERS, T. XU;* NATIONAL HIGH MAGNETIC FIELD LABORATORY.

19:30 3LP3J-03 / 229 **COLD MASS ANALYSIS FOR THE SERIES-CONNECTED HYBRID MAGNET FOR HELMHOLTZ ZENTRUM BERLIN FOR MATERIALS AND ENERGY** *Y. ZHAI, S. BOLE, I. R. DIXON, M. D. BIRD;* NATIONAL HIGH MAGNETIC FIELD LABORATORY, TALLAHASSEE, FL, USA.

19:30 3LP3J-04 / 230 **VERY HIGH FIELD HTS MAGNET STUDIES** *P. TIXADOR1, J. REY[2], C. BRUZEK[3], E. MOSSANG[4], F. DEBRAY[5];* [1]GRENOBLE INP, [2]CEA-DSM-IRFU-SACM, [3]NEXANS FRANCE, [4]CNRS-LNCMI, [5]CNRS LNCMI.

19:30 3LP3J-05 / 231 **STATUS OF THE JLAB HALL B 12 GEV UPGRADE** *L. QUETTIER, V. BURKERT, D. KASHY, E. LEUNG, W. SCHNEIDER;* JLAB.

19:30 3LP3J-06 / 232 **DEVELOPMENT OF A ^{5}T-MAGNETOMETER FOR SYNCHROTRON RADIATION EXPERIMENTS** *B. WANG[1], J. CHEN[1], B. WAHRER[1], C. TAYLOR[1], L. XU[1], B. WAGNER[1], M. WANG[1], S. PRESTEMON[2], E. ARENHOLZ[2];* [1]WANG NMR INC., [2]LAWRENCE BERKELEY NATIONAL LABORATORY.

19:30 3LP3J-07 / 233 **PRELIMINARY DESIGN OF JLAB CLAS12 LARGE SUPERCONDUCTING SIX COIL TORUS MAGNETS** *B. WANG[1], B. WAHRER[1], C. TAYLOR[1], J. ZBANSIK[1], D. DELL'ORCO[1], J. ROSS[1], J. CHEN[1], L. XU[1], H. CHEN[1], B. WAGNER[1], R. PONG[1], T. JUANG[1], M. WANG[1], C. CARTER[1], P. CHENG[1], V. BURKERT[2], L. QUETTIER[2], D. KASHY[2];* [1]WANG NMR INC., [2]JEFFERSON LABORATORY (JLAB).

19:30 3LP3J-08 / 234 **CRYOSTAT DESIGN FOR THE NHMFL SERIES-CONNECTED HYBRIDS** *J. CHEN, H. BAI, M. BIRD, K. CANTRELL, S. BOLE;* NATIONAL HIGH MAGNETIC FIELD LABORATORY.

19:30 3LP3J-09 / 235 **25 TESLA HTS MAGNET INSERT COIL IN ZERO BOIL OFF CRYOSTAT** *J. GOOD;* CRYOGENIC LTD.

3MP3A: 212 FLUX-PINNING IMPROVEMENT IN HTS WIRES AND TAPES I *EXHIBIT HALL* YUTAKA YOSHIDA (NAGOYA UNIVERSITY) AND GIORGIO ERCOLANO (UNIVERSITY OF CAMBRIDGE)

19:30 3MP3A-01 / 236 **MINUTE DOPING OF Y1-XREXBA[2]CU[3]O7-Δ THIN FILMS WITH RE = TB AND ND** *J. N. REICHART[1], E. L. THOMAS[2], T. J. HAUGAN[1], X. SONG[3], P. N. BARNES[1];* [1]AIR FORCE RESEARCH LABORATORY, [2]UNIVERSITY OF DAYTON, [3]WEST VIRGINIA UNIVERSITY.

19:30 3MP3A-02 / 237 **TRANSPORT CHARACTERIZATION OF GDBA[2]CU[3]O7-Δ COATED CONDUCTORS DEPOSITED BY THE IN-PLUME PLD REEL-TO-REEL TECHNIQUE** *R. FUGER[1], R. MIYOSHI[1], T. KISS[1], N. CHIKUMOTO[2], S. LEE[2], T. IZUMI[2];* [1]KYUSHU UNIVERSITY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC.

19:30 3MP3A-04 / 239 **IN-FIELD PROPERTIES OF SMBCO COATED CONDUCTOR ON IBAD_MGO METAL SUBSTRATES BY BATCH-TYPE REACTIVE CO-EVAPORATION** *R. KO[1], S. JANG[1], K. SONG[2], S. OH[1], C. PARK[3], H. HA[1], H. KIM[1], D. HA[1], S. KANG[2], Y. KIM[4];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]CHONBUK NATIONAL UNIVERSITY, [3]SEOUL NATIONAL UNIVERSITY, [4]PUSAN NATIONAL UNIVERSITY.

19:30 3MP3A-05 / 240 **FABRICATION AND CHARACTERIZATION OF FILAMENTARY (ND,SM,GD)-BA-CU-O SUPERCONDUCTOR DOPED WITH COBALT AND NICKEL** *Y. IKEBE1, E. BAN1, G. NISHIJIMA2, K. WATANABE[2];* [1]MEIJO UNIVESITY, [2]TOHOKU UNIVERSITY.

19:30 3MP3A-06 / 241 **CRITICAL CURRENT PROPERTIES IN MAGNETIC FIELD OF FILAMENTARY SM-BA-CU-O WITH METAL ADDITIONS** *E. BAN[1], Y. IKEBE[1], G. NISHIJIMA[2], K. WATANABE[2];* [1]MEIJO UNIVERSITY, [2]TOHOKU UNIVERSITY.

19:30 3MP3A-07 / 242 **MAGNETIC PINNING IN YBCO** *S. C. WIMBUSH, S. A. HARRINGTON, J. L. MACMANUS-DRISCOLL;* UNIVERSITY OF CAMBRIDGE.

19:30 3MP3A-08 / 243 **VORTEX PATTERNS IN A MESOSCOPIC SUPERCONDUCTING ROD WITH A MAGNETIC DOT** *A. R. D. C. ROMAGUERA[1], M. M. DORIA[2], F. M. PEETERS[3];* [1]UNIVERSIDADE FEDERAL RURAL DE PERNAMBUCO, [2]UNIVERSIDADE FEDERAL DO RIO DE JANEIRO, [3]UNIVERSITEIT ANTWERPEN.

19:30 3MP3A-09 / 244 **CHARACTERIZATION OF COMMERCIAL YBCO COATED CONDUCTORS AFTER FAST NEUTRON IRRADIATION** *M. CHUDÝ, M. EISTERER, H. W. WEBER;* VIENNA UNIVERSITY OF TECHNOLOGY, ATOMINSTITUT.

19:30 3MP3A-10 / 245 **DYNAMIC GROWTH EFFECTS OF RARE EARTH NANOPARTICLES ON NANOROD FORMATION IN YBA[2]C[3]OX THIN FILMS** *F. BACA[1], T. G. HOLESINGER[1], B. MAIOROV[1], L. CIVALE[1], T. J. HAUGAN[2], J. REICHART[2], P. N. BARNES[2], J. Z. WU[3];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]U. S. AIR FORCE RESEARCH LABORATORIES, [3]UNIVERSITY OF KANSAS.

19:30 3MP3A-11 / 246 **EFFECTS OF NANOSCALE DEFECTS ON CRITICAL CURRENT DENSITY OF Y1-X EUXBA2CU3O7-X THIN FILMS** *R. GOSWAMI[1], T. J. HAUGAN[2], P. N. BARNES[2], G. SPANOS[3], R. L. HOLTZ[3];* [1]SAIC/NAVAL RESEARCH LABORATORY, WASHINGTON DC, [2]AIR FORCE RESEARCH LABORATORY, OH 45433, [3]NAVAL RESEARCH LABORATORY, WASHINGTON DC.

3MP3B: 118 HTS FLUX PINNING AND DYNAMICS III *EXHIBIT HALL* BORIS MAIOROV (LOS ALAMOS NATIONAL LABORATORY) AND ZHIJUN CHEN (ARGONNE NATIONAL LABORATORY)

19:30 3MP3B-01 / 247 **COMPARISON OF CONTACT AND CONTACTLESS MEASUREMENTS OF THE CRITICAL CURRENT OF COATED CONDUCTORS** *I. RUDNEV, S. POKROVSKI;* NATIONAL RESEARCH NUCLEAR UNIVERSITY, INTERNATIONAL

LABORATORY OF HIGH MAGNETIC FIELDS AND LOW TEMPERATURES IN WROCLAW.

19:30 3MP3B-02 / 248 **NONLINEARITY OF THE CURRENT-VOLTAGE CHARACTERISTICS FOR YBA^{2}CU^{3}O7-X SINGLE CRYSTALS AND THE BEREZINSKII-KOSTERLITZ-THOULESS TRANSITION** *M. A. VASYUTIN, N. D. KUZMICHEV;* MACHINE-BUILDING INSTITUTE.

19:30 3MP3B-03 / 249 **VORTEX GLASS STATE IN SUPERCONDUCTORS CONTAINING FRACTAL CLUSTERS OF A NORMAL PHASE** *Y. I. KUZMIN;* IOFFE PHYSICAL TECHNICAL INSTITUTE OF THE RUSSIAN ACADEMY OF SCIENCES.

19:30 3MP3B-04 / 250 **CRITICAL CURRENT MEASUREMENT OF HTS YBACUO RIBBONS** *T. LECREVISSE, J. REY, J. GHELLER, O. LOUCHARD;* CEA SACLAY.

19:30 3MP3B-05 / 251 **NUMERICAL INVESTIGATIONS ON EDGE EFFECTS OF SHIELDING CURRENT DENSITY IN HTS THICK FILM** *S. IKUNO[1], T. TAKAYAMA[2], A. KAMITANI[2];* [1]TOKYO UNIVERSITY OF TECHNOLOGY, [2]YAMAGATA UNIVERSITY.

19:30 3MP3B-06 / 252 **THE IC BEHAVIOR OF 2G YBCO TAPES UNDER DC MAGNETIC FIELD AT VARIOUS TEMPERATURES** *R. PEI, Z. HONG, T. COOMBS;* CAMBRIDGE UNIVERSITY.

19:30 3MP3B-07 / 253 **ELECTRICAL CHARACTERISTICS OF STACKS OF YBCO TAPES IN APPLIED MAGNETIC FIELD** *J. KIM, C. KIM, J. KVITKOVIC, S. PAMIDI;* CENTER FOR ADVANCED POWER SYSTEMS.

19:30 3MP3B-08 / 254 **ANALYSIS OF LOCAL CURRENT DISTRIBUTION IN PATTERNED YBCO COATED CONDUCTORS USING LOW-TEMPERATURE SCANNING LASER MICROSCOPY** *S. PARK, J. KIM, G. KIM, B. CHO, H. RI;* DEPT. OF PHYSICS, KYUNGPOOK NATIONAL UNIVERSITY.

19:30 3MP3B-09 / 255 **STUDY OF THE IRREVERSIBILITY LINE AND CRITICAL CURRENT OF BISCCO THIN FILMS WITH DIFFERENT SUPERCONDUCTING PHASES** *A. MARIÑO CAMARGO, M. B. LOPEZ SANTOS, P. A. GARCÉS CONSTAIN;* UNIVERSIDAD NACIONAL DE COLOMBIA.

19:30 3MP3B-10 / 256 WITHDRAWN

08:00 ORAL SESSIONS

4EA: 167 TES NOISE *EXECUTIVE* JOEL ULLOM (NIST) AND KENT IRWIN (NIST)

08:00 4EA-01 ***(INVITED)*** **FUNDAMENTAL NOISE PROCESSES IN TES DEVICES** *M. GALEAZZI;* UNIVERSITY OF MIAMI.

08:30 4EA-02 **ON THE EFFECT OF NON-UNIFORMITY IN TESES UNDER DC AND AC BIAS** *J. VAN DER KUUR, L. GOTTARDI, P. DE KORTE, M. LINDEMAN, B. DIRKS, H. HOEVERS;* SRON NATIONAL INSTITUTE FOR SPACE RESEARCH.

08:45 4EA-03 **THERMAL MODELS OF SUPERCONDUCTING TRANSITION-EDGE SENSORS** *I. MAASILTA, K. KINNUNEN, M. PALOSAARI;* UNIVERSITY OF JYVASKYLA.

09:00 4EA-04 **SURFACE CURRENT FLUCTUATIONS IN IR-TES SUPERCONDUCTING SURFACE SHEATH** *M. RIBEIRO GOMES[1], M. GALEAZZI[2];* [1]UNIVERSITY OF LISBON, CENTRE FOR NUCLEAR PHYSICS, [2]UNIVERSITY OF MIAMI.

09:15 4EA-05 **NOISE CHARACTERIZATION IN IR THIN FILMS** *Y. UPRETY[1], D. BAGLIANI[2], R. EGGENHOFFNER[2], M. GALEAZZI[1], F. GATTI[2], M. R. GOMES[3], K. PRASAI[1];* [1]UNIVERSITY OF MIAMI, [2]UNIVERSITY OF GENOA, ITALY, [3]CENTRO DE FÍSICA NUCLEAR DA UNIVERSIDADE DE LISBOA, LISBOA, PORTUGAL.

09:30 4EA-06 **NOISE STUDY OF LOW RESISTIVITY IR-BASED TES** *D. BAGLIANI[1], F. BRUNETTO[1], M. DELL'ANNA[1], R. EGGENHÖFFNER[2], F. GATTI[1], M. GALEAZZI[3], M. RIBEIRO GOMES[4];* [1]UNIVERSITY AND INFN OF GENOA, [2]UNIVERSITY OF GENOA, [3]UNIVERSITY OF MIAMI, [4]UNIVERSITY OF LISBON, CENTRE FOR NUCLEAR PHYSICS.

4EB: 151 TERAHERTZ CIRCUITS *DIPLOMAT* PASCAL FEBVRE (UNIVERSITY OF SAVOIE) AND ALEXNADER KARPOV(CALTECH)

08:00 4EB-01 **DEVELOPMENT OF A CRYOCOOLER-BASED MULTI-CHANNEL HTS JOSEPHSON THZ DETECTOR ARRAY** *J. DU[1], A. D. HELLICAR[2], S. M. HANHAM[2], K. E. LESLIE[1], J. C. MACFARLANE[1], L. LI[2], N. NIKOLIC[2], C. P. FOLEY[1];* [1]CSIRO CMSE, AUSTRALIA, [2]CSIRO ICT CENTRE, AUSTRALIA.

08:15 4EB-02 **TERAHERTZ CHARACTERIZATION OF EXTERNAL RESONANT SYSTEMS BY HIGH-TC JOSEPHSON JUNCTIONS** *V. N. GUBANKOV[1], I. I. GUNDAREVA[1], Y. Y. DIVIN[2], V. V. PAVLOVSKIY[1], O. Y. VOLKOV[1];* [1]KOTEL'NIKOV INSTITUTE OF RADIO ENGINEERING AND ELECTRONICS OF RAS, MOSCOW, 125009, RUSSIA, [2]FORSCHUNGSZENTRUM JÜLICH, D-52425 JÜLICH, GERMANY.

08:30 4EB-03 **MICROSPEC - A FULLY INTEGRATED HIGH PERFORMANCE TERAHERTZ SPECTROMETER ON A SINGLE WAFER** *S. H. MOSELEY[1], D. BENFORD[1], C. M. BRADFORD[2], A. BROWN[1], W. HSIEH[1], T. STEVENSON[1], K. U-YEN[1], E. WOLLACK[1], J. ZMUIDZINAS[3];* [1]NASA/GSFC, [2]JPL, [3]CALTECH.

08:45 4EB-04 **JOSEPHSON SPECTROSCOPY FOR IDENTIFICATION OF LIQUIDS** *Y. DIVIN[1], M. LYATTI[1], U. POPPE[1], K. URBAN[1], V. PAVLOVSKIY[2];* [1]FORSCHUNGSZENTRUM JUELICH, [2]KOTELNIKOV INSTITUTE OF RADIO ENGINEERING AND ELECTRONICS.

09:00 4EB-05 **MAGNETIC FIELD-TUNED SUPERCONDUCTING SPLIT-RING RESONATORS AT TERAHERTZ** *B. JIN[1], C. ZHANG[1], S. ENGELBRECHT[2], A. PIMENOV[2], Q. XU[1], C. CAO[1], J. CHEN[1], L. KANG[1], W. XU[1], P. WU[1];* [1]RESERACH INSTITUTE OF SUPERCONDUCTOR ELECTRONICS, [2]EXPERIMENTELLE PHYSIK IV, UNIVERSITÄT WÜRZBURG, AM HUBLAND, D-97074 WÜRZBURG, GERMANY.

09:15 4EB-06 **TUNABLE TERAHERTZ EMISSION FROM INTRINSIC JOSEPHSON JUNCTIONS** *H. WANG[1], S. GUENON[2], J. YUAN[1], Z. JIANG[3], Y. ZHONG[3], P. WU[3], A. ISHII[1], T. HATANO[1], B. GROSS[2], M. GRÜNZWEIG[1], D. KOELLE[2], R. KLEINER[2];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]UNIVERSITAET TUEBINGEN, [3]NANJING UNIVERSITY.

09:30 4EB-07 **A ROAD TO HIGH POWER TERAHERTZ RADIATION FROM INTRINSC JOSEPHSON JUNCTIONS** *K. KADOWAKI[1], M. TSUJIMOTO[1], K. IVANOVIC[1], T. KOIKE[1], N. ORITA[1], K. DEGUCHI[1], R. NAKAYAMA[1], T. YAMAMOTO[1], T. KASHIWAGI[1], H. MINAMI[1], M. TACHIKI[1], R. A. KLEMM[2];* [1]INSTITUTE OF MATERIALS SCIENCE, [2]UNIVERSITY OF CENTRAL FLORIDA.

09:45 4EB-08 **SELF EMISSION FROM LARGE ARRAYS OF NIOBIUM JOSEPHSON JUNCTIONS** *F. SONG[1], A. SEMENOV[2], F. MÜLLER[3], R. BEHR[3], L. FANG[4], A. KLUSHIN[5];* [1]INSTITUTE OF BIO- AND NANOSYSTEMS AND JARA-FUNDAMENTALS OF FUTURE INFORMATION TECHNOLOGY; DEPARTMENT OF ELECTRONICS, NANKAI UNIVERSITY, 300071 TIANJIN, P. R. CHINA, [2]INSTITUTE OF PLANETARY RESEARCH, GERMAN AEROSPACE CENTER, 12489 BERLIN, GERMANY, [3]PHYSIKALISCH-TECHNISCHE BUNDESANSTALT, 38116 BRAUNSCHWEIG, GERMANY, [4]DEPARTMENT OF ELECTRONICS, NANKAI UNIVERSITY, 300071 TIANJIN, P. R. CHINA, [5]INSTITUTE OF BIO- AND NANOSYSTEMS AND JARA-FUNDAMENTALS OF FUTURE INFORMATION TECHNOLOGY.

4LA: 127 STABILITY HTS II *EMPIRE* GIUSEPPE CELENTANO (ENEA) AND YUKI IWASA (FRANCIS BITTER MAGNET LABORATORY)

08:00 4LA-01 **DEGRADATION OF YBCO COIL PERFORMANCE DUE TO EPOXY IMPREGNATION** *T. TAKEMATSU[1], R. HU[1], T. TAKAO[1], Y. YANAGISAWA[2], H. NAKAGOME[2], D. UGLIETTI[3], T. KIYOSHI[3], M. TAKAHASHI[4], H. MAEDA[4];* [1]FACULTY OF SCIENCE AND TECHNOLOGY, SOPHIA UNIVERSITY, [2]GRADUATE SCHOOL OF ENGINEERING, CHIBA UNIVERSITY, [3]SUPERCONDUCTING MATERIALS CENTER, NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [4]SYSTEMS AND STRUCTURAL BIOLOGY CENTER, RIKEN.

08:15 4LA-02 **ELECTRICAL AC LOSS MEASURMENTS ON A ^{2}G YBCO COIL** *C. REY, R. DUCKWORTH, W. SCHWENTERLY;* OAK RIDGE NATIONAL LABORATORY.

08:30 4LA-03 **COUPLING AC LOSS OF YBCO PANCAKE COILS** *V. A. GRINENKO[1], K. NENKOV[1], C. STIEHLER[1], M. VOJENCIAK[2], G. FUCHS[1], B. HOLZAPFEL[1];* [1]LEIBNIZ INSTITUTE FOR SOLID STATE AND MATERIALS RESEARCH DRESDEN, [2]INSTITUTE OF ELECTRICAL ENGINEERING, CENTRE OF EXCELLENCE CENG, BRATISLAVA.

08:45 4LA-04 **QUENCH INITIATION IN YBCO LAYER-WOUND COILS USING AC CURRENT OR AC MAGNETIC FIELD** *M. DALBAN-CANASSY[1], U. P. TROCIEWITZ[1], Y. VIOUCHKOV[2], S. V. P. S. PAMIDI[3];* [1]ASC-NHMFL, [2]NHMFL, [3]CAPS-FSU.

09:00 4LA-05 **EVALUATION OF THE NORMAL-ZONE PROPAGATION CHARACTERISTICS OF REBCO COATED CONDUCTOR WITH LAMINATED CU TAPE** *M. DAIBO, S. FUJITA, M. HARAGUCHI, Y. IIJIMA, T. SAITOH;* FUJIKURA LTD..

09:15 4LA-06 **QUENCH CHARACTERISTICS OF 2212 SOLENOID INSERT COILS IN BACKGROUND FIELDS UP TO 20 TESLA** *Y. YANG[1], E. A. YOUNG[1], I. FALORIO[1], W. O. S. BAILEY[1], J. SIMKIN[2], S. P. G. CHAPPELL[3];* [1]UNIVERSITY OF SOUTHAMPTON, [2]VECTOR FIELDS, COBHAM TECHNICAL SERVICES, [3]OXFORD INSTRUMENTS.

09:30 4LA-07 **EXPERIMENTAL STUDY OF MAGNETIC EFFECTS ON THE STABILITY MARGIN OF WIND-AND-REACT BI^{2}SR^{2}CACU^{2}OX COILS** *L. YE[1], F. HUNTE[1], J. SCHWARTZ[1], D. ARBELAEZ[2], S. PRESTEMON[2];* [1]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NORTH CAROLINA STATE UNIVERSITY, RALEIGH, NC 27695, USA, [2]LAWRENCE BERKELEY NATIONAL LABORATORY, BERKELEY, CA 94720, USA.

09:45 4LA-08 **OBSERVATION OF IMPOSTER FLUX PUMPING** *R. WEINSTEIN[1], D. PARKS[2], R. SAWH[2], K. DAVEY, IEEE FELLOW[3];* [1]BEAM PARTICLE DYNAMICS LAB, PHYSICS DEPT. AND TEXAS CENTER FOR SUPERCONDUCTIVITY, UNIVERSITY OF HOUSTON, 632 SCIENCE RESEARCH BLDG. 1, HOUSTON TX 77204-5005, USA, WEINSTEIN@UH.EDU, [2]BEAM PARTICLE DYNAMICS LAB, PHYSICS DEPT. AND TEXAS CENTER FOR SUPERCONDUCTIVITY, UNIVERSITY OF HOUSTON, 632 SCIENCE RESEARCH BLDG. 1, HOUSTON TX 77204-5005, USA, [3]INDEPENDENT CONSULTANT, 1844 OLD MISSION RD., EDGEWATER, FL, USA, KDAVEY@IEEE.ORG.

4LB: 171 RESISTIVE TYPE FAULT CURRENT LIMITERS II *PALLADIAN* PASCAL TIXADOR (GRENOBLE INP) AND MICHAEL GREEN (LAWRENCE BERKELEY NATIONAL LABORATORY)

08:00 4LB-01 ***(INVITED)*** **HTS FAULT CURRENT LIMITERS -FIRST COMMERCIAL DEVICES FOR DISTRIBUTION LEVEL GRIDS IN EUROPE** *J. BOCK[1], S. KRAMER[1], M. BLUDAU[1], S. ELSCHNER[2];* [1]NEXANS SUPERCONDUCTORS, [2]UNIVERSITY OF APPLIED SCIENCE.

08:30 4LB-02 **PERFORMANCE OF [2]G HTS TAPES IN SUB-COOLED LN2 FOR SUPERCONDUCTING FAULT CURRENT LIMITER APPLICATIONS** *J. LLAMBES[1], D. HAZELTON[1], V. SELVAMANICKAM[2];* [1]SUPERPOWER-INC, [2]UNIVERSITY OF HOUSTON.

08:45 4LB-03 **ENSYSTROB -RESISTIVE FAULT CURRENT LIMITER BASED ON COATED CONDUCTORS FOR MEDIUM VOLTAGE APPLICATIONS** *A. KUDYMOW[1], S. ELSCHNER[2], S. FINK[1], W. GOLDACKER[1], F. GRILLI[1], C. SCHACHERER[1], M. NOE[1], A. HOBL[3], J. BOCK[3];* [1]KARLSRUHE INSTITUTE OF TECHNOLOGY, INSTITUTE FOR TECHNICAL PHYSICS, [2]UNIVERSITY OF APPLIED SCIENCE, MANNHEIM, [3]NEXANS SUPERCONDUCTORS GMBH.

09:00 4LB-04 **HEAT PROPAGATION VELOCITIES IN COATED CONDUCTORS FOR FAULT CURRENT LIMITER APPLICATIONS.** *L. ANTOGNAZZA[1], M. DECROUX[1], M. THERASSE[1], M. ABPLANALP[2];* [1]UNIVERSITY OF GENEVA, DPMC, [2]ABB CORPORATE RESEARCH CENTRE IN SWITZERLAND.

09:15 4LB-05 **S/N TRANSITION PROCESS OF YBCO THIN FILM CONSIDERED FROM 2 DIMENSIONAL VOLTAGE DISTRIBUTION MEASUREMENT** *M. MORI[1], H. NISHIOKA[1], J. BABA[1], T. NITTA[2], T. KUMAGAI[3], M. SHIBUYA[4];* [1]THE UNIVERSITY OF TOKYO, [2]MEISEI UNIVERSITY, [3]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL (AIST), [4]KANTO GAKUIN UNIVERSITY.

09:30 4LB-06 **TRANSIENT HEAT TRANSFER OCCURRING IN COATED CONDUCTORS UNDER SHORT CURRENT PULSES** *D. COLANGELO[1], F. ROY[1], F. GRILLI[2], F. SIROIS[3], B. DUTOIT[1];* [1]ECOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE, SWITZERLAND, [2]INSTITUTE FOR TECHNICAL PHYSICS (ITP), FORSCHUNGSZENTRUM KARLSRUHE GMBH, KARLSRUHE, GERMANY, [3]ECOLE POLYTECHNIQUE DE MONTR´EAL, PO BOX 6079 STATION CENTRE-VILLE, MONTR´EAL, QC, H[3]C [3]A7, CANADA.

09:45 4LB-07 **TEST MODEL PRODUCTION OF SUPERCONDUCTING FAULT CURRENT LIMITER FOR POWER SYSTEM WITH ELECTROMAGNETIC REPULSION SWITCH ADAPTED TO HIGH SPEED RE-CLOSING** *Y. SATO[1], H. ANJI[1], H. OKUMO[2], N. TAKAO[2], S. YANABU[1];* [1]TOKYO DENKI UNIVERSITY, [2]TOKYO ELECTRIC POWER COMPANY.

4LC: 134 HTS POWER CABLES I

HAMPTON MIKE GOUGE (ORNL) AND NAOYUKI AMEMIYA (KYOTO UNIVERSITY)

08:00 4LC-01 ***(INVITED)*** **PROGRESS AND STATUS OF A 2G HTS POWER CABLE IN LONG ISLAND POWER AUTHORITY (LIPA) GRID** *J. MAGUIRE[1], J. YUAN[1], W. ROMANOSKY[1], F. SCHMIDT[2], R. SOIKA[2], S. BRATT[3], C. KING[1], J. MCNAMARA[1], T. WELSH[4];* [1]AMERICAN SUPERCONDUCTOR CO., [2]NEXANS DEUTSCHLAND GMBH, [3]AIR LIQUIDE, [4]LONG ISLAND POWER AUTHORITY.

08:30 4LC-02 ***(INVITED)*** **STATUS OF SUPERCONDUCTING CABLE DEMONSTRATION PROJECT IN JAPAN** *S. HONJO[1], T. MIMURA[1], Y. KITOH[1], Y. NOGUCHI[1], T. MASUDA[2], H. YUMURA[2], M. IKEUCHI[3], H. YAGUCHI[3];* [1]TOKYO ELECTRIC POWER COMPANY, [2]SUMITOMO ELECTRIC INDUSTRIES, [3]MAYEKAWA MFG.

09:00 4LC-03 ***(INVITED)*** **DEVELOPMENTAL RESULTS OF 154KV, [1]GVA, 30M HTS CABLE** *J. CHO[1], K. SIM[1], S. KIM[1], S. LEE[2], H. JANG[2], C. CHOI[2], B. YANG[3], S. KIM[4], H. YEOM[5], S. LEE[6], M. PARK[7];* [1]KERI, [2]LS CABLE, [3]KEPRI, [4]CVE, [5]KIMM, [6]UIDUK UNIV., [7]CHANGWON NATIONAL UNIV..

09:30 4LC-04 ***(INVITED)*** **RUSSIAN PROGRAM ON HTS POWER CABLES** *V. VYSOTSKY, V. SYTNIKOV;* RUSSIAN SCIENTIFIC R&D CABLE INSTITUTE.

10:00 4LC-05 **CRYOGENIC AND ELECTRICAL DESIGN STUDIES OF HELIUM GAS COOLED SUPERCONDUCTING DC CABLE** *S. V. PAMIDI[1], H. RODRIGO[1], C. H. KIM[1], J. KIM[1], D. CROOK[1], S. RANNER[1], B. TROCIEWITZ[1], S. DALE[1], D. KNOLL[2], D. LINDSAY[2], D. WILLEN[2], C. THIDEMANN[2], H. LENTGE[2], J. KEPHART[3], B. FITZPATRICK[3];* [1]FLORIDA STATE UNIVERSITY, [2]ULTERA, [3]NAVAL SURFACE WARFARE CENTER CARDEROCK DIVISION.

4MA: 121 FLUX-PINNING IMPROVEMENT IN HTS WIRES AND TAPES II *BLUE* KANAME MATSUMOTO (KYUSHU INSTITUTE OF TECHNOLOGY) AND LEONARDO CIVALE (LOS ALAMOS NATIONAL LABORATORY)

08:00 4MA-01 ***(INVITED)*** **EFFECT OF STRAIN, BZO CONTENT AND THE INCORPORATION OF DOUBLE-PEROVSKITE-BASED TA- AND NB-OXIDE NANOSTRUCTURES ON FLUX-PINNING IN COATED CONDUCTORS** *A. GOYAL, S. WEE, E. D. SPECHT, C. CANTONI, Y. ZUEV, Y. GAO;* OAK RIDGE NATIONAL LABORATORY.

08:30 4MA-02 **LOW-TEMPERATURE PHASE TRANSFORMATION AS A NEW WAY TO ENHANCE PINNING OF YBCO FILMS** *V. SOLOVYOV[1], W. SI[1], J. ZHOU[1], L. WU[1], J. QING[1], K. DEVELOS-BAGARINAO[2], Q. LI[1];* [1]BROOKHAVEN NATIONAL LABORATORY, 2[2]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY.

08:45 4MA-03 **FLUX-PINNING MECHANISMS IN STOICHIOMETRIC YBCO FILMS PREPARED BY A FLUORINE-FREE MOD METHOD** *H. YAMASAKI[1], K. OHKI[2], I. YAMAGUCHI[1], M. SOHMA[1], W. KONDO[1], H. MATSUI[1], T. MANABE[1], T. KUMAGAI[1];* [1]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY (AIST), [2]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY (AIST), NOW IN SUMITOMO ELECTRIC INDUSTRIES.

09:00 4MA-04 **COMPOSITION EFFECTS ON THE CRITICAL CURRENT OF MOCVD-PROCESSED ZR:GDYBCO COATED CONDUCTORS IN AN APPLIED MAGNETIC FIELD** *Y. CHEN[1], T. SHI[2], A. P. GUEVARA[2], Y. ZHANG[2], I. KESGIN[2], Y. YAO[2], A. RAR[1], G. MAJKIC[2], V. SELVAMANICKAM[2];* [1]SUPERPOWER INC, [2]UNIVERSITY OF HOUSTON.

09:15 4MA-05 **STRATEGIC RESEARCH ON PERFORMANCE OPTIMIZATION OF YBCO COATED CONDUCTORS** *T. AYTUG[1], M. PARANTHAMAN[1], E. SPECHT[1], S. COOK[1], C. CANTONI[1], F. LIST[1], K. KIM[1], Y. ZHANG[1], A. GOYAL[1], D. CHRISTEN[1], Y. CHEN[2], V. SELVAMANICKAM[2], V. MARONI[3], D. MILLER[3], Z. CHEN[3], A. KROPF[3], N. ZALUZEC[3];* [1]OAK RIDGE NATIONAL LABORATORY, [2]SUPERPOWER, INC., [3]ARGONNE NATIONAL LABORATORY.

09:30 4MA-06 **ALL-MOCVD TECHNOLOGY FOR COATED CONDUCTOR FABRICATION** *A. MOLODYK, M. NOVOZHILOV, S. STREET, L. CASTELLANI, A. IGNATIEV;* METAL OXIDE TECHNOLOGIES INC..

09:45 4MA-07 **SUPERCONDUCTING YBCO THIN FILMS, MULTILAYERS AND HETEROSTRUCTURES** *A. V. PAN, S. V. PYSARENKO, O. V. SHCHERBAKOVA, S. A. FEDOSEEV, S. DOU;* UNIVERSITY OF WOLLONGONG.

10:00 4MA-08 **ENHANCED FLUX-PINNING IN LONG LENGTH COATED CONDUCTORS MANUFACTURED VIA HR-PLD AND ABAD** *A. HALLBAUER, A. RUTT, L. KIRCHHOFF, K. SCHLENGA, A. USOSKIN;* BRUKER HTS GMBH.

09:45 4MA-09 WITHDRAWN

4MB: 107 MEASUREMENTS III *BLUE PRE-FUNC.* JOHN DURRELL (CAMBRIDGE) AND FUMETAKI KAMETANI (NHMFL)

08:00 4MB-01 **INVESTIGATION OF THREE-DIMENSIONAL CURRENT DISTRIBUTION AT SILVER DIFFUSION JOINT OF RE-123 COATED CONDUCTORS BASED ON MAGNETIC MICROSCOPY COMBINED WITH FINITE ELEMENT METHOD** *K. HIGASHIKAWA[1], Y. HONDA[1], M. INOUE[1], T. KISS[1], N. CHIKUMOTO[2], N. SAKAI[2], T. IZUMI[2];* [1]KYUSHU UNIVERSITY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC.

08:15 4MB-02 **COMPUTATION OF CURRENT DISTRIBUTION IN YBCO TAPES WITH DEFECTS OBTAINED FROM HALL MAGNETIC MAPPING BY INVERSE PROBLEM SOLUTION** *M. CARRERA[1], J. AMORÓS[2], X. GRANADOS[3], R. MAYNOU[2], T. PUIG[3], X. OBRADORS[3];* [1]UNIVERSITAT DE LLEIDA, [2]UNIVERSITAT POLITÈCNICA DE CATALUNYA, [3]INSTITUT DE CIÈNCIA DE MATERIALS DE BARCELONA (ICMAB-CSIC).

08:30 4MB-03 **METHOD AND APPARATUS FOR CONTACTLESS IC MEASUREMENT USING MAGNETIC CIRCUIT** *C. GU, T. QU, S. ZOU, Z. HAN;* APPLIED SUPERCONDUCTIVITY RESEARCH CENTER, TSINGHUA UNIVERSITY.

08:45 4MB-04 **TEMPERATURE DEPENDENCE OF THE MAGNETIC SHIELDING EFFICIENCY MEASURED ON BI-2212 HOLLOW CYLINDERS**

SUBJECTED TO AXIAL MAGNETIC FIELDS *J. F. FAGNARD[1], S. ELSCHNER[2], J. BOCK[3], M. DIRICKX[1], B. VANDERHEYDEN[4], P. VANDERBEMDEN[4];* [1]SUPRATECS, CISS DEPARTMENT, ROYAL MILITARY ACADEMY, B-1000 BRUSSELS, BELGIUM, [2]UNIVERSITY OF APPLIED SCIENCE MANNHEIM, D-68163 MANNHEIM, GERMANY, [3]NEXANS SUPERCONDUCTORS GMBH, D-50351 HÜRTH, GERMANY, [4]SUPRATECS, DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, UNIVERSITY OF LIEGE, B-4000 LIEGE, BELGIUM.

09:00 4MB-05 WITHDRAWN.

09:15 4MB-06 **INVESTIGATION OF POWER DISSIPATION MECHANISMS IN COATED CONDUCTORS AT HIGH CURRENT DENSITIES BASED ON ULTRA FAST PULSED CURRENT MEASUREMENTS** *P. BERNSTEIN[1], C. MCLOUGHLIN[1], Y. THIMONT[1], F. SIROIS[2], J. COULOMBE[2];* [1]CNRS-CRISMAT ENSICAEN, [2]ECOLE POLYTECHNIQUE DE MONTRÉAL.

09:30 4MB-07 **CURRENT LIMITING PHENOMENA IN SMBA^{2}CU^{3}O7-Δ COATED CONDUCTORS OBSERVED BY LASER-INDUCED THERMOELECTRIC IMAGING AND LOW-TEMPERATURE LASER SCANNING MICROSCOPY** *G. KIM1, A. MATSEKH2, M. INOUE2, T. KISS2, W. JO1, H. S. HA3, S. S. OH[3];* [1]EWHA WOMANS UNIVERSITY, [2]KYUSHU UNIVERSITY, [3]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE (KERI).

09:45 4MB-08 **NON-DESTRUCTIVE MEASUREMENT OF CRITICAL CURRENTS AND E-J CHARACTERISTICS IN CYLINDRICAL (RE)BCO BULK SUPERCONDUCTORS** *Z. XU, A. M. CAMPBELL, D. A. CARDWELL;* UNIVERSITY OF CAMBRIDGE.

10:00 4MB-09 **PROBING LOCALIZED DAMAGE IN QUENCHED YBA^{2}CU^{3}OX COATED CONDUCTORS USING FORENSIC METHODS** *H. SONG[1], Y. XIN[2], F. HUNTE[3], J. SCHWARTZ[3];* [1]ASC/NHMFL/FSU, [2]NHMFL/FSU, [3]MSE, NCSU.

4MC: 100 NB3SN *CONGRESSIONAL* ARUP GHOSH (BROOKHAVEN NATIONAL LABORATORY) AND JEFF PARRELL (OXFORD SUPERCONDUCTING TECHNOLOGY)

08:00 4MC-01 **CALORIMETRIC INVESTIGATION OF NB^{3}SN AND NB^{3}AL WIRES FOR THE NEXT GENERATION OF ACCELERATOR MAGNETS** *C. SENATORE[1], R. FLÜKIGER[1], T. BOUTBOUL[2], L. OBERLI[3], K. TSUCHIYA[4], T. TAKEUCHI[5];* [1]DEPARTMENT OF CONDENSED MATTER PHYSICS AND MANEP/NCCR, UNIVERSITY OF GENEVA, [2]FUSION FOR ENERGY, [3]CERN, [4]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION, KEK, [5]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, NIMS.

08:15 4MC-02 **STRUCTURE AND PERFORMANCE OF NB^{3}SN SUPERCONDUCTING WIRES PREPARED FROM SN-BASED ALLOY SHEETS** *K. TACHIKAWA1, T. ANDO1, H. SASAKI1, M. YAMAGUCHI1, T. TAKEUCHI[2];* [1]TOKAI UNIVERSITY, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE.

08:30 4MC-03 **LONGITUDINAL AND TRANSVERSE CROSS-SECTIONAL MICROSTRUCTURE AND CRITICAL CURRENT DENSITY IN NB^{3}SN SUPERCONDUCTORS** *I. PONG[1], C. SCHEUERLEIN[1], L. OBERLI[1], C. SENATORE[2], L. BOTTURA[1];* [1]CERN, [2]UNIVERSITY OF GENEVA.

08:45 4MC-04 **ELECTRON BACKSCATTER DIFFRACTION ANALYSIS ON NB^{3}AL AND NB^{3}SN MULTIFILAMENTS** *T. TAKEUCHI[1], K. TSUCHIYA[2], N. BANNO[1], A. KIKUCHI[1], Y. IIJIMA[1];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION.

09:00 4MC-05 **NEW DEVELOPMENTS IN NB3SN PIT STRAND, THE EFFECT OF SECOND PHASE ADDITIONS ON THE SUPERCONDUCTING PROPERTIES** *L. R. MOTOWIDLO;* SUPRAMAGNETICS, INC..

09:15 4MC-06 **STOICHIOMETRY AND MORPHOLOGY STUDIES OF THE MICROSTRUCTURES OF TUBE TYPE NB^{3}SN STRANDS** *D. PUTNAM[1], M. SUMPTION[1], X. PENG[2], M. TOMSIC[2], T. COLLINGS[1];* [1]THE OHIO STATE UNIVERSITY, [2]HYPER TECH RESEARCH, INC..

09:30 4MC-07 **THE EFFECTS OF VARIABLE SN CONTENT ON THE PROPERTIES OF A15 SUPERCONDUCTING NB^{3}SN** *J. ZHOU, Y. JO, Z. SUNG, P. LEE, D. LARBALESTIER;* NHMFL-ASC, FSU.

09:45 4MC-08 **ANALYSIS OF THE STRAIN SENSITIVITY OF NB^{3}SN BULK AND THIN FILM MODEL SAMPLES** *M. G. T. MENTINK[1], A. ANDERS[1], M. M. J. DHALLE[2], D. R. DIETDERICH[1], A. GODEKE[1], W. GOLDACKER[3], D. PUTNAM[4], J. L. SLACK[1], M. D.*

SUMPTION[4], H. H. J. TEN KATE[2]; [1]LAWRENCE BERKELEY NATIONAL LABORATORY, BERKELEY, CA, [2]FACULTY OF SCIENCE AND TECHNOLOGY, UNIVERSITY OF TWENTE, THE NETHERLANDS, [3]KARLSRUHE INSTITUTE OF TECHNOLOGY, KARLSRUHE, GERMANY, [4]CENTER FOR SUPERCONDUCTING AND MAGNETIC MATERIALS, OHIO STATE UNIVERSITY, OH.

10:30 ORAL SESSIONS

4EX: 157 SUPERCONDUCTING MIXERS *EXECUTIVE* TORSTEN MAY (INSTITUTE OF PHOTONIC TECHNOLOGY) AND BORIS KARASIK (JET PROPULSION LABORATORY/CALTECH)

10:30 4EX-01 ***(INVITED)*** **PERFORMANCE OF THE ALMA BAND 10 SIS RECEIVER PROTOTYPE MODEL** *Y. UZAWA[1], Y. FUJII[1], K. KANEKO[1], M. KROUG[1], T. KOJIMA[1], K. KUROIWA[1], A. MIYACHI[1], K. MAKISE[2], Z. WANG[2], W. SHAN[3];* [1]NATIONAL ASTRONOMICAL OBSERVATORY OF JAPAN, [2]NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, [3]PURPLE MOUNTAIN OBSERVATORY.

11:00 4EX-02 **BALLOON-BORNE SUPERCONDUCTING INTEGRATED RECEIVER FOR ATMOSPHERIC RESEARCH** *O. KISELEV[1], M. BIRK[2], A. ERMAKOV[1], L. FILIPPENKO[1], H. GOLSTEIN[3], R. HOOGEVEEN[3], N. KINEV[1], B. VAN KUIK[3], A. DE LANGE[3], G. DE LANGE[3], P. YAGOUBOV[4], V. KOSHELETS[1];* [1]KOTEL'NIKOV INSTITUTE OF RADIO ENGINEERING AND ELECTRONICS RAS, [2]DLR GERMAN AEROSPACE CENTRE, REMOTE SENSING TECHNOLOGY INSTITUTE, D-82234 WESSLING, GERMANY, [3]SRON NETHERLANDS INSTITUTE FOR SPACE RESEARCH, P.O. BOX 800, 9700 AV GRONINGEN, THE NETHERLANDS, [4]EUROPEAN ORGANIZATION FOR ASTRONOMICAL RESEARCH IN THE SOUTHERN HEMISPHERE (ESO) KARL-SCHWARZSCHILD-STRASSE [2]; D-85748 GARCHING BEI MÜNCHEN, GERMANY.

11:15 4EX-03 **LOW NOISE 1 THZ SIS MIXER FOR STRATOSPHERIC OBSERVATORY** *A. KARPOV[1], D. MILLER[1], J. A. STERN[2], B. BUMBLE[2], H. G. LEDUC[2], J. ZMUIDZINAS[1];* [1]CALIFORNIA INSTITUTE OF TECHNOLOGY, [2]JPL, CALIFORNIA INSTITUTE OF TECHNOLOGY.

11:30 4EX-04 **ULTRAWIDE NOISE BANDWIDTH OF NBN HOT-ELECTRON BOLOMETER MIXERS WITH IN SITU GOLD CONTACTS** *I. TRETYAKOV, M. FINKEL, S. RYABCHUN, A. MASLENNIKOVA, N. KAUROVA, A. LOBASTOVA, B. VORONOV, G. GOL'TSMAN;* MOSCOW STATE PEDAGOGICAL UNIVERSITY.

11:45 4EX-05 **HETERODYNE MIXING AND DIRECT DETECTION PERFORMANCE OF A SUPERCONDUCTING NBN HOT-ELECTRON BOLOMETER** *W. ZHANG, K. ZHOU, S. LI, W. MIAO, Z. LIN, Y. REN, S. SHI;* PURPLE MOUNTAIN OBSERVATORY.

12:00 4EX-06 **LARGE-SIGNAL FREQUENCY RESPONSE OF AN HEB MIXER: FROM DC TO TERAHERTZ** *Y. LOBANOV[1], E. TONG[1], A. HEDDEN[1], R. BLUNDELL[1], B. VORONOV[2], G. GOL'TSMAN[2];* [1]HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS, [2]MOSCOW STATE PEDAGOGICAL UNIVERSITY.

12:15 4EX-07 **NBN HOT-ELECTRON BOLOMETER FOR DETECTION OF SHORT THZ PULSES** *K. S. ILIN[1], A. D. SEMENOV[2], V. JUDIN[3], H. W. HUEBERS[4], M. SIEGEL[1], A. S. MUELLER[5];* [1]INSTITUTE OF MICRO- AND NANOELECTRONIC SYSTEMS, KARLSRUHE INSTITUTE OF TECHNOLOGY, D-76187 KARLSRUHE, GERMANY, [2]GERMAN AEROSPACE CENTER, BERLIN, 12489 GERMANY, [3]LABORATORY FOR APPLICATIONS OF SYNCHROTRON RADIATION, UNIVERSITY OF KARLSRUHE, 76128 GERMANY, [4]GERMAN AEROSPACE CENTER, BERLIN, 12489 GERMANY, INSTITUT FÜR OPTIK UND ATOMARE PHYSIK, TECHNISCHE UNIVERSITÄT BERLIN, D-10623 BERLIN, GERMANY, [5]LABORATORY FOR APPLICATIONS OF SYNCHROTRON RADIATION, UNIVERSITY OF KARLSRUHE, 76128 GERMANY, INSTITUTE FOR SYNCHROTRON RADIATION, KARLSRUHE INSTITUTE OF TECHNOLOGY, 76021 GERMANY.

4EY: 149 DIGITAL CIRCUITS II *DIPLOMAT* OLEG MUKHANOV (HYPRES) AND JOHN PRZYBYSZ ()

10:30 4EY-01 ***(INVITED)*** **50 GHZ OPERATION OF SFQ FLOATING-POINT MULTIPLIER USING 10 KA/CM^2 NB PROCESS** *Y. SHIMAMURA[1], K. TOSHIKI[1], F. MIYAOKA[1], Y. YAMANASHI[1], N. YOSHIKAWA[1], A. FUJIMAKI[2], N. TAKAGI[2], K. TAKAGI[2];* [1]YOKOHAMA NATIONAL UNIVERSITY, [2]NAGOYA UNIVERSITY.

11:00 4EY-02 **CLOCK LINE CONSIDERATIONS FOR AN SFQ LARGE SCALE RECONFIGURABLE DATA PATHS PROCESSOR** *I. KATAEVA[1], H. AKAIKE[1], A. FUJIMAKI[1], S. NAGASAWA[2], N. TAKAGI[1];* [1]NAGOYA UNIVERSITY, [2]ISTEC-SRL.

11:15 4EY-03 **IMPROVED ROBUSTNESS FOR RSFQ CIRCUITS BY IMPLEMENTING MULTIPLE PHASE SHIFTING ELEMENTS** *O. MIELKE[1], T. ORTLEPP[2], R. STOLZ[1], J. KUNERT[1], H. G. MEYER[1], H. TOEPFER[2];* [1]INSTITUTE OF PHOTONIC TECHNOLOGY, [2]ILMENAU UNIVERSITY OF TECHNOLOGY.

11:30 4EY-04 **MULTI-BIT MIXERS FOR DIGITAL-RF RECEIVERS** *T. V. FILIPPOV, S. SARWANA, A. SAHU, A. F. KIRICHENKO, D. GUPTA;* HYPRES.

11:45 4EY-05 **HIGH-SPEED TEST OF A RADIX-2 BUTTERFLY PROCESSING ELEMENT FOR THE FAST FOURIER TRANSFORM USING SFQ CIRCUITS** *F. MIYAOKA, T. KAINUMA, Y. SHIMAMURA, Y. YAMANASHI, N. YOSHIKAWA;* YOKOHAMA NATIONAL UNIVERSITY.

12:00 4EY-06 **DESIGN AND IMPLEMENTATION OF COMPONENT CIRCUITS OF AN SFQ HALF-PRECISION FLOATING-POINT ADDER USING 10 KA/CM2 NB PROCESS** *T. KAINUMA[1], Y. YAMANASHI[1], N. YOSHIKAWA[1], A. FUJIMAKI[2], N. TAKAGI[2], K. TAKAGI[2];* [1]YOKOHAMA NATIONAL UNIVERSITY, [2]NAGOYA UNIVERSITY.

12:15 4EY-07 **DESIGN APPROACH OF DYNAMICALLY RECONFIGURABLE SINGLE FLUX QUANTUM LOGIC GATES** *Y. YAMANASHI, I. OKAWA, N. YOSHIKAWA;* YOKOHAMA NATIONAL UNIVERSITY.

4LX: 126 STABILITY LTS II *EMPIRE* LUCA BOTTURA (CERN) AND MARK BIRD (NHMFL - FSU)

10:30 4LX-01 **CONSOLIDATION OF THE 13 KA INTERCONNECTS IN THE LHC FOR OPERATION AT 7 TEV** *A. VERWEIJ, F. BERTINELLI, N. CATALAN LASHERAS, Z. CHARIFOULLINE, R. DENZ, P. FESSIA, C. GARION, H. TEN KATE, M. KORATZINOS, S. MATHOT, A. PERIN, C. SCHEUERLEIN, S. SGOBBA, J. STECKERT, J. TOCK;* CERN.

10:45 4LX-02 **STABILITY OF HIGH-JC NB[3]SN WIRES IN THE ADIABATIC LIMIT*** *A. K. GHOSH[1], E. GREGORY[2], X. PENG[3];* [1]BROOKHAVEN NATIONAL LABORATORY, [2]SUPERGENICS I, [3]HYPER TECH RESEARCH INC..

11:00 4LX-03 **STABILITY IN NB[3]SN CONDUCTORS; MAGNETIC AND SELF FIELD INSTABILITY CONSIDERATIONS AT 4 K AND 2 K, INFLUENCE OF MAGNET CONDITIONS** *M. D. SUMPTION, E. W. COLLINGS;* THE OHIO STATE UNIVERSITY.

11:15 4LX-04 **CONVERGENCE STUDIES OF THERMAL AND ELECTROMAGNETIC TRANSIENT QUENCH ANALYSIS OF 11 GEV SUPER HIGH MOMENTUM SPECTROMETER SUPERCONDUCTING MAGNETS IN JEFFERSON LAB** *E. SUN[1], P. BRINDZA[1], S. LASSITER[1], M. FOWLER[1], E. XU[2];* [1]JEFFERSON LAB, [2]VECTOR FIELDS SOFTWARE, COBHAM TECHNICAL SERVICES.

11:30 4LX-05 **THE ROLE OF QUENCH-BACK IN THE PASSIVE QUENCH PROTECTION OF UNCOUPLED SOLENOIDS IN SERIES WITH AND WITHOUT COIL SUB-DIVISION** *X. GUO[1], M. A. GREEN[2], L. WANG[3], H. WU[1], H. PAN[1];* [1]INSTITUTE OF CRYOGENICS AND SUPERCONDUCTIVE TECHNOLOGY, HIT, HARBIN, CHINA, [2]LAWRENCE BERKELEY NATIONAL LABORATORY, [3]SHANGHAI INSTITUTE OF APPLIED PHYSICS, SHANGHAI, CHINA..

11:45 4LX-06 WITHDRAWN

12:00 4LX-07 **PROTECTION SYSTEM FOR THE SUPERCONDUCTING OUTSERT COILS OF THE 45 T HYBRID MAGNET AT HFML** *A. DEN OUDEN, S. A. J. WIEGERS, J. A. A. J. PERENBOOM, J. MAAN;* RADBOUD UNIVERSITY NIJMEGEN.

4LY: 143 POWER TRANSMISSION CABLES *PALLADIAN* JIM MAGUIRE (AMSC) AND TAKATO MASUDA (SUMITOMO ELECTRIC INDUSTRIES, LTD.)

10:30 4LY-01 **AC LOSS MEASUREMENT IN A THREE-PHASE TRI-AXIAL CABLE: THEORETICAL BACKGROUND AND PRACTICAL MEASUREMENT** *D. N. NGUYEN, S. P. ASHWORTH;* LOS ALAMOS NATIONAL LABORATORY.

10:45 4LY-02 **EFFECTS OF LATERAL-TAILORING OF COATED CONDUCTOR FOR AC LOSS REDUCTION OF SUPERCONDUCTING POWER TRANSMISSION CABLES** *N. AMEMIYA[1], K. TAKEUCHI[1], Q. LI[2], T. NAKAMURA[1], M. YAGI[3], S. MUKOYAMA[3], N. FUJIWARA[4];* [1]KYOTO UNIVERSITY, [2]UNIVERSITY OF

CAMBRIDGE, [3]FURUKAWA ELECTRIC CO., LTD., [4]SUPERCONDUCTIVITY RESEARCH LABORATORY.

11:00 4LY-03 **THERMAL MODELING OF HIGH-TEMPERATURE SUPERCONDUCTING DC TRANSMISSION CABLE** *J. A. SOUZA, J. C. ORDONEZ, R. HOVSAPIAN, J. V. C. VARGAS;* FLORIDA STATE UNIVERSITY - FSU.

11:15 4LY-04 **ASSESSMENT OF OVERLAPPING THE TAPES FOR REDUCING AC LOSSES IN HTS POWER TRANSMISSION CABLES MADE OF HELICALLY WOUND COATED CONDUCTORS** *M. SIAHRANG[1], F. SIROIS[1], D. N. NGUYEN[2];* [1]ECOLE POLYTECHNIQUE DE MONTREAL, [2]LOS ALAMOS NATIONAL LABORATORY.

11:30 4LY-05 **AC LOSS DISTRIBUTION AMONG COATED CONDUCTORS IN SUPERCONDUCTING POWER TRANSMISSION CABLES** *Q. LI1, N. AMEMIYA[2], K. TAKEUCHI[2], T. NAKAMURA[2], N. FUJIWARA[3];* [1]UNIVERSITY OF CAMBRIDGE, [2]KYOTO UNIVERSITY, [3]SUPERCONDUCTIVITY RESEARCH LABORATORY.

11:45 4LY-06 **THERMAL MANAGEMENT OF LONG-LENGTH HTS CABLE SYSTEMS** *J. A. DEMKO[1], W. V. HASSENZAHL[2];* [1]ORNL, [2]ADVANCED ENERGY ANALYSIS.

12:00 4LY-07 **FEASIBILITY STUDY ON HIGH TEMPERATURE SUPERCONDUCTING FAULT CURRENT LIMITING CABLE (HTS-FCL CABLE) USING FLUX FLOW RESISTANCE** *F. KATO, H. KOJIMA, N. HAYAKAWA, F. ENDO, H. OKUBO;* NAGOYA UNIVERSITY.

12:15 4LY-08 **RESEARCH OF QUENCH PROTECTION METHOD FOR HIGH-TEMPERATURE SUPERCONDUCTING CABLES** *Y. NIU, H. ZHANG, Y. WANG, H. LIU;* NORTH CHINA ELECTRIC POWER UNIVERSITY.

4LZ: 140 HTS ACCELERATOR MAGNETS *HAMPTON* SATOSHI AWAJI (TOHOKU UNIVERSITY) AND PIERRE SCHNIZER (GSI HELMHOLTZZENTRUM FÜR SCHWERIONENFORSCHUNG MBH)

10:30 4LZ-01 **DEVELOPMENT AND TEST OF HTS-UNDULATOR COMPONENTS FOR FEL APPLICATIONS** *S. PRESTEMON, D. ARBELAEZ, R. D. SCHLUETER, D. R. DIETDERICH;* LBNL.

10:45 4LZ-02 **DESIGN AND TEST OF AN HTS PLANAR UNDULATOR PROTOTYPE** *C. BOFFO[1], W. WALTER[1], S. CASALBUONI[2], A. GRAU[2];* [1]BABCOCK NOELL GMBH, [2]INSTITUTE FOR SYNCHROTRON RADIATION, KARLSRUHE INSTITUTE OF TECHNOLOGY.

11:00 4LZ-03 **HIGH FIELD HTS R&D SOLENOID FOR MUON COLLIDER** *R. GUPTA[1], M. ANERELLA[1], A. GHOSH[1], H. KIRK[1], R. PALMER[1], S. PLATE[1], W. SAMPSON[1], Y. SHIROYANAGI[1], P. WANDERER[1], D. CLINE[2], B. BRANDT[3], A. GARREN[3], J. KOLONKO[3], R. SCANLAN[3], R. WEGGEL[3];* [1]BROOKHAVEN NATIONAL LABORATORY, [2]UNIVERSITY OF CALIFORNIA, LOS ANGELES, [3]PARTICLE BEAM LASERS, INC..

11:15 4LZ-04 **CRITICAL CURRENT GRADIENTS IN BI-2212 INSERT COILS FOR ACCELERATOR MAGNETS** *A. GODEKE, D. ARBELAEZ, D. W. CHENG, D. R. DIETDERICH, H. FELICE, S. O. PRESTEMON, G. SABBI, X. WANG;* LAWRENCE BERKELEY NATIONAL LABORATORY.

11:30 4LZ-05 **SECOND GENERATION HTS QUADRUPOLE FOR FRIB** *R. GUPTA[1], M. ANERELLA[1], J. COZZOLINO[1], A. GHOSH[1], H. HOCKER[1], W. SAMPSON[1], J. SCHMALZLE[1], Y. SHIROYANAGI[1], P. WANDERER[1], A. ZELLER[2];* [1]BROOKHAVEN NATIONAL LABORATORY, [2]NATIONAL SUPERCONDUCTING CYCLOTRON LABORATORY.

11:45 4LZ-06 **IMPLEMENTATION OF A FULL HTS DIPOLE SYNCHROTRON STORAGE RING** *M. FEE, V. CHAMRITSKI, M. CHRISTIAN, S. GIBSON, T. ROBINSON, D. POOKE;* HTS-110 LTD.

12:00 4LZ-07 **A NEW PROJECT FOR RESEARCH AND DEVELOPMENT OF FUNDAMENTAL TECHNOLOGIES FOR APPLICATIONS OF HIGH TC SUPERCONDUCTOR TAPES TO ACCELERATOR MAGNETS** *N. AMEMIYA[1], K. TAKAHASHI[1], N. OKADA[1], T. NAKAMURA[1], Y. MORI[1], T. OGITSU[2], T. TOSAKA[3], T. KURUSU[3], T. YOSHIYUKI[3], K. NODA[4], M. YOSHIMOTO[5];* [1]KYOTO UNIVERSITY, [2]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION, [3]TOSHIBA CORPORATION, [4]NATIONAL INSTITUTE OF RADIOLOGICAL SCIENCES, [5]JAPAN ATOMIC ENERGY AGENCY.

4MX: 112 FLUX-PINNING IMPROVEMENT IN HTS WIRES AND TAPES III *BLUE* CHAN PARK (SEOUL NATIONAL UNIVERSITY) AND SOPHIE HARRINGTON (UNIVERSITY OF CAMBRIDGE)

10:30 4MX-01 ***(INVITED)*** **CROSSOVER FROM NANOROD LIKE VORTEX PINNING TO NANOPARTICLE LIKE PINNING IN THE YBCO FILMS WITH THE ENGINEERED ARTIFICIAL PINNING CENTERS** *K. MATSUMOTO[1], P. MELE[1], A. ICHINOSE[2], Y. YOSHIDA[3], M. MUKAIDA[4], R. KITA[5];* [1]KIT, [2]CRIEPI, [3]NAGOYA UNIV., [4]KYUSHU UNIV., [5]SHIZUOKA UNIV..

11:00 4MX-02 ***(INVITED)*** **NANO-ENGINEERING OF PHASE SEPARABLE INCLUSIONS IN HIGH PERFORMANCE YBCO THICK FILMS FOR COATED CONDUCTORS** *T. G. HOLESINGER, D. M. FELDMANN, J. Y. COULTER, F. J. BACA, B. MAIOROV, L. CIVALE;* LOS ALAMOS NATIONAL LABORATORY.

11:30 4MX-03 **UNUSUAL FLUX PINNING PROPERTIES OF YBCO WITH LAYERED BAZRO3 NANOPARTICLE ADDITIONS** *T. J. HAUGAN[1], J. N. REICHART[1], M. J. MULLINS[1], E. L. BREWSTER[1], J. S. OLDS[1], P. N. BARNES[1], F. J. BACA[2], H. WANG[3];* [1]U.S. AIR FORCE RESEARCH LABORATORY, [2]LOS ALAMOS NATIONAL LABORATORY, [3]TEXAS A&M UNIVERSITY.

11:45 4MX-04 **C-AXIS CORRELATED PINNING BY NATURAL LINER DEFECTS IN YBCO FILM** *Y. YOSHIDA[1], Y. ICHINO[1], S. TAKAGI[1], Y. TAKAI[1], K. MATSUMOTO[2], A. ICHINOSE[3];* [1]NAGOYA UNIVERSITY, [2]KYUSHU INSTITUTE OF TECHNOLOGY, [3]CENTRAL RESEARCH INSTITUTE OF ELECTRIC POWER INDUSTRY.

12:00 4MX-05 **INDUCING SELF-ASSEMBLY OF NANOPARTICLES IN YBCO VIA CA-DOPING** *P. N. BARNES[1], T. HAUGAN[1], T. CAMPBELL[1], F. J. BACA[2];* [1]AIR FORCE RESEARCH LABORATORY, [2]LOS ALAMOS NATIONAL LABORATORY.

12:15 4MX-06 **SYNERGETIC PINNING CENTRES IN YBA^{2}CU^{3}OX FILMS THROUGH A COMBINATION OF AG NANO-DOT SUBSTRATE DECORATION, AG/YBCO QUASI-MULTILAYERS, AND THE USE OF BAZRO3-DOPED TARGET** *P. MIKHEENKO[1], V. DANG[1], M. AWANG KECHIK[1], A. SARKAR[1], P. PATURI[2], H. HUHTINEN[2], J. S. ABELL[1], A. CRISAN[1];* [1]UNIVERSITY OF BIRMINGHAM, [2]UNIVERSITY OF PORI.

4MY: 109 AC LOSSES III *BLUE PRE-FUNC.* ARCHIE CAMPBELL (UNIVERSITY OF CAMBRIDGE) AND STEVE FLESHLER (AMERICAN SUPERCONDUCTOR INC.)

10:30 4MY-01 **ANALYTICAL MODEL OF THE AC LOSSES IN POWER CABLES WITH TWO LAYER SUPERCONDUCTING TAPES** *Y. MAWATARI[1], A. P. MALOZEMOFF[2];* [1]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY, [2]AMERICAN SUPERCONDUCTOR CORP.

10:45 4MY-02 **AC MAGNETIZATION LOSS OF YBCO COATED CONDUCTOR TAPE MEASURED BY THREE DIFFERENT TECHNIQUES** *M. MAJOROS[1], M. D. SUMPTION[1], E. W. COLLINGS[1], J. SOUC[2], F. GOMORY[2], M. VOJENCIAK[2], L. M. FISHER[3], A. V. KALINOV[3], I. F. VOLOSHIN[3];* [1]THE OHIO STATE UNIVERSITY, [2]INST. ELECTRICAL ENGN., SLOVAK ACADEMY OF SCIENCES, BRATISLAVA, [3]ALL-RUSSIAN ELECTRICAL ENGN. INSTITUTE, MOSCOW.

11:00 4MY-03 **EVALUATION OF DIFFERENT APPROACHES TO AC LOSS REDUCTION IN [2]G YBCO TAPE** *G. MAJKIC[1], I. KESGIN[1], Y. ZHANG[1], Y. QIAO[2], B. SCHMIDT[2], V. SELVAMANICKAM[1];* [1]UNIVERSITY OF HOUSTON, [2]SUPERPOWER INC..

11:15 4MY-04 ***(INVITED)*** **EFFECT OF STRIATED STRANDS IN [2]G ROEBEL CABLE** *S. TERZIEVA[1], W. GOLDACKER[1], R. NAST[1], F. GRILLI[1], A. KUDYMOW[1], M. VOJENCIAK[2], J. SOUC[2];* [1]KARLSRUHE INSTITUTE OF TECHNOLOGY, INSTITUTE FOR TECHNICAL PHYSICS, KARLSRUHE, GERMANY, [2]INSTITUTE OF ELECTRICAL ENGINEERING, SLOVAK ACADEMY OF SCIENCES, BRATISLAVA, SLOVAKIA.

11:45 4MY-05 ***(INVITED)*** **AC LOSS REDUCTION IN FILAMENTIZED YBCO COATED CONDUCTORS WITH VIRTUAL TRANSVERSE CROSS-CUTS** *Y. ZHANG[1], R. C. DUCKWORTH[1], S. W. COOK[1], F. A. LIST[1], T. T. HA[1], M. J. GOUGE[1], Y. CHEN[2], X. XIONG[2], V. SELVAMANICKAM[2];* [1]OAK RIDGE NATIONAL LABORATORY, [2]SUPERPOWER INC..

4MZ: 104 MGB2 WIRES IV *CONGRESSIONAL* GIOVANNI GRASSO (COLUMBUS SUPERCONDUCTORS SPA) AND MATTHEW RINDFLEISCH (HYPER TECH RESEARCH)

10:30 4MZ-01 ***(INVITED)*** **A MODEL EXPLAINING THE IMPROVED SUPERCONDUCTING PROPERTIES OF IN SITU MGB2 WIRES AFTER**

COLD HIGH PRESSURE DENSIFICATION *C. SENATORE, M. S. A. HOSSAIN, R. FLÜKIGER;* DEPARTMENT OF CONDENSED MATTER PHYSICS & MANEP/NCCR, UNIVERSITY OF GENEVA.

11:00 4MZ-02 **SIGNIFICANTLY ENHANCED JC-B PROPERTIES IN MGB2 TAPES BY CARBOHYDRATE C^{9}H1^{1}NO DOPING** *X. ZHANG, Y. MA, D. WANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

11:15 4MZ-03 **NOVEL C-AXIS ORIENTED EX-SITU MGB2 CONDUCTORS** *A. YAMAMOTO[1], T. MOCHIZUKI[1], H. TANAKA[1], H. OGINO[1], J. SHIMOYAMA[1], K. KISHIO[1], S. HORII[2], K. WADA[3], Y. YAMADA[3], Y. SHIMADA[4], S. HATA[4], K. IKEDA[4], H. NAKASHIMA[4];* [1]UNIVERSITY OF TOKYO, [2]KOCHI UNIV. OF TECH., [3]TOKAI UNIVERSITY, [4]KYUSHU UNIVERSITY.

11:30 4MZ-04 **THE INFLUENCE OF STRAND DESIGN, MALIC ACID, AND DIRECT CARBON-BORON DOPING IN MGB2 STRANDS** *Y. YANG[1], M. SUSNER[1], M. D. SUMPTION[1], M. RINDFLEISCH[2], M. TOMSIC[2], E. W. COLLINGS[1];* [1]CENTER FOR SUPERCONDUCTING AND MAGNETIC MATERIALS, THE OHIO STATE UNIVERSITY, [2]HYPER TECH RESEARCH, COLUMBUS, OH.

11:45 4MZ-05 **EX SITU VERSUS IN-SITU CARBON-DOPING IN MGB2 SUPERCONDUCTING STRANDS** *M. A. SUSNER[1], Y. YANG[1], S. D. BOHNENSTIEHL[1], M. D. SUMPTION[1], M. MAJOROS[1], C. J. KOVACS[1], M. A. RINDFLEISCH[2], J. V. MARZIK[3], E. W. COLLINGS[1];* [1]THE OHIO STATE UNIVERSITY, [2]HYPER TECH RESEARCH, INC., [3]SPECIALTY MATERIALS, INC..

12:00 4MZ-06 **MGB2 SYNTHESIS REACTION AND TAPE SINTERING PROCESS INVESTIGATION WITH IN-SITU HEXRD TECHNIQUE.** *M. VIGNOLO, E. BELLINGERI, A. MARTINELLI, G. ROMANO, A. MALAGOLI, V. BRACCINI, C. FERDEGHINI;* CNR-SPIN.

12:15 4MZ-07 **REVIEW OF CARBOHYDRATE-DOPED MGB2 CONDUCTORS** *J. KIM[1], H. KUMAKURA[2], M. TOMSIC[3], S. DOU[4];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, UNIVERSITY OF WOLLONGONG, [2]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [3]HYPER TECH RESEARCH INCORPORATED, [4]UNIVERSITY OF WOLLONGONG.

12:30 4MZ-08 **PROGRESSIVE REDUCTION OF AC-LOSSES IN MULTIFILAMENTARY MAGNESIUM DIBORIDE CONDUCTORS** *E. A. YOUNG, H. WEN, Y. YANG;* UNIVERSITY OF SOUTHAMPTON.

14:00 POSTER SESSIONS

4EPA: 305 DIGITAL CIRCUITS III *EXHIBIT HALL* HANNES TOEPFER (ILMENAU UNIVERSITY OF TECHNOLOGY) AND JOHN SPARGO (NORTHROP GRUMMAN)

14:00 4EPA-01 / 81 **DESIGN AND IMPLEMENTATION OF MULTI-FLUX DRIVERS USING HIGH BETA_C JUNCTIONS** *D. OZAWA, Y. NATSUME, Y. YAMANASHI, N. YOSHIKAWA;* YOKOHAMA NATIONAL UNIVERSITY.

14:00 4EPA-02 / 82 **IMPLEMENTATION OF JOSEPHSON-CMOS HYBRID MEMORIES WITH BIT-SERIAL DATA INPUT/OUTPUT PORTS** *K. YAGUCHI[1], Y. OKAMOTO[1], H. JIN[1], H. PARK[1], Y. YAMANASHI[1], N. YOSHIKAWA[1], T. V. DUZER[2];* [1]YOKOHAMA NATIONAL UNIVERSITY, [2]UNIVERSITY OF CALIFORNIA, BERKELEY.

14:00 4EPA-03 / 83 **INTEGRATION OF OPTICAL WAVEGUIDES WITH SFQ CIRCUITS** *Y. ARITA, N. YOSHIKAWA, T. BABA, Y. YAMANASHI;* YOKOHAMA NATIONAL UNIVERSITY.

14:00 4EPA-04 / 84 **DEMONSTRATION OF 30 GBIT/S GENERATION OF SUPERCONDUCTIVE TRUE RANDOM NUMBER GENERATOR** *T. SUGIURA, Y. YAMANASHI, N. YOSHIKAWA;* YOKOHAMA NATIONAL UNIVERSITY.

14:00 4EPA-05 / 85 **INVESTIGAION OF CHARACTERISTIC VARIATIONS OF HIGH-SPEED CRYO CMOS AMPLIFIERS FOR INTERFACE CIRCUITS OF THE JOSEPHSON/CMOS HYBRID MEMORIES.** *H. JIN, Y. OKAMOTO, K. YAGUCHI, Y. YAMANASHI, N. YOSHIKAWA;* YOKOHAMA NATIONAL UNIVERSITY.

14:00 4EPA-06 / 86 **DESIGN AND EXPERIMENTAL STUDY OF AN RSFQ WAVE-PIPELINED 8-BIT ALU AND KOGGE-STONE ADDER** *A. F. KIRICHENKO[1], T. V. FILIPPOV[1], O. A. MUKHANOV[1], M. DOROJEVETS[2], C. AYALA[2];* [1]HYPRES, [2]STONY BROOK UNIVERSITY.

14:00 4EPA-07 / 87 **THE MULTIPLIER OF LARGE SCALE INTEGRATION SFQ CIRCUITS BASED ON THE BOOTH ENCODER** *R. NAKAMOTO, S. SAKURABA, T. ONOMI, S.*

SATO, K. NAKAJIMA; RESEARCH INSTITUTE OF ELECTRICAL COMMUNICATION, TOHOKU UNIVERSITY.

4EPB: 304 MICROWAVE III *EXHIBIT HALL* HAMID MOHEBBI AND RAAFAT MANSOUR (UNIVERSITY OF WATERLOO)

14:00 4EPB-01 / 88 **DEVELOPMENT OF SUPERCONDUCTING NBTIN WAVEGUIDES FOR THE TERAHERTZ SIS MIXERS** *K. KUROIWA[1], K. MAKISE[2], T. KOJIMA[1], Y. FUJII[3], M. KROUG[3], A. MIYACHI[3], Y. UZAWA[3], Z. WANG[2], H. OGAWA[1];* [1]OSAKA PREFECTURE UNIVERSITY, [2]NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, [3]NATIONAL ASTRONOMICAL OBSERVATORY OF JAPAN.

14:00 4EPB-02 / 89 **DESIGN AND ESTIMATION OF SUPERCONDUCTING BAND-PASS FILTERS USING HTS BULK RESONATORS** *A. SAITO[1], H. TESHIMA[2], S. ONO[1], N. SEKIYA[3], M. TAKEDA[4], K. NAKAJIMA[1], S. OHSHIMA[1];* [1]YAMAGATA UNIVERSITY, [2]NIPPON STEEL CORPORATION, [3]UNIVERSITY OF YAMANASHI, [4]SHIZUOKA UNIVERSITY.

14:00 4EPB-03 / 90 **MECHANISMS LIMITING THE PERFORMANCE OF MGB2 THIN-FILM MICROWAVE RESONATORS** *G. GHIGO[1], R. GERBALDO[1], L. GOZZELINO[1], F. LAVIANO[1], G. LOPARDO[1], B. MINETTI[1], E. MONTICONE[2], C. PORTESI[2], E. MEZZETTI[1];* [1]DEPARTMENT OF PHYSICS, POLITECNICO DI TORINO, TORINO, ITALY, [2]NATIONAL INSTITUTE OF METROLOGICAL RESEARCH, TORINO, ITALY.

14:00 4EPB-04 / 91 **TIME DOMAIN CHARACTERIZATION OF DISCRETE JOSEPHSON JUNCTION TRANSMISSION LINE** *M. KHOSHNEGAR, H. MAJEDI;* INSTITUTE FOR QUANTUM COMPUTING, UNIVERSITY OF WATERLOO.

14:00 4EPB-05 / 92 **DESIGN OF SUPERCONDUCTING TRANSMIT FILTERS USING STRIPLINE STRUCTURE** *N. SEKIYA[1], K. YAMAMOTO[1], S. KAKIO[1], A. SAITO[2], S. OHSHIMA[2];* [1]UNIVERSITY OF YAMANASHI, [2]YAMAGATA UNIVERSITY.

14:00 4EPB-06 / 93 **SIS JUNCTION USING AS A MICROWAVE NOISE SOURCE** *H. INOUE[1], T. NOGUCHI[2], K. KOHNO[1];* [1]UNIVERSITY OF TOKYO, [2]NATIONAL ASTRONOMICAL OBSERVATORY OF JAPAN.

14:00 4EPB-07 / 94 **MICROWAVE PHASE AND AMPLITUDE MODULATOR FOR MICROWAVE PULSE GENERATION** *T. OHKI[1], R. RAFIQUE[2];* [1]BBN TECHNOLOGIES, [2]ST-ERICSSON.

14:00 4EPB-08 / 95 WITHDRAWN.

4EPC: 309 MIXERS *EXHIBIT HALL* YOSHINORI UZAWA (NATIONAL ASTRONOMICAL OBSERVATORY OF JAPAN) AND MICHAEL SIEGEL (KARLSRUHE INSTITUTE OF TECHNOLOGY)

14:00 4EPC-01 / 96 **FABRICATION OF NANO-ANTENNAS FOR SUPERCONDUCTING INFRARED DETECTOR** *A. KAWAKAMI, S. SAITO;* NICT.

14:00 4EPC-02 / 97 **NBTIN HOT ELECTRON BOLOMETER WAVEGUIDE MIXERS ON SI^{3}N4 MEMBRANES AT THZ FREQUENCIES** *P. PÜTZ, K. JACOBS, M. JUSTEN, F. SCHOMAKER, M. SCHULTZ, S. WULFF, C. E. HONINGH;* UNIVERSITÄT ZU KÖLN.

14:00 4EPC-03 / 98 **A STUDY OF THE STABILITY OF THE QUASI-OPTICAL SUPERCONDUCTING NBTIN HOT-ELECTRON BOLOMETER MIXER AT 1.5 THZ FREQUENCY BAND** *H. MAEZAWA[1], T. YAMAKURA[2], S. YAMAMOTO[3], T. SHIINO[3], S. SHIBA[3], A. MIZUNO[1], N. NAKAI[2];* [1]NAGOYA UNIVERSITY, [2]TSUKUBA UNIVERSITY, [3]UNIVERSITY OF TOKYO.

14:00 4EPC-04 / 99 **DIRECT MEASUREMENT OF THE GAIN AND NOISE BANDWIDTHS OF HEB MIXERS** *Y. V. LOBANOV[1], E. TONG[1], A. HEDDEN[1], R. BLUNDELL[1], B. M. VORONOV[2], G. N. GOL'TSMAN[2];* [1]HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS, [2]MOSCOW STATE PEDAGOGICAL UNIVERSITY.

14:00 4EPC-05 / 100 **SENSOR APPLICATION OF A SERIES ARRAY OF MESOSCOPIC SNS JUNCTIONS AS A FERMION OSCILLATOR SYSTEM** *T. MATSUI, H. OHTA, A. KAWAKAMI;* NATIONAL INST. OF INFO. & COMM. TECH..

14:00 4EPC-06 / 101 **DESIGN AND PERFORMANCE OF 660 GHZ SIS MIXERS FOR THE SUBMILLIMETER ARRAY TELESCOPE** *A. HEDDEN[1], E. TONG[1], R. BLUNDELL[1], K. JACOBS[2], C. HONINGH[2], P. PUETZ[2], S. WULFF[2], M. SCHULTZ[2];* [1]HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS, [2]PHYSIKALISCHES INSTITUT DER UNIVERSITAT ZU KOLN.

14:00 4EPC-07 / 102 **DEVELOPMENT OF SUPERCONDUCTOR-INSULATOR-SUPERCONDUCTOR (SIS) TERAHERTZ RECEIVER WITH A MECHANICAL AND THERMAL VIBRATION-REDUCED CRYOCOOLER** *T. YAMADA, K. KIKUCHI, S. KOHJIRO;* AIST.

14:00 4EPC-08 / 103 **TESTING AND ANALYSIS OF BICRYSTAL JOSEPHSON JUNCTION MIXER'S CONVERSION EFFICIENCY AT THZ** *T. HUA, D. C. LI, L. ZHOU, W. W. XU, J. CHEN, P. H. WU;* RESEARCH INSTITUTE OF SUPERCONDUCTOR ELECTRONICS, NANJING UNIVERSITY, NANJING, CHINA.

14:00 4EPC-09 / 104 **SIS MIXER DEVELOPMENTS FOR SMA** *C. LI;* INSTITUTE OF ASTRONOMY AND ASTROPHYSICS, ACADEMIA SINICA.

14:00 4EPC-10 / 105 **CHARACTERIZATION OF SIS RECEIVERS USING A DIGITAL SPECTROMETER** *C. TONG, S. PAINE, A. HEDDEN, R. BLUNDELL;* SMITHSONIAN OBSERVATORY.

14:00 4EPC-11 / 106 **NOISE AND BANDWIDTH PERFORMANCE OF TWIN VERTICALLY STACKED SIS JUNCTIONS** *J. LI[1], S. SHI[1], M. WANG[2], T. CHEN[2], C. CHEN[2], W. LU[2], C. CHIU[2];* [1]PURPLE MOUNTAIN OBSERVATORY, [2]INSTITUTE OF ASTRONOMY AND ASTROPHYSICS.

14:00 4EPC-12 / 107 **STABILITY OF SUPERCONDUCTING HOT ELECTRON BOLOMETER RECEIVERS** *J. CHEN, Y. JIANG, M. LIANG, X. JIA, L. KANG, B. JIN, W. XU, P. WU;* NANJING UNIVERSITY.

14:00 4EPC-13 / 108 **MULTIBAND TERAHERTZ DETECTION USING A SUPERCONDUCTING HOT-ELECTRON BOLOMETER DETECTOR AND A TRIBAND MESH FILTER** *L. LIU[1], D. HERALD[2], J. ZHANG[2], A. LICHTENBERGER[2], R. WEIKLE, II2, G. XING[1], P. FAY[1];* [1]UNIV. OF NOTRE DAME, [2]UNIV. OF VIRGINIA.

4EPD: 310 NOVEL DETECTORS *EXHIBIT HALL* SAE WOO NAM (NIST) AND ERIC DAULER (MIT LINCOLN LABORATORY)

14:00 4EPD-01 / 109 **A RE-ENTRANT MGB2 CAVITY FOR DYNAMIC CASIMIR EXPERIMENT** *G. GIUNCHI[1], A. FIGINI ALBISETTI[1], C. BRAGGIO[2], G. CARUGNO[2], G. MESSINEO[3], G. RUOSO[4], G. GALEAZZI[4];* [1]EDISON SPA, [2]INFN SEZIONE PADOVA ,DIPARTIMENTO FISICA "G.GALILEI", [3]INFN SEZIONE TRIESTE ,DIPARTIMENTO FISICA UNIVERSITÀ TRIESTE, [4]LABORATORI NAZIONALI LEGNARO ,INFN ,LEGNARO ,PADOVA.

14:00 4EPD-02 / 110 WITHDRAWN

14:00 4EPD-03 / 111 **THZ DIRECT DETECTOR BASED ON SI WITH SUPERCONDUCTING CONTACTS.** *D. MOROZOV[1], P. MAUSKOPF[1], P. BARRY[1], T. BRIEN[1], T. WHALL[2], M. PREST[2];* [1]CARDIFF UNIVERSITY, [2]WARWICK UNIVERSITY.

14:00 4EPD-04 / 112 **YBCO-FILM BASED TERAHERTZ DETECTORS IN NOT DISSIPATIVE REGIME: CONTROL OF THE THZ RESPONSE BY HEAVY IONS NANOSTRUCTURE IMPLANTATION** *E. MEZZETTI[1], R. GERBALDO[1], G. GHIGO[1], L. GOZZELINO[1], F. LAVIANO[1], B. MINETTI[1], A. ROVELLI[2];* [1]POLITECNICO DI TORINO, [2]ISTITUTO NAZIONALE DI FISICA NUCLEARE - LABORATORI NAZIONALI DEL SUD.

14:00 4EPD-05 / 113 **OPTICAL CHARACTERIZATION OF THE QUANTUM CAPACITANCE DETECTOR** *J. BUENO[1], N. LLOMBART[2], P. K. DAY[3], J. KAWAMURA[3], K. B. COOPER[3], P. M. ECHTERNACH[3];* [1]CENTRO DE ASTROBIOLOGIA, [2]UNIVERSIDAD COMPLUTENSE DE MADRID, [3]JET PROPULSION LABORATORY.

14:00 4EPD-06 / 114 WITHDRAWN

14:00 4EPD-07 / 115 **SINGLE PHOTON RECEIVER BASED ON ABRIKOSOV VORTICES** *G. KARAPETROV, V. G. YEFREMENKO, G. MIHAJLOVIC, A. M. DATESMAN, S. D. BADER, V. NOVOSAD;* ARGONNE NATIONAL LABORATORY.

14:00 4EPD-08 / 116 **PHOTORESPONSE CHARACTERIZATION OF YBCO THIN FILMS** *H. ATIKIAN, B. GHAMSARI, A. H. MAJEDI;* UNIVERSITY OF WATERLOO.

14:00 4EPD-09 / 117 **NUMERICAL ANALYSIS OF SUPERCONDUCTING OPTICAL PLASMONIC WAVEGUIDES** *A. EFTEKHARIAN, H. MAJEDI;* INSTITUTE FOR QUANTUM COMPUTING, UNIVERSITY OF WATERLOO.

14:00 4EPD-10 / 118 **HIGH COUNT-RATE NEAR-IR SINGLE PHOTON DETECTION WITH A NIOBIUM NANOBOLOMETER** *F. W. CARTER, D. F. SANTAVICCA, A. J. ANNUNZIATA, L. FRUNZIO, D. E. PROBER;* YALE UNIVERSITY.

14:00 4EPD-11 / 119 **INVESTIGATION AND OPTIMIZATION OF LEKID STRUCTURES AND MULTI-PIXEL ARRAYS AT 4.2 K** *S. H. WUENSCH, T. KAPPLER, F. GEUPPERT, G. HAMMER, M. SIEGEL;* KARLSRUHE INSTITUTE OF TECHNOLOGY.

14:00 4EPD-12 / 120 **SUBGAP TUNNELING CURRENT AT LOW TEMPERATURE IN NB/AL-ALN/NB SIS JUNCTIONS** *T. NOGUCHI, T. SUZUKI, T. TAMURA;* NATIONAL ASTRONOMICAL OBSERVATORY OF JAPAN.

4EPE: 301 QUANTUM COMPUTING III *EXHIBIT HALL* THOMAS OHKI (BBN TECHNOLOGIES) AND KEVIN OSBORN (LABORATORY FOR PHYSICAL SCIENCES)

14:00 4EPE-01 / 121 **DISTRIBUTED-ELEMENT PHASE QUBIT** *O. NAAMAN, J. E. BAUMGARDNER, A. HERR, R. M. LEWIS, J. A. STRONG, J. PARK, A. A. PESETSKI;* NORTHROP GRUMMAN.

14:00 4EPE-02 / 122 **IDENTIFYING SOURCES OF DECOHERENCE IN A DC SQUID PHASE QUBIT WITH A SUB-MICRON JOSEPHSON JUNCTION AND INTERDIGITATED CAPACITOR** *A. J. PRZYBYSZ, H. KWON, R. BUDOYO, E. J. CROWE, B. K. COOPER, C. VLAHACOS, S. PAUL, A. DRAGT, C. J. LOBB, J. R. ANDERSON, F. C. WELLSTOOD;* UNIVERSITY OF MARYLAND.

14:00 4EPE-03 / 123 **TRANSMON QUBIT WITH A LUMPED-ELEMENT RESONANT READOUT** *D. H. SLICHTER[1], R. VIJAY[1], O. NAAMAN[2], I. SIDDIQI[1];* [1]QUANTUM NANOELECTRONICS LAB, UNIVERSITY OF CALIFORNIA BERKELEY, [2]QUANTUM NANOELECTRONICS LAB, UNIVERSITY OF CALIFORNIA BERKELEY; NORTHROP GRUMMAN, ELECTRONIC SYSTEMS.

14:00 4EPE-04 / 124 **ARCHITECTURE AND OPERATION OF A SUPERCONDUCTOR ADIABATIC OPTIMIZATION PROCESSOR** *M. W. JOHNSON, A. J. BERKLEY, P. BUNYK, R. HARRIS, J. JOHANSSON, T. LANTING, E. TOLKACHEVA, I. PERMINOV, E. CHAPPLE, B. WILSON, J. HILTON, E. LADIZINSKY, G. ROSE;* D-WAVE SYSTEMS, INC..

14:00 4EPE-05 / 125 **DIGITAL QUANTUM GATES** *A. A. PESETSKI, J. E. BAUMGARDNER, R. M. LEWIS, J. A. STRONG;* NORTHROP GRUMMAN.

14:00 4EPE-06 / 126 **ROBUST AND SCALABLE FLUX QUBITS AND COUPLERS** *T. LANTING;* D-WAVE SYSTEMS.

14:00 4EPE-07 / 127 **EFFECT OF SPIN-FLIP PULSE SEQUENCES ON DEPHASING IN A FLUX BIASED PHASE QUBIT** *B. MAO[1], G. SUN[2], S. HAN[1];* [1]UNIVERSITY OF KANSAS, [2]NANJING UNIVERSITY.

14:00 4EPE-08 / 128 **QUANTUM COMPUTING WITH QUANTUM KNOTS IN 1024 QUANTUM RANDOM NUMBER GENERATOR ON MAGNETIC FLUX QUBITS** *D. O. LEDENYOV[1], V. O. LEDENYOV[2], O. P. LEDENYOV[3];* [1]JAMES COOK UNIVERSITY, TOWNSVILLE QUEENSLAND 4811, AUSTRALIA, [2]KHARKOV STATE UNIVERSITY, SVOBODY SQUARE 4, KHARKOV 61077, UKRAINE, [3]NATIONAL SCIENTIFIC CENTRE KHARKOV INSTITUTE OF PHYSICS AND TECHNOLOGY, ACADEMICHESKAYA 1, KHARKOV 61108, UKRAINE.

4EPF: 311 SNSPD: CHARACTERIZATION AND ANALYSIS *EXHIBIT HALL* FRANCESCO MARSILI (MIT) AND SANDER DORENBOS (DELFT UNIVERSITY OF TECHNOLOGY)

14:00 4EPF-01 / 129 **THERMAL RESET AND KINETIC INDUCTANCE IN SUPERCONDUCTING NANOWIRE SINGLE-PHOTON DETECTORS** *A. J. ANNUNZIATA[1], D. F. SANTAVICCA[1], J. CHUDOW[1], O. QUARANTA[2], L. FRUNZIO[1], M. ROOKS[1], A. FRYDMAN[3], D. PROBER[1];* [1]YALE UNIVERSITY, [2]UNIVERSITY OF SALERNO, [3]BAR ILAN UNIVERSITY.

14:00 4EPF-02 / 130 **A NOVEL BIAS SCHEME AND READ OUT ELECTRONICS FOR SUPERCONDUCTING NANOWIRES SINGLE PHOTON DETECTOR** *Z. YAN, A. MAJEDI, T. JENNEWEIN;* UNIVERSITY OF WATERLOO.

14:00 4EPF-03 / 131 **SWIFTS WAVEGUIDE MICRO-SPECTROMETER INTEGRATED ON TOP OF A 1D-NBN SSPD ARRAY** *P. CAVALIER[1], C. CONSTANCIAS[2], A. MORAND[3], L. MAINGAULT[1], P. FEAUTRIER[4], J. VILLEGIER[1];* [1]CEA-INAC, [2]CEA LETI-DPTS, [3]IMEP-LAHC, [4]LAOG.

14:00 4EPF-04 / 132 **SUPERCONDUCTING NANOWIRE SINGLE PHOTON DETECTOR DEVELOPED FOR PRACTICAL QKD APPLICATIONS** *L. B. ZHANG, Q. Y. ZHAO, L. KANG, J. CHEN, C. H. CAO, P. H. WU;* RESEARCH INSTITUTE OF SUPERCONDUCTOR ELECTRONICS, DEPARTMENT OF ELECTRONIC SCIENCE & ENGINEERING, NANJING UNIVERSITY.

14:00 4EPF-05 / 133 **HIGH SPATIAL RESOLUTION DISTRIBUTED FIBER SENSOR THERMOMETER USING RAMAN SCATTERING IN SINGLE-MODE**

FIBER *S. NAM[1], B. BAEK[1], S. DYER[1], M. TANNER[2], R. HADFIELD[2], S. MIKI[3], Z. WANG[3];* [1]NIST, [2]HERIOT-WATT UNIVERSITY, [3]NICT.

14:00 4EPF-06 / 134 **MULTICHANNEL SNSPD SYSTEM WITH 21% SYSTEM DETECTION EFFICIENCY AT 1550NM WAVELENGTH** *S. MIKI, T. YAMASHITA, M. FUJIWARA, M. SASAKI, Z. WANG;* NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY.

4EPG: 316 SNSPD: FABRICATION AND PACKAGING *EXHIBIT HALL* ANDREW KERMAN (MIT LINCOLN LABORATORY) AND KARL BERGGREN (MIT)

14:00 4EPG-01 / 135 **COMPACT FIBER-COUPLED PACKAGING TECHNIQUE FOR SNSPDS WITH OPTICAL CAVITY STRUCTURE** *S. MIKI[1], T. YAMASHITA[1], M. FUJIWARA[1], M. SASAKI[1], M. TAKEDA[2], Z. WANG[1];* [1]NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY, [2]SHIZUOKA UNIVERSITY.

14:00 4EPG-02 / 136 **DEVELOPMENT OF A VERSATILE EXPERIMENTAL SETUP FOR SUPERCONDUCTING NANOWIRE SINGLE PHOTON DETECTORS** *M. KESHAVARZ AKHLAGHI, A. HAMED MAJEDI;* UNIVERSITY OF WATERLOO.

14:00 4EPG-03 / 137 **PERFORMANCES OF FIBER-COUPLED SUPERCONDUCTING NANOWIRE SINGLE-PHOTON DETECTORS MEASURED AT ULTRALOW TEMPERATURE** *T. YAMASHITA, S. MIKI, W. QIU, M. FUJIWARA, M. SASAKI, Z. WANG;* NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY.

14:00 4EPG-04 / 138 **SUPERCONDUCTOR/FERROMAGNET PROXIMIZED NANOSTRUCTURES FOR OPTICAL PHOTON DETECTION APPLICATIONS** *G. P. PEPE[1], L. PARLATO[1], N. MARROCCO[1], V. PAGLIARULO[1], G. PELUSO[1], C. DE LISIO[1], A. BARONE[1], R. CRISTIANO[2], M. EJARNAES[2], A. CASABURI[2], H. MYOREN[3], T. TAINO[3], R. SOBOLEWSKI[4], C. BONAVOLONTÀ[1];* [1]CNR-SPIN AND UNIVERSITY OF NAPLES FEDERICO II, [2]CNR ISTITUTO DI CIBERNETICA, NAPLES, [3]SAITAMA UNIVERSITY, SAITAMA, JAPAN, [4]UNIVERSITY OF ROCHESTER NY, USA.

14:00 4EPG-05 / 139 **TWO NEW GROWTH METHODS FOR SUPERCONDUCTING NIOBIUM NITRIDE THIN FILMS FOR PHOTODETECTION** *M. W. RABIN, T. L. WILLIAMSON, G. ZOU, M. A. HOFFBAUER, Q. JIA, D. ROSENBERG, N. R. WEISSE-BERNSTEIN, O. A. VALENZUALA, T. G. HOLESINGER;* LOS ALAMOS NATIONAL LABORATORY.

14:00 4EPG-06 / 140 **NIOBIUM NITRIDE FILM GROWTH FOR NEXT GENERATION SUPERCONDUCTING SINGLE PHOTON DETECTORS** *L. SAN EMETERIO ALVAREZ[1], W. JIANG[1], K. SENAPATI[1], Z. H. BARBER[1], M. G. TANNER[2], R. J. WARBURTON[2], R. H. HADFIELD[2];* [1]UNIVERSITY OF CAMBRIDGE, [2]HERIOT-WATT UNIVERSITY.

14:00 4EPG-07 / 141 WITHDRAWN

4EPH: 313 TES MULTIPLE TOPICS *EXHIBIT HALL* NAOKO IYOMOTO (THE UNIVERSITY OF TOKYO) AND SAE WOO NAM (NIST)

14:00 4EPH-01 / 142 **STUDY OF INTERDIFFUSION OF IR AND (AU, AL) INTO SI/SIN SUBSTRATES** *M. RIBEIRO GOMES[1], D. BAGLIANI[2], F. GATTI[2], E. ALVES[3], N. PESSOA BARRADAS[3], F. BRUNETTO[2], M. DELL'ANNA[2], M. GALEAZZI[4];* [1]UNIVERSITY OF LISBON, CENTRE FOR NUCLEAR PHYSICS, [2]I.N.F.N. AND UNIVERSITY OF GENOA, [3]INSTITUTO TECNOLÓGICO E NUCLEAR, [4]UNIVERSITY OF MIAMI.

14:00 4EPH-02 / 143 **THE ROLE OF SUBSTRATE PROPERTIES IN ELECTRON-PHONON COUPLING IN NORMAL METALS BELOW 1 K** *J. M. UNDERWOOD, P. J. LOWELL, G. C. O'NEIL, J. N. ULLOM;* NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.

14:00 4EPH-03 / 144 **AN INVESTIGATION OF THE LONGITUDINAL PROXIMITY EFFECT IN SUPERCONDUCTING AND NORMAL METAL TES** *A. BROWN[1], J. A. CHERVENAK[2], G. KLETETSCHKA[3], N. S. JETHAVA[4], V. MIKULA[3];* [1]NASA-GSFC/MEI TECHNOLOGIES INC, [2]NASA-GSFC, [3]NASA-GSFC/CATHOLIC UNIVERSITY, [4]NASA-GSFC/ORAU.

14:00 4EPH-04 / 145 **INVESTIGATION OF THE LATERAL PROXIMITY EFFECT IN A TRANSITION-EDGE HOT-ELECTRON MICRO-BOLOMETER** *E. M. BARRENTINE[1], D. E. BRANDL[1], A. D. BROWN[2], K. L. DENIS[2], W. T. HSIEH[2], P. C. NAGLER[2], T. R. STEVENSON[2], D. J. TALLEY[2], P. T. TIMBIE[1], K. U-YEN[2];* [1]UNIVERSITY OF WISCONSIN-MADISON, [2]NASA GODDARD SPACE FLIGHT CENTER.

14:00 4EPH-05 / 146 **MAGNESIUM AS A LIGHT-WEIGHT ALTERNATIVE TO COPPER FOR MANUFACTURING REFRIGERATORS** *K. PRASAI[1], D. BOGORIN[1], M. GALEAZZI[1], D. MCCAMMON[2], Y. UPRETY[1];* [1]UNIVERSITY OF MIAMI, [2]UNIVESITY OF WISCONSIN.

14:00 4EPH-06 / 147 **DEVELOPMENT OF ALPHA SPECTROMETERS USING MAGNETIC MICROCALORIMETERS** *I. KIM, Y. JANG, M. KIM, J. LEE, K. LEE, M. LEE, S. LEE, W. YOON, Y. KIM;* KOREA RESEARCH INSTITUTE OF STANDARDS AND SCIENCE (KRISS).

14:00 4EPH-07 / 148 **PERFORMANCE ESTIMATION FOR THIN-FILM MAGNETIC MICROCALORIMETERS WITH IN-PLANE MAGNETIZATION** *S. T. P. BOYD[1], F. T. JAECKEL[1], R. A. CANTOR[2];* [1]UNIVERSITY OF NEW MEXICO, [2]STAR CRYOELECTRONICS.

14:00 4EPH-08 / 149 **FLUX-COUPLED DIRECT FEEDBACK IN A SQUID AMPLIFIER** *B. A. HINES[1], K. M. SUNDQVIST[2], D. N. SEITZ[2], M. E. HUBER[1];* [1]UNIVERSITY OF COLORADO DENVER, [2]UNIVERSITY OF CALIFORNIA BERKELEY.

4LPA: 279 MAGLEV: DYNAMIC PROPERTIES, VIBRATION *EXHIBIT HALL* NURIA DEL-VALLE (UNIVERSITAT AUTONOMA DE BARCELONA) AND MICHAEL TARTAGLIA (FERMILAB)

14:00 4LPA-01 / 149 **DYNAMIC PROPERTIES OF MAGNETIC LEVITATION SYSTEM USING HIGH-TEMPERATURE SUPERCONDUCTORS** *I. SAKAI, T. HIGUCHI;* DEPARTMENT OF PRECISION ENGINEERING, SCHOOL OF ENGINEERING, THE UNIVERSITY OF TOKYO.

14:00 4LPA-02 / 150 **THE DYNAMIC CHARACTERISTICS OF THE HTS BULK SUPERCONDUCTING ACTUATOR DRIVEN WITH AC ELECTROMAGNETS** *D. INOUE, S. KIM, J. JOO, Y. UWANI;* OKAYAMA UNIVERSITY.

14:00 4LPA-03 / 151 **OPERATING CHARACTERISTIC ANALYSIS OF ELECTROMAGNETIC SUSPENSION SYSTEM CONSIDERING THE VARIATION OF THE MAGNETIC FIELD DISTRIBUTION DUE TO THE VIBRATION** *J. JANG[1], K. CHANG[1], Y. KIM[1], Y. CHUNG[2], C. LEE[3], T. KO[1];* [1]YONSEI UNIVERSITY, [2]THE UNIVERSITY OF SUWON, [3]KOREA RAILROAD RESEARCH INSTITUTE.

14:00 4LPA-04 / 152 **EFFECT OF AN ADDITIONAL MASS ON NONLINEAR RESONANCE OF A BEAM LEVITATED OVER HIGH-TC SUPERCONDUCTING BULKS** *T. TAKABAYASHI, T. KOKUZAWA, T. SUGIURA;* KEIO UNIVERSITY.

14:00 4LPA-05 / 153 **WITHDRAWN**

14:00 4LPA-06 / 154 **STUDY OF THE LATERAL FORCE BEHAVIOR IN A FIELD COOLED SUPERCONDUCTING LINEAR BEARING** *D. H. N. DIAS[1], G. G. SOTELO[2], R. DE ANDRADE JR.[1];* [1]FEDERAL UNIVERSITY OF RIO DE JANEIRO, [2]FLUMINENSE FEDERAL UNIVERSITY.

14:00 4LPA-07 / 155 **VIBRATION REDUCTION OF A HIGH-TC SUPERCONDUCTING MAGNETIC LEVITATION SYSTEM WITH AN AUTOPARAMETRIC VIBRATION ABSORBER** *D. TAGUCHI, T. SUGIURA;* KEIO UNIVERSITY.

14:00 4LPA-08 / 156 **DYNAMICS WITH MAGNETIC INTERACTION OF TWO COAXIAL SUPERCONDUCTING RINGS** *K. BHAN[1], M. FEDORCHUK[2], V. KOZOREZ[3];* [1]KECK GRADUATE INSTITUTE, [2]COLGATE UNIVERSITY, [3]TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV.

14:00 4LPA-09 / 157 **INCREASED LEVITATION PROPERTY OF TWO-SET MODEL IN MAGNETIC LEVITATION SYSTEM USING MAGNETIC SHIELDING EFFECT OF HTS BULK** *T. TAKAO[1], S. SAITO[1], S. KAMEYAMA[1], T. DOI[1], N. TANOUE[1], H. KAMIJO[2];* [1]SOPHIA UNIVERSITY, [2]RAILWAY TECHNICAL RESEARCH INSTITUTE.

14:00 4LPA-10 / 158 **SUSPENSION FORCE TRANSITION OF HIGH-TC SUPERCONDUCTING BULKS IN A VARYING EXTERNAL MAGNETIC FIELD** *L. LIU, J. S. WANG, J. LI, J. ZHENG, G. T. MA, S. Y. WANG;* SOUTHWEST JIAOTONG UNIVERSITY.

4LPB: 273 MAGNET SEPARATION *EXHIBIT HALL* CHRISTOPHER REY (OAK RIDGE NATIONAL LABORATORY) AND MIKE COFFEY (CRYOMAGNETICS, INC.)

14:00 4LPB-01 / 159 **REMOVAL OF HG FROM HUMAN SERUM WITH NANO-SIZE MAGNETIC BEADS BY ARTIFICIAL DIALYZER WITH SUPERCONDUCTING MAGNETIC SEPARATOR** *T. OKAMOTO[1], O. MIURA[1],*

M. TAKEUCHI[2]; [1]TOKYO METROPOLITAN UNIVERSITY, [2]KOMAZAWA JIN CLINIC.

14:00 4LPB-02 / 160 **WITHDRAWN**

14:00 4LPB-03 / 161 **STUDY ON HIGH GRADIENT MAGNETIC SEPARATION FOR SELECTIVE REMOVAL OF IMPURITY FROM HIGHLY VISCOUS FLUID** *S. HAYASHI, F. MISHIMA, Y. AKIYAMA, S. NISHIJIMA;* OSAKA UNIVERSITY.

14:00 4LPB-04 / 162 **HIGH GRADIENT SUPERCONDUCTING MAGNETIC SEPARATION FOR IRON REMOVAL FROM THE GLASS POLISHING WASTE** *F. MISHIMA, Y. AKIYAMA, S. NISHIJIMA;* GRADUATE SCHOOL OF ENGINEERING, OSAKA UNIVERSITY.

14:00 4LPB-05 / 163 **HIGH GRADIENT MAGNETIC SEPARATION OF PNEUMATIC CONVEYED POWDER PRODUCTS** *Y. NAKAI, F. MISHIMA, Y. AKIYAMA, S. NISHIJIMA;* OSAKA UNIVERSITY.

14:00 4LPB-06 / 164 **DEVELOPMENT OF NUMERICAL ANALYSIS METHOD FOR ION SEPARATION WITH NOVEL MAGNETIC CHROMATOGRAPHY** *S. NOGUCHI[1], S. KIM[2];* [1]HOKKAIDO UNIVERSITY, [2]OKAYAMA UNIVERSITY.

14:00 4LPB-08 / 166 **MAGNETIC SEPARATION OF PAPER PULP WASTEWATER** *D. KIM, S. KWON, Y. CHOI, J. KIM;* KOREA BASIC SCIENCE INSTITUTE.

4LPC: 270 MOTORS AND GENERATORS - DESIGN *EXHIBIT HALL* GREGORY SNITCHLER (AMERICAN SUPERCONDUCTOR) AND PHILIPPE MASSON (ADVANCED MAGNET LAB)

14:00 4LPC-01 / 167 **STATOR DESIGN FOR A 1000KW HTSC MOTOR WITH AIR-GAP WINDING** *D. WU[1], E. CHEN[1], J. CHEN[2];* [1]TECO-WESTINGHOUSE MOTOR COMPANY, [2]WUHAN INSTITUTE OF MARINE ELECTRIC PROPULSION.

14:00 4LPC-02 / 168 **DESIGN OF THE FIELD COIL FOR A 5 MW HTS SYNCHRONOUS MOTOR** *H. KIM[1], Y. KWON[1], J. SONG[2], H. LEE[2];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]KOREA UNIVERSITY.

14:00 4LPC-03 / 169 **DESIGN STUDIES ON A 1000KW HIGH TEMPERATURE SUPER-CONDUCTING MOTOR** *J. CHEN, W. TANG, J. ZHENG, F. XIE;* WUHAN INSTITUTE OF MARINE ELECTRIC PROPUSION.

14:00 4LPC-04 / 170 WITHDRAWN.

4LPD: 280 MOTORS AND GENERATORS, BULK AND PM *EXHIBIT HALL* HO MIN KIM (KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE) AND MICHAEL GREEN (LAWRENCE BERKELEY NATIONAL LABORATORY)

14:00 4LPD-01 / 171 **A TUBULAR LINEAR MAGNETIC GEAR USING HTS BULKS FOR FIELD MODULATION** *W. LI, K. CHAU, J. LI;* THE UNIVERSITY OF HONG KONG.

14:00 4LPD-02 / 172 **DESIGN AND ANALYSIS OF A HTS PERMANENT-MAGNET HYBRID BRUSHLESS MACHINE** *C. LIU, K. T. CHAU, J. ZHONG, J. LI;* THE UNIVERSITY OF HONG KONG.

14:00 4LPD-03 / 173 **DESIGN AND ANALYSIS OF A SUPERCONDUCTOR LINEAR GENERATOR FOR WAVE ENERGY CONVERTER** *M. MIRZAEI[1], S. ABDOLLAHI[2];* [1]ELECTRICAL ENGINEERING DEPARTMENT, AMIRKABIR UNIVERSITY OF TECHNOLOGY, [2]ELECTRICAL ENGINEERING DEPARTMENT, UNIVERSITY OF TEHRAN.

14:00 4LPD-04 / 174 **EXPERIMENTAL MAGNETIZATION AND OPERATION OF A HIGH-TC SUPERCONDUCTING MOTOR** *W. XIAN, Y. YAN, W. YUAN, T. A. COOMBS;* THE UNIVERSITY OF CAMBRIDGE.

14:00 4LPD-05 / 175 **A NOVEL HTS-PM VERNIER MOTOR FOR DIRECT-DRIVE PROPULSION** *J. LI, K. CHAU;* THE UNIVERSITY OF HONG KONG.

14:00 4LPD-06 / 176 **PULSE FIELD MAGNETIZATION PROPERTIES OF BULK RE-BA-CU-O AS POLE-FIELD MAGNETS FOR HTS ROTATING MACHINES** *Z. DENG[1], M. MIKI[1], B. FELDER[1], K. TSUZUKI[1], R. TAGUCHI[1], N. SHINOHARA[1], H. HAYAKAWA[2], M. IZUMI[1];* [1]TOKYO UNIVERSITY OF MARINE SCIENCE AND TECHNOLOGY, [2]KITANO SEIKI CO. LTD..

14:00 4LPD-07 / 177 **INFLUENCE OF AC MAGNETIC FIELD ON AN HTS ROTATING MACHINE WITH GD-BULK HTS FIELD-POLE MAGNETS** *M. MIKI[1], B. FELDER[1], Z. DENG[1], K. TSUZUKI[1], N. SHINOHARA[1], M. IZUMI[1], T. IDA[2], H. HAYAKAWA[3];*

[1]TOKYO UNIVERSITY OF MARINE SCIENCE AND TECHNOLOGY, [2]HIRISHIMA NATIONAL COLLEGE OF MARINE TECHNOLOGY, [3]KITANO SEIKI CO. LTD..

14:00 4LPD-08 / 178 **TORQUE DENSITY COMPARISON OF DOUBLE-STATOR AND TRADITIONAL PERMANENT MAGNET BRUSHLESS MOTORS** *Y. WANG[1], M. CHENG[1], K. CHAU[2];* [1]SOUTHEAST UNIVERSITY, [2]HONG KONG UNIVERSITY.

4LPE: 287 MAGLEV: SYSTEM STUDIES *EXHIBIT HALL* GIOVANNI GIUNCHI (EDISON SPA) AND MASAFUMI OGATA (RAILWAY TECHNICAL RESEARCH INSTITUTE)

14:00 4LPE-01 / 179 **RESEARCH OF MAGLEV PROJECT FOR HTS MAGLEV LUANCH** *F. GUO, Y. J. TANG;* HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY.

14:00 4LPE-02 / 180 **RECENT DEVELOPMENTS OF HIGH TEMPERATURE SUPERCONDUCTING MAGLEV AT THE ASCLAB** *J. S. WANG, S. S. WANG, J. ZHENG, F. YEN, G. T. MA;* SOUTHWEST JIAOTONG UNIVERSITY.

14:00 4LPE-03 / 181 **MAGNETIC POTENTIAL WELL AS A NEW MAGNETIC LEVITATION PHENOMENON** *V. KOZOREZ;* TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV.

14:00 4LPE-04 / 182 **A DRIVEN MODE RESEARCH OF A HTS MAGLEV PARALLEL COIL GUN** *F. GUO, Y. J. TANG;* HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY.

14:00 4LPE-05 / 183 **CHARACTERISTIC ANALYSIS ON GROUND CONDUCTORS IN HTS EDS SYSTEM** *D. BAE1, H. KANG[1], Y. CHUNG[2], T. KO[3];* [1]CHUNGJU NATIONAL UNIVERSITY, [2]SUWON UNIVERSITY, [3]YONSEI UNIVERSITY.

14:00 4LPE-06 / 184 **TRIAL MANUFACTURE OF SMALL HTS MAGNET USING [2]G WIRES FOR MAGLEV TRAIN APPLICATION** *M. OGATA, K. MIZUNO, Y. ARAI, H. HASEGAWA, T. SASAKAWA, K. NAGASHIMA;* RAILWAY TECHNICAL RESEARCH INSTITUTE.

14:00 4LPE-07 / 185 **DESIGN AND ANALYSIS OF A SUPERCONDUCTING LINEAR SYNCHRONOUS MOTOR FOR MAGLEV TRANSPORTATION SYSTEM** *S. E. ABDOLLAHI[1], M. MIRZAEI[2];* [1]UNIVERSITY OF TEHRAN, [2]AMIRKABIR UNIVERSITY OF TECHNOLOGY.

14:00 4LPE-08 / 186 WITHDRAWN.

14:00 4LPE-09 / 187 **CONCEPTUAL DESIGN OF HTS COIL IN SUPERCONDUCTING ELECTROMAGNET FOR MAGLEV** *C. LEE[1], J. KIM[1], D. BAE[2], Y. YOON[3], J. JANG[4], T. KO[4];* [1]KOREA RAILROAD RESEARCH INSTITUTE, [2]CHUNGJU NATIONAL UNIVERSITY, [3]ANSAN COLLEGE OF TECHNOLOGY, [4]YONSEI UNIVERSITY.

4LPF: 277 OTHER NOVEL APPLICATIONS I *EXHIBIT HALL* SASHA ISHMAEL (FLORIDA INSTITUTE OF TECHNOLOGY & ADVANCED MAGNET LAB. INC.) AND AKIRA YAMAMOTO (KEK)

14:00 4LPF-01 / 188 **A CRYO-FREE 10 T HIGH-FIELD MAGNET SYSTEM FOR A NOVEL SUPERCONDUCTING APPLICATION** *W. STAUTNER, K. HARAN, S. MINE, J. ROCHFORD;* GE GLOBAL RESEARCH.

14:00 4LPF-02 / 189 **HIGH TEMPERATURE SUPERCONDUCTING DEGAUSSING FROM FEASIBILITY STUDY TO FLEET ADOPTION** *J. KEPHART, B. FITZPATRICK, M. PYRYT;* NAVAL SURFACE WARFARE CENTER - CARDEROCK DIVISION.

14:00 4LPF-03 / 190 **SUITABLE STRUCTURE OF PM-PM SYSTEM WITH A COPPER PLATE FOR REDUCING VIBRATION TRANSMISSION AND IMPROVING DAMPING EFFECT IN A SUPERCONDUCTING SEISMIC ISOLATION DEVICE** *S. SASAKI[1], K. SHIMADA[1], T. YAGAI[1], M. TSUDA[1], T. HAMAJIMA[1], N. KAWAI[2], K. YASUI[2];* [1]TOHOKU UNIVERSITY, [2]OKUMURA CORPORATION.

14:00 4LPF-04 / 191 **CONDUCTION-COOLED SUPERCONDUCTING MAGNET WITH PERSISTENT CURRENT SWITCH OPERATION** *Q. WANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

14:00 4LPF-05 / 192 **DEVELOPMENT AND TEST OF MODEL APPARATUS UTILIZING HTS MAGNETIC LEVITATION FOR NON-CONTACT SPINNING CLEAN-UP PROCESSORS OF PHOTO MASK PRODUCTION** *S. FUKUI1, J. OGAWA[1], T. OKA[1], T. SATO[1], K. SAITO[2], S. SORIMACHI[2];* [1]NIIGATA UNIVERSITY, [2]MTC CO. LTD..

14:00 4LPF-06 / 193 **DESIGN OF A SUPERCONDUCTING DIAMAGNETIC TORQUER SYSTEM** *C. CUI;* INSTITUTE OF ELECTRICAL ENGINEERING,CHINESE ACADEMY OF SCIENCES.

4LPG: 278 OTHER NOVEL APPLICATIONS II *EXHIBIT HALL* ALVARO SANCHEZ (UNIVERSITAT AUTONOMA DE BARCELONA) AND MICHAEL STRASIK (THE BOEING COMPANY)

14:00 4LPG-01 / 194 **DESIGN ALGORITHM OF HIGH HOMOGENOUS MULTI-LAYER HIGH MAGNETIC SUPERCONDUCTING MAGNET** *Q. WANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

14:00 4LPG-02 / 195 **THIXOTROPIC GEL FLOW UNDER SUPERCONDUCTING MAGNETS: ANALYTICAL AND NUMERICAL STUDIES, EXPERIMENTAL PROJECT** *L. HEYRENDT, J. LÉVÊQUE, D. NETTER;* GREEN - NANCY UNIVERSITÉ.

14:00 4LPG-03 / 196 **SIMULATION OF GRAVITY CONTROLL EFFECTS ON PROTEIN CRYSTAL GROWTH USING MAGNETIC FORCE** *H. OKADA, N. HIROTA, S. MATSUMOTO, H. WADA;* NATIONAL INSTITUTE FOR MATERIALS SCIENCE.

14:00 4LPG-04 / 197 **DEVELOPMENT OF THE HIGH SENSITIVITY INSTRUMENT FOR IN-VIVO AND FAST EXAMINATION OF IRON DISTRIBUTION WITHIN THE ANIMAL TORSO** *J. J. CHIEH[1], S. YANG[2], H. HORNG[1], C. HONG[3], H. YANG[4], C. WU[5], W. TSENG[6];* [1]NATIONAL TAIWAN NORMAL UNIVERSITY, [2]MAGQU CO. LTD, [3]NATIONAL CHUNG HSING UNIVERSITY, [4]NATIONAL TAIWAN UNIVERSITY, [5]NATIONAL TAIWAN UNIVERSITY HOSPITAL, [6]E-DA HOSPITAL.

14:00 4LPG-05 / 198 **ADVANCED APPLICATIONS BASED ON THE MAGNETIC POTENTIAL WELL (MPW)** *O. KOZOREZ[1], H. FRANKLIN[2];* [1]KOZORIZ-FRANKLIN CALIFORNIA MAGLEV INC., [2]KOZORIZ-FRANKLIN CALIFORNIA MAGLEV, INC..

14:00 4LPG-06 / 199 **2-AXIS ELECTROMAGNETIC STIRRING SYSTEM WAS PRODUCED EXPERIMENTALLY, AND ESTIMATED WITH AC SUPERCONDUCTING MAGNETS** *H. KASAHARA[1], S. TANIGUCHI[2], S. SHIMASAKI[2], K. UENO[2], K. MIYASHITA[3];* [1]CRIEPI, [2]TOHOKU UNIV., [3]HITACHI CABLE LTD..

4LPH: 276 POWER CABLE AC LOSS AND CO-AXIAL *EXHIBIT HALL* SHINICHI MUKOYAMA (FURUKAWA ELECTRIC) AND MIKE GOUGE (ORNL)

14:00 4LPH-01 / 200 **PITCH DESIGN OF HTS CABLE CORE COMPOSED OF COATED CONDUCTORS WITH NIW SUBSTRATE** *K. SIM[1], J. CHO[1], T. KO[2];* [1]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [2]YONSEI UNIVERSITY.

14:00 4LPH-02 / 201 **HYSTERESIS LOSS IN POWER CABLES MADE OF [2]G HTS WIRES WITH NIW ALLOY SUBSTRATE** *V. ZUBKO, S. FETISOV, A. NOSOV, N. POLYAKOVA, V. VYSOTSKY;* RUSSIAN SCIENTIFIC R&D CABLE INSTITUTE.

14:00 4LPH-03 / 202 **THERMAL ANALYSIS OF CO-AXIAL MULTI-LAYERED BSCCO HTS POWER CABLE** *D. MIYAGI, N. TAKATA, N. TAKAHASHI;* OKAYAMA UNIVERSITY.

14:00 4LPH-04 / 203 **MEASUREMENTS OF AC LOSS AND CURRENT DISTRIBUTION IN SUPERCONDUCTING CABLES** *D. NGUYEN, S. P. ASHWORTH;* LOS ALAMOS NATIONAL LABORATORY.

14:00 4LPH-05 / 204 **STUDY OF ELECTRIC MEASUREMENT METHOD OF AC LOSS IN MULTI-LAYER HTS CABLE WITH HTS MAGNETIC SHIELD** *S. FUKUI1, J. OGAWA[1], H. KATO[1], T. SATO[1], T. OKA[1], K. RYU[2];* [1]NIIGATA UNIVERSITY, [2]CHONNAM NATIONAL UNIVERSITY.

14:00 4LPH-06 / 205 **AC LOSS STUDY WITH 5 M HTS MODEL CABLES** *V. VYSOTSKY, K. SHUTOV, A. NOSOV, S. FETISOV, V. SYTNIKOV;* RUSSIAN SCIENTIFIC R&D CABLE INSTITUTE.

14:00 4LPH-07 / 206 **AC LOSS MEASUREMENT OF A SHORT HTS CABLE WITH SHIELD BY ELECTRICAL METHOD** *Z. LI[1], Y. MA[1], K. RYU[1], S. FUKUI[2], S. HWANG[3];* [1]CHONNAM NATIONAL UNIVERSITY, [2]NIIGATA UNIVERSITY, [3]KOREA ELECTRIC POWER RESEARCH INSTITUTE.

14:00 4LPH-08 / 207 **DESIGN AND EVALUATION OF 66 KV CLASS HTS POWER CABLE USING REBCO WIRES** *M. OHYA[1], T. SETOGUCHI[1], H. YUMURA[1], T. MASUDA[1], N. AMEMIYA[2], H. ICHIKAWA[3], N. FUJIWARA[3];* [1]SUMITOMO ELECTRIC INDUSTRIES, LTD., [2]KYOTO UNIVERSITY, [3]INTERNATIONAL SUPERCONDUCTIVITY TECHNOLOGY CENTER.

14:00 4LPH-09 / 208 **A DISCUSSION ON CURRENT DISTRIBUTION IN MULTILAYER AC HTS CABLES - PROXIMITY EFFECT** *W. Z. GONG, Y. XIN, J. Y. ZHANG;* INNOPOWER SUPERCONDUCTOR CABLE CO., LTD..

4LPJ: 275 POWER CABLE OVER CURRENT AND DISTRIBUTION *EXHIBIT HALL* VITALY VYSOTSKY (RUSSIAN SCIENTIFIC R&D CABLE INSTITUTE) AND ERIC SUN (JLAB)

14:00 4LPJ-01 / 209 **OVER-CURRENT CHARACTERISTICS OF 66 KV RE123 HTS POWER CABLE** *X. WANG[1], H. UEDA[1], A. ISHIYAMA[1], M. OHYA[2], N. FUJIWARA[3];* [1]WASEDA UNIVERSITY, [2]SUMITOMO ELECTRIC INDUSTRIES, LTD., [3]INTERNATIONAL SUPERCONDUCTIVITY TECHNOLOGY CENTER.

14:00 4LPJ-02 / 210 **OVER-CURRENT CHARACTERISTICS OF A 275KV CLASS YBCO POWER CABLE** *T. URYU[1], X. WANG[1], H. UEDA[1], A. ISHIYAMA[1], M. YAGI[2], N. FUJIWARA[3];* [1]WASEDA UNIVERSITY, [2]FURUKAWA ELECTRIC CO., LTD., [3]ISTEC-SRL.

14:00 4LPJ-03 / 211 WITHDRAWN

14:00 4LPJ-04 / 212 **STABILITY ANALYSIS OF HTS POWER CABLE WITH FAULT CURRENT** *M. FURUSE[1], S. FUCHINO[1], K. AGATSUMA[1], T. MASUDA[2], M. OHYA[2], S. HONJO[3], T. MIMURA[3], Y. NOGUCHI[3];* [1]NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY, [2]SUMITOMO ELECTRIC INDUSTRIES, LTD., [3]TOKYO ELECTRIC POWER COMPANY.

14:00 4LPJ-05 / 213 **NUMERICAL ANALYSIS OF SUPERCONDUCTING POWER CABLE DURING FAULT CONDITION** *S. CHOI[1], S. LEE[2], K. SIM[3], J. CHO[3], T. KO[1];* [1]YONSEI UNIVERSITY, [2]UIDUK UNIVERSITY, [3]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

14:00 4LPJ-06 / 214 **DYNAMIC SIMULATION OF HTSC CABLES WITH CONVENTIONAL SIMULATION PROGRAM** *M. J. GELABERT-SERRA[1], A. SUMPER[2], X. GRANADOS[3], A. SUDRIA-ANDREU[2], J. RULL-DURAN[1];* [1]CITCEA-UPC, [2]CITCEA-UPC/IREC, [3]ICMAB.

14:00 4LPJ-07 / 215 **MINIMAL PATH CONNECTION OF SUPERCONDUCTING POWER CABLE USING STEINER TREE** *S. LEE;* SEOUL NATIONAL UNIVERSITY OF TECHNOLOGY.

14:00 4LPJ-08 / 216 **THE ANALYSIS OF CURRENT DISTRIBUTION FOR PARALLEL HTS TAPES** *X. LI, Y. WANG, X. CUI;* NORTH CHINA ELECTRIC POWER UNIVERSITY.

4LPK: 274 POWER CABLE PROJECTS AND DC CABLES *EXHIBIT HALL* JIM MAGUIRE (AMSC) AND MAKOTO TSUDA (TOHOKU UNIVERSITY)

14:00 4LPK-01 / 217 **TEST RESULTS OF A 30M HTS CABLE FOR YOKOHAMA PROJECT** *T. MASUDA[1], H. YUMURA[1], M. OHYA[1], Y. ASHIBE[1], H. ITO[1], M. WATANABE[1], S. HONJO[2], T. MIMURA[2], Y. KITOU[2], Y. NOGUCHI[2];* [1]SUMITOMO ELECTRIC INDUSTRIES, LTD., [2]TOKYO ELECTRIC POWER COMPANY.

14:00 4LPK-02 / 218 **TESTING RESULTS OF 154KV HTS POWER CABLE IN SOUTH KOREA** *B. YANG[1], J. KANG[1], J. CHO[2], S. LEE[3], S. KIM[4];* [1]KEPCO, [2]KERI, [3]LS CABLE, [4]CVE.

14:00 4LPK-03 / 219 **PROGRESS ON THE PERFORMANCE TEST OF KEPCO HTS POWER CABLE** *Y. CHOI;* KBSI.

14:00 4LPK-04 / 220 **HARMONIC DEPENDANT LOSS CHARACTERISTIC STUDY OF HTS CABLE USING THYRISTOR CONVERTER** *J. KIM[1], A. KIM[1], D. KIM[1], I. YU[1], M. PARK[1], J. CHO[2], K. SIM[2], S. KIM[2], J. LEE[3];* [1]CHANGWON NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSITUTE, [3]KYUNGNAM UNIVERSITY.

14:00 4LPK-05 / 221 **CRITICAL CURRENT AND ITS MAGNETIC FIELD EFFECT MEASUREMENT OF HTS TAPES FORMING DC SUPERCONDUCTING CABLE** *M. HAMABE[1], M. SUGINO[1], H. WATANABE[1], T. KAWAHARA[1], S. YAMAGUCHI[1], Y. ISHIGURO[2], K. KAWAMURA[3];* [1]CHUBU UNIVERSITY, [2]JFE STEEL, [3]MAYEKAWA M.F.G..

14:00 4LPK-06 / 222 **A NOVEL APPROACH FOR DESIGN OF HTS DC CABLE** *Y. WANG, H. LIU, Y. ZHENG, H. ZHANG;* NORTH CHINA ELECTRIC POWER UNIVERSITY.

14:00 4LPK-07 / 223 **DEVELOPMENT OF DC SUPERCONDUCTING CABLE FOR RAILWAY SYSTEM** *M. TOMITA, Y. FUKUMOTO, K. SUZUKI, M. MURALIDHAR, A. ISHIHARA;* RAAILWAY TECHNICAL RESERCH INSTITUTE.

14:00 4LPK-08 / 224 **IRON STEEL CRYOGENIC PIPE FOR DC SUPERCONDUCTING POWER TRANSMISSION LINE** *S. YAMAGUCHI, T. FUJII, M. HAMABE, H. WATANABE, T. KAWAHARA;* CHUBU UNIVERSITY.

4LPL: 272 SFCL HYBRID AND OTHERS *EXHIBIT HALL* TOSHIYUKI MITO (NATIONAL INSTITUTE FOR FUSION SCIENCE) AND ERIC SUN (JLAB)

14:00 4LPL-01 / 225 **RESEARCH ON HYBRID TYPE SUPERCONDUCTING FAULT CURRENT LIMITER WITH YBCO CC** *Z. ZHANG;* INSTITUTE OF ELECTRICAL ENGINEERING CHINESE ACADEMY OF SCIENCES.

14:00 4LPL-02 / 226 **A DOUBLE LINE COMMUTATION TYPE SFCL WITH FIRST PEAK LIMITING FUNCTION** *O. HYUN[1], S. YIM[1], C. PARK[1], S. YOO[1], S. YANG[1], W. KIM[1], H. KIM[1], G. LEE[2], J. SIM[2], K. PARK[2];* [1]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [2]LS INDUSTRIAL SYSTEMS.

14:00 4LPL-03 / 227 **EXPERIMENTAL STUDY ON FAULT CURRENT LIMITING AND UNINTERRUPTIBLE POWER SUPPLYING CHARACTERISTICS OF A SFCL USING MAGNETIC COUPLING OF TWO COILS** *S. LIM, I. YOU, S. WANG, J. KIM;* SOONGSIL UNIVERSITY.

14:00 4LPL-04 / 228 **ANALYSIS ON OPERATIONAL CHARACTERISTICS OF HYBRID TYPE SUPERCONDUCTOR FAULT CURRENT LIMITER WITH THE FIRST HALF CYCLE NON-LIMITING OPERATION** *I. YOU, S. WANG, S. LIM, J. KIM;* SOONGSIL UNIVERSITY.

14:00 4LPL-05 / 229 **STUDY ON PEAK CURRENT LIMITING CHARACTERISTICS OF A FLUX-LOCK TYPE SFCL USING ITS THIRD WINDING** *S. LIM, J. KIM;* SOONGSIL UNIVERSITY.

14:00 4LPL-06 / 230 **INCREASE CHARACTERISTICS OF CURRENT LIMITING CAPACITY OF SFCL BY USING MATRIX-TYPE SFCL MODULE** *B. YOO[1], D. CHUNG[1], Y. CHO[2], B. JUNG[2], H. CHOI[1];* [1]WOOSUK UNIV., [2]CHOSUN UNIV..

14:00 4LPL-07 / 231 **CHARACTERIZATION OF FAULT VOLTAGES OF MATRIX-TYPE SFCL WITH 1 X 9 MODULE** *D. CHUNG[1], B. YOO[1], Y. CHO[2], B. JUNG[2], D. CHEONG[3], H. CHOI[2];* [1]WOOSUK UNIV., [2]CHOSUN UNIV., [3]KOREA UNIVIERSITY OF EDUCATION.

14:00 4LPL-08 / 232 **EMERGENCY BLACKOUT OPERATION OF CRYOGENIC SYSTEM FOR HYBRID SFCL** *H. CHANG[1], M. KIM[1], J. SIM[2], S. YIM[3], O. HYUN[3];* [1]HONG IK UNIVERSITY, [2]LS INDUSTRIAL SYSTEMS INC., [3]KOREA ELECTRIC POWER RESEARCH INSTITUTE.

4LPM: 246 STABILITY HTS III *EXHIBIT HALL* DONG KEUN PARK (MIT) AND RAMESH GUPTA (BROOKHAVEN NATIONAL LABORATORY)

14:00 4LPM-01 / 233 **THEORETICAL AND EXPERIMENTAL STUDY OF SUPERCONDUCTING COILS WOUND USING COATED CONDUCTORS** *W. YUAN, M. D. AINSLIE, W. XIAN, Z. HONG, Y. YAN, A. M. CAMPBELL, T. A. COOMBS;* UNIVERSITY OF CAMBRIDGE.

14:00 4LPM-03 / 235 **NORMAL ZONE PROPAGATION IN PANCAKE COILS MADE OUT OF YBCO COATED CONDUCTORS.** *G. A. LEVIN[1], K. A. NOVAK[2], W. A. JONES[1], P. N. BARNES[1];* [1]PROPULSION DIRECTORATE, AIR FORCE RESEARCH LABORATORY, WRIGHT-PATTERSON AIR FORCE BASE, OH, USA, [2]DEPARTMENT OF MATHEMATICS, AIR FORCE INSTITUTE OF TECHNOLOGY, WRIGHT-PATTERSON AIR FORCE BASE, OH 45433 USA.

14:00 4LPM-04 / 236 **AC LOSSES AND TRANSPORT CURRENT IN ROEBEL CABLE MADE OF YBCO COATED CONDUCTOR TAPES** *M. MAJOROS[1], M. D. SUMPTION[1], D. TURRIONI[2], E. BARZI[2], A. ZLOBIN[2], A. NIJHUIS[3], E. W. COLLINGS[1];* [1]THE OHIO STATE UNIVERSITY, COLUMBUS, OH, USA, [2]FERMI NATIONAL ACCELERATOR LABORATORY, BATAVIA, IL, USA, [3]LOW TEMPERATURE DIVISION, FACULTY OF APPLIED PHYSICS, UNIVERSITY OF TWENTE, ENSCHEDE, NL.

14:00 4LPM-05 / 237 **HEAT AND QUENCH PROPAGATION IN YBCO COATED CONDUCTOR COILS AT 4.2 K AND SUBJECTED TO APPLIED FIELDS - MODELING AND MEASUREMENT** *M. MAJOROS[1], M. D. SUMPTION[1], M. A. SUSNER[1], V. LOMBARDO[2], D. TURRIONI[2], E. BARZI[2], E. W. COLLINGS[1];* [1]THE OHIO STATE UNIVERSITY, COLUMBUS, OH, USA, [2]FERMI NATIONAL ACCELERATOR LABORATORY, BATAVIA, IL, USA.

14:00 4LPM-06 / 238 **QUENCH ANALYSIS OF A HIGH-CURRENT FORCED-FLOW HTS CONDUCTOR FOR FUSION MAGNETS** *C. MARINUCCI[1], R. WESCHE[1], L. BOTTURA[2];* [1]EPFL, CRPP FUSION TECHNOLGY, [2]CERN.

14:00 4LPM-07 / 239 **THERMAL STABILITY PROPERTIES UNDER THE CRYOCOOLING CONDITION FOR YBA^2CU^3O7 COATED CONDUCTOR TAPE** *K. WATANABE[1], V. R. ROMANOVSKII[2], Y. KAWASE[1], G. NISHIJIMA[1], S. AWAJI[1], I. INOUE[3], H. SAKAMOTO[3], M. MIMURA[3], S. NAGAYA[4];* [1]INSTITUTE FOR MATERIALS RESEARCH, TOHOKU UNIVERSITY, [2]RUSSIAN RESEARCH CENTER 'KURCHATOV INSTITUTE', [3]FURUKAWA ELECTRIC CO., LTD., [4]CHUBU ELECTRIC POWER CO., INC..

14:00 4LPM-08 / 240 **THERMAL STABILITY OF CONDUCTION-COOLED YBCO PANCAKE COIL** *H. MIYAZAKI, S. IWAI, T. TOSAKA, K. TASAKI, S. HANAI, M. URATA, S. IOKA, Y. ISHII;* TOSHIBA CORPORATION.

14:00 4LPM-09 / 241 **WITHDRAWN**

14:00 4LPM-10 / 242 **BENCHMARK OF TWO QUENCH SIMULATION CODES FOR THE PROTECTION STUDY OF AN HIGH-FIELD HTS INSERT DIPOLE** *A. STENVALL[1], M. SORBI[2], G. VOLPINI[2], R. MIKKONEN[1];* [1]TAMPERE UNIVERSITY OF TECHNOLOGY, [2]ISTITUTO NAZIONALE DI FISICA NUCLEARE.

4LPN: 271 TRANSFORMERS II *EXHIBIT HALL* NICHOLAS LONG (INDUSTRIAL RESEARCH LTD) AND NAOKI HAYAKAWA (NAGOYA UNIVERSITY)

14:00 4LPN-01 / 243 **APPLICATION OF IBAD-MGO BUFFERED COATED CONDUCTORS FOR HTS POWER TRANSFORMERS** *Y. GOSHO1, T. SAITOH[2], H. OKAMOTO[3], H. HAYASHI[3];* [1]SUPERCONDUCTIVITY RESEARCH LABORATORY INTERNATIONAL SUPERCONDUCTIVITY TECHNOLOGY CENTER, [2]FUJIKURA LTD., [3]KYUSHU ELECTRIC POWER CO..

14:00 4LPN-02 / 244 **FEASIBILITY RESEARCH OF IMPROVING THE SUPERCONDUCTING INDUCTANCE PULSED CURRENT OUTPUT WAVEFORM BY USING HTS AIR-CORE TRANSFORMER** *M. SONG, Y. TANG, J. LI;* R□D CENTER OF APPLIED SUPERCONDUCTIVITY,HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY.

14:00 4LPN-03 / 245 **FAULT CURRENT LIMITATION IN POWER NETWORK BY SUPERCONDUCTING TRANSFORMERS MADE OF ^{2}G HTS** *T. JANOWSKI[1], B. A. GLOWACKI[2], G. WOJTASIEWICZ[3], S. KOZAK[3], J. KOZAK[3], B. KONDRATOWICZ-KUCEWICZ[3], M. MAJKA[3];* [1]LUBLIN UNIVERSITY OF TECHNOLOGY, POLAND, [2]DEPARTMENT OF MATERIALS SCIENCE AND METALLURGY, UNIVERSITY OF CAMBRIDGE, UK; INSTITUTE OF POWER ENGINEERING, POLAND, [3]ELECTROTECHNICAL INSTITUTE IN WARSAW, POLAND.

14:00 4LPN-04 / 246 **DEVELOPMENT OF ELEMENTAL TECHNOLOGY FOR HTS POWER TRANSFORMER** *H. HAYASHI[1], H. OKAMOTO[1], M. IWAKUMA[2], A. TOMIOKA[2], Y. GOSHO[3], Y. SHIOHARA[3];* [1]KYUSHU ELECTRIC POWER CO.,INC., [2]KYUSHU UNIVERSITY, [3]ISTEC-SRL.

14:00 4LPN-05 / 247 **DESIGN AND LOSS ANALYSIS OF AN HTS TRANSFORMER WITH A LARGE CURRENT CAPACITY** *W. S. KIM[1], S. LEE[2], S. H. PARK[2], J. LEE[3], C. PARK[4], S. HAHN[5], K. CHOI[2];* [1]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [2]KOREA POLYTECHNIC UNIVERSITY, [3]WOOSUK UNIVERSITY, [4]SEOUL NATIONAL UNIVERSITY, [5]ELECTRICAL ENGINEERING AND SCIENCE RESEARCH INSTITUTE.

14:00 4LPN-06 / 248 **NOVEL SELF-LIMITING TRANSFORMER WITH ACTIVE MAGNETIC SHORT CIRCUIT USING PERFECT YBCO WIRE LOOPS** *J. KOSA;* KECSKEMET COLLEGE FACULTY OF MECHANICAL ENGINEERING AND AUTOMATION.

14:00 4LPN-07 / 249 **ANALYSIS OF CURRENT LIMITING AND RECOVERY CHARACTERISTICS OF SUPERCONDUCTING FAULT CURRENT LIMITING TRANSFORMER (SFCLT) WITH YBCO COATED CONDUCTORS** *T. KITO, M. KOTARI, H. KOJIMA, N. HAYAKAWA, F. ENDO, H. OKUBO;* NAGOYA UNIVERSITY.

4MPA: 211 AC LOSSES IV *EXHIBIT HALL* DOAN NGUYEN (LOS ALAMOS NATIONAL LABORATORY) AND YASUNORI MAWATARI (NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY)

14:00 4MPA-01 / 249 WITHDRAWN

14:00 4MPA-02 / 250 **AC TRANSPORT LOSS OF COATED CONDUCTORS IN ANTI-PARALLEL ARRANGEMENT** *F. GÖMÖRY, J. SOUC, M. VOJENCIAK;* SLOVAK ACADEMY OF SCIENCES.

14:00 4MPA-03 / 251 **MAGNETIC AND TRANSPORT AC LOSSES IN HTS ROEBEL CABLE** *N. J. LONG[1], L. S. LAKSHMI[1], M. P. STAINES[1], Z. JIANG[1], R. A. BADCOCK[1], K. P. THAKUR[1], J. EMHOFER[2];* [1]INDUSTRIAL RESEARCH LTD, [2]VIENNA UNIVERSITY OF TECHNOLOGY.

14:00 4MPA-04 / 252 **STUDIES OF IC AND AC TRANSPORT LOSS FOR THE MULTI-LAYERED 2G HTS TAPES USED IN AN ELECTRIC MACHINE** *R. PEI;* CAMBRIDGE UNIVERSITY.

14:00 4MPA-05 / 253 **INFLUENCE OF REPEATED MECHANICAL STRESSES ON AC MAGNETIZATION LOSSES IN MULTI-FILAMENTARY BI2223/AG-SHEATHED WIRES** *T. OJIMA[1], T. UNO[1], S. MITSUI[1], T. TAKAO[1], O. TSUKAMOTO[2], T. MIMURA[3];* [1]FACULTY OF SCIENCE AND TECHNOLOGY SOPHIA UNIVERSITY, TOKYO, JAPAN, [2]OFFICE OF INDUSTRY AND COMMUNITY LIAISON ENGINEERING YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA, JAPAN, [3]SUPERCONDUCTIVITY TECHNOLOGY GROUP, R&D CENTER, TOKYO ELECTRIC POWER COMPANY, TOKYO JAPAN.

14:00 4MPA-06 / 254 **STUDY ON METHOD TO SUPPRESS DECAY OF TRAPPED MAGNETIC FLUXES IN THE HTS BULK SUBJECTED TO PERTURBATION OF EXTERNAL MAGNETIC FIELD BY USE OF SHIELDING RING WOUND OF HTS WIRE** *K. YAMAGISHI[1], O. TSUKAMOTO[1], J. OGAWA[2], D. MIYAGI[3];* [1]YOKOHAMA NATIONAL UNIVERSITY, [2]NIIGATA UNIVERSITY, [3]OKAYAMA UNIVERSITY.

14:00 4MPA-07 / 255 **WITHDRAWN**

14:00 4MPA-08 / 256 **MEASUREMENTS OF AC LOSSES IN BISCOO HTS COIL AT DIFFERENT FREQUENCIES USING ELECTRICAL METHOD** *S. BENDALI;* GREEN-UHP.

4MPB: 210 AC LOSSES V *EXHIBIT HALL* BRUCE AMM (GE CORPORATE R&D) AND FEDOR GOMORY (SLOVAK ACADEMY OF SCIENCES)

14:00 4MPB-01 / 257 **INFLUENCE OF DC OFFSET TRANSPORT CURRENT ON AC LOSS CHARACTERISTICS IN HTS TAPES** *J. OGAWA, S. FUKUI, T. OKA, T. SATO, H. KOJIMA, M. SHIBAYAMA, M. EGAWA;* NIIGATA UNIVERSITY.

14:00 4MPB-02 / 258 **EXPERIMENTAL AND ANALYTICAL STUDIES ON THE ENERGY LOSS OF A HTS COIL DURING CHARGING AND DISCHARGING CONDITION** *Y. HWANG, K. CHANG, Y. KIM, S. CHOI, J. NA, S. CHU, T. KO;* YONSEI UNIVERSITY.

14:00 4MPB-03 / 259 **THE TEMPERATURE SCALING OF TRANSPORT AC LOSSES ACCORDING TO SUPERCONDUCTING TAPE ARRAY GEOMETRY** *Y. HWANG[1], K. CHANG[1], Y. KIM[1], S. CHOI[1], H. KIM[1], J. LEE[2], H. LEE[2], T. KO[1];* [1]YONSEI UNIVERSITY, [2]KOREA UNIVERSITY.

14:00 4MPB-04 / 260 **YBCO COATED CONDUCTORS PATTERNED USING MICROCONTACT PRINTING** *E. GALSTYAN[1], M. KIM[2], I. RUSAKOVA[1], W. W. BRYAN[2], M. P. CUCHIARA[3], J. L. WEST[3], H. C. FREYHARDT[1], A. J. JACOBSON[1], R. LEE[2], A. USOSKIN[4], A. RUTT[4];* [1]TEXAS CENTER FOR SUPERCONDUCTIVITY, UNIVERSITY OF HOUSTON, [2]DEPARTMENT OF CHEMISTRY, UNIVERSITY OF HOUSTON, [3]DEPARTMENT OF BIOENGINEERING, RICE UNIVERSITY, HOUSTON, [4]BRUKER HTS GMBH, GERMANY.

14:00 4MPB-05 / 261 **LOW LOSS NBTI SUPERCONDUCTING RUTHERFORD CABLE MANUFACTURE FOR THE SIS300 INFN MODEL DIPOLE** *G. VOLPINI[1], F. ALESSANDRIA[1], G. BELLOMO[2], P. FABBRICATORE[1], S. FARINON[1], U. GAMBARDELLA[1], M. HOLM[3], B. KARLEMO[3], R. MUSENICH[1], M. SORBI[2];* [1]INFN, [2]INFN AND MILAN UNIVERSITY, [3]LUVATA PORI OY.

14:00 4MPB-06 / 262 **LOW LOSS MAGNESIUM DIBORIDE WIRES - DEVELOPMENT STATUS, AC LOSS MEASUREMENTS, AND SIMULATIONS WITH NUMERICAL METHODS** *L. ROSTILA[1], S. BRISIGOTTI[1], G. GRASSO[1], J. SOUC[2], A. STENVALL[3], M. LYLY[3];* [1]COLUMBUS SUPERCONDUCTORS S.P.A., [2]SLOVAK ACADEMY OF SCIENCES, [3]TAMPERE UNIVERSITY OF TECHOLOGY.

14:00 4MPB-07 / 263 **HYSTERESIS LOSS MEASUREMENTS FOR NBTI AND NB3SN WIRES** *H. GAO, S. ZHU, J. LI, W. LIU, L. YAN, T. WANG, Y. FENG, X. LIU;* WESTERN SUPERCONDUCTING TECHNOLOGIES, CO. LTD; NATIONAL ENGINEERING LABORATORY FOR SUPERCONDUCTING MATERIALS PREPARATION.

14:00 4MPB-08 / 264 **AC LOSS OF MGB2 SUPERCONDUCTING WIRES IN VARIOUS TEMPERATURES** *S. CHOI[1], T. KIYOSHI[1], J. KIM[2], S. DOU[2];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]UNIVERSITY OF WOLLONGONG.

14:00 4MPB-09 / 265 **CALCULATION OF MAGNETIZATION LOSSES OF SUPERCONDUCTING COILS MADE OF MULTICORE MGB2 CABLE** *A. MORANDI, M. FABBRI;* UNIVERSITY OF BOLOGNA, DIE - DEPT. OF ELECTRICAL ENGINEERING, VIALE RISORGIMENTO 2, 40136 BOLOGNA, ITALY.

FRIDAY, AUGUST 06, 2010

08:00 PLENARY SESSION

5PL: 401 PLENARY 2 - SPONSORED BY IEEE COUNCIL ON SUPERCONDUCTIVITY AND THE COALITION FOR THE COMMERCIAL APPLICATION OF SUPERCONDUCTORS *REGENCY* MIKE OSOFSKY (NRL)

08:00 5PL-01 **FRIDAY OPENING REMARKS.** *M. OSOFSKY;* NRL.

08:15 5PL-02 **SCIENCE, SOCIETY, AND SUPERCONDUCTIVITY** *S. E. KOONIN;* U.S. DEPARTMENT OF ENERGY.

09:30 5PL-03 **US NAVY'S SUPERCONDUCTIVITY PROGRAMS: SCIENTIFIC CURIOSITY TO FLEET UTILITY** *D. U. GUBSER;* NAVAL RESEARCH LABORATORY.

10:00 5PL-04 **SUPERCONDUCTIVITY AND HIGH ENERGY PHYSICS-A STUDY IN SYMBIOSIS** *B. STRAUSS[1], S. ST.LORANT[2];* [1]U.S. DEPARTMENT OF ENERGY, [2]SLAC NATIONAL LABORATORY (RETIRED).

10:45 ORAL SESSION

5EA: 162 SUPERCONDUCTING NANOWIRE SINGLE PHOTON DETECTORS *EXECUTIVE* SAE WOO NAM (NIST) AND BURM BAEK (NIST)

10:45 5EA-01 ***(INVITED)*** **ADVANCED READOUT AND PACKAGING OF SUPERCONDUCTING NANOWIRE SINGLE-PHOTON DETECTORS** *A. J. KERMAN, E. A. DAULER, R. MOLNAR, J. YOON, J. D. MOORES;* MIT LINCOLN LABORATORY.

11:15 5EA-02 ***(INVITED)*** **HIGH-EFFICIENCY SUPERCONDUCTING NANOWIRE SINGLE PHOTON DETECTORS AT >^{4}K** *E. A. DAULER[1], R. J. MOLNAR[1], J. U. YOON[1], A. J. KERMAN[1], V. BOLKHOVSKY[1], X. HU[2], K. K. BERGGREN[2], J. D. MOORES[1];* [1]MIT LINCOLN LABORATORY, [2]MIT.

11:45 5EA-03 ***(INVITED)*** **RSFQ BASED READOUT OF SUPERCONDUCTING SINGLE PHOTON DETECTORS** *T. ORTLEPP[1], M. HOFHERR[2], K. ILIN[2], S. ENGERT[1], D. RALL[2], S. WUENSCH[2], H. TOEPFER[1], M. SIEGEL[2];* [1]ILMENAU UNIVERSITY OF TECHNOLOGY, [2]KARLSRUHE INSTITUTE OF TECHNOLOGY.

12:15 5EA-04 **SINGLE PHOTON DETECTION AND FABRICATION OF MGB2 NANOWIRE BY THE LIFTOFF PROCESS** *H. SHIBATA, H. TAKESUE, T. HONJO, T. AKAZAKI, Y. TOKURA;* NTT BASIC RESEARCH LABORATORY.

12:30 5EA-05 **NEW GENERATION OF NANOWIRE NBN SUPERCONDUCTING SINGLE-PHOTON DETECTOR FOR MID-INFRARED** *G. GOLTSMAN, Y. KORNEEVA, I. FLORYA, M. ELEZOV, P. AN, A. KORNEEV;* MOSCOW STATE PEDAGOGICAL UNIVERCITY.

10:45 POSTER SESSIONS

5EPA: 307 CIRCUIT DESIGN *EXHIBIT HALL* SAAD SARWANA (HYPRES IN.C) AND AKIRA FUJIMAKI (NAGOYA UNIVERSITY)

10:45 5EPA-01 / 81 **DATA-FLOW MICROARCHITECTURE FOR WIDE DATAPATH RSFQ PROCESSORS: DESIGN STUDY** *M. DOROJEVETS, C. AYALA, A. KASPEREK;* STONY BROOK UNIVERSITY.

10:45 5EPA-02 / 82 **ADVANCED BEHAVIORAL MODELING OF DIGITAL SUPERCONDUCTING ELECTRONICS BY INCLUDING TIMING AND JITTER INFORMATION** *T. STOYADINOVA[1], T. ORTLEPP[2], B. EBERT[2], V. MLADENOV[1],*

T. HADDAD[2], H. TOEPFER[2]; [1]TECHNICAL UNIVERSITY OF SOFIA, [2]ILMENAU UNIVERSITY OF TECHNOLOGY.

10:45 5EPA-03 / 83 **VHDL MODELS OF COMBINATORIAL GATES IN RECIPROCAL QUANTUM LOGIC** *A. HERR;* NORTHROP GRUMMAN CORPORATION.

10:45 5EPA-04 / 84 **WITHDRAWN**

5EPB: 323 HTS FABRICATION II *EXHIBIT HALL* BRIAN MOECKLY (STI) AND JIAN CHEN (NANJING UNIVERSITY)

10:45 5EPB-01 / 85 **INTRINSIC JOSEPHSON JUNCTIONS MADE FROM THIN-FILM-LIKE BSCCO SINGLE CRYSTALS** *X. WANG[1], L. YOU[1], X. YANG[1], Z. WANG[2];* [1]SHANGHAI INSTITUTE OF MICROSYSTEM AND INFORMATION TECHNOLOGY (SIMIT), CHINESE ACADEMY OF SCIENCE (CAS), [2]DEPARTMENT OF MATHEMATICS, SHANGHAI JIAOTONG UNIVERSITY.

10:45 5EPB-02 / 86 **INTRINSIC JOSEPHSON JUNCTIONS IN BI-2212 THIN FILMS FABRICATED BY METAL-ORGANIC DECOMPOSITION** *K. HAMANAKA, K. OHO, T. TACHIKI, T. UCHIDA;* NATIONAL DEFENSE ACADEMY.

10:45 5EPB-03 / 87 **CHARACTERIZATION OF BI^{2}SR^{2}CACU^{2}OX STACKS FABRICATED BY ACID TREATMENT PROCESS** *T. KATO[1], H. MIZUMARU[1], T. ASANO[1], H. SHIMAKAGE[2], J. CHEN[3], K. HAMASAKI[1];* [1]NAGAOKA UNIVERSITY OF TECHNOLOGY, [2]NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, [3]NANJING UNIVERSITY.

10:45 5EPB-04 / 88 **SHAPIRO STEP RESPONSE OF INTRINSIC JOSEPHSON JUNCTIONS WITH HIGH CRITICAL CURRENTS OF (BI1-XPBX)^{2}SR^{2}CACU^{2}OY** *N. OTHMAN, G. OYA, M. KITAMURA, A. IRIE;* UTSUNOMIYA UNIVERSITY.

10:45 5EPB-05 / 89 **EXPERIMENT EVIDENCE OF QUANTUM FLUCTUATION AT 30 K IN SUBMICRON AREA OF BI^{2}SR^{2}CACU^{2}O8+Δ (BI-2212) SINGLE CRYSTAL WHISKER** *S. SAINI, S. KIM;* JEJU NATIONAL UNIVERSITY.

10:45 5EPB-06 / 90 **FOCUSSED-ION-BEAM DEPOSITION OF COMPACT ON-CHIP RESISTORS FOR ENVIRONMENTAL ISOLATION OF INTRINSIC JOSEPHSON JUNCTIONS** *S. SALEEM1, J. C. FENTON[1], M. KORSAH[2], S. C. SPELLER[2], C. R. M. GROVENOR[2], P. A. WARBURTON[1];* [1]UNIVERSITY COLLEGE LONDON, [2]UNIVERSITY OF OXFORD.

5EPC: 324 MICROWAVE IV *EXHIBIT HALL* JORDI MATEU (DEPT. OF SIGNAL THEORY AND COMMUNICATION UNIVERSITAT POLITCNICA DE CATALUNYA (UPC) AND STEFAN WUENSCH (KIP)

10:45 5EPC-01 / 91 **SYMMETRY OF THE ENERGY GAP IN MGB2 FROM MICROWAVE MEASUREMENTS AND IMPLICATIONS FOR APPLICATIONS** *D. E. OATES[1], Y. D. AGASSI[2], B. H. MOECKLY[3];* [1]MIT LINCOLN LABORATORY, [2]NAVAL SURFACE WARFARE CENTERCARDEROCK DIVISION, BETHESDA MD, USA, [3]STI INC. SANTA BARBARA, CA, USA.

10:45 5EPC-02 / 92 **MECHANISMS FOR ELECTROMAGNETIC RADIATION FROM SINGLE AND STACKED JOSEPHSON JUNCTIONS IN A CAVITY** *S. MADSEN[1], V. PIERRO[2], G. FILATRELLA[2], P. L. CHRISTIANSEN[3], N. F. PEDERSEN[3];* [1]UNIVERSITY OF SOUTHERN DENMARK, [2]UNIVERSITY OF SANNIO, [3]TECHNICAL UNIVERSITY OF DENMARK.

10:45 5EPC-03 / 93 **INTRINSIC SURFACE RESISTANCE OF YBCO THIN FILMS UNDER THE DC MAGNETIC FIELD** *K. NAKAGAWA[1], T. HONMA[1], S. NAKAYAMA[1], S. ONO[1], H. KAI[2], A. SAITO[1], M. MUKAIDA[2], K. NAKAJIMA[1], S. OHSHIMA[1];* [1]YAMAGATA UNIVERSITY, [2]KYUSHU UNIVERSITY.

10:45 5EPC-04 / 94 **MM WAVE SURFACE IMPEDANCE CHARACTERIZATION OF HTS FILMS AND SINGLE CRYSTALS USING QUASI-OPTICAL SAPPHIRE RESONATORS** *N. T. CHERPAK[1], A. A. BARANNIK[1], S. A. BUNYAEV[1], Y. V. PROKOPENKO[1], K. I. TOROKHTII[2], S. A. VITUSEVICH[3];* [1]USIKOV IRE NAS OF UKRAINE, [2]NATIONAL TECHNICAL UNIVERSITY-KHPI, [3]INSTITUT FUER BIO- UND NANOSYSTEME (IBN), JUELICH-AACHEN RESEARCH ALLIANCE FOR FUTURE INFORMATION TECHNOLOGY (JARA-FIT),FORSCHUNGSZENTRUM JUELICH.

10:45 5EPC-05 / 95 **EVEN AND ODD ORDER INTERMODULATION NONLINEARITY FROM A SUPERCONDUCTIVE MICROSTRIP LINE** *S. K. REMILLARD[1], V. BUNNELL[1], E. K. PEASE[1], S. C. LEE[2];* [1]HOPE COLLEGE, [2]MERCER UNIVERSITY.

10:45 5EPC-06 / 96 **SUPERCONDUCTING LUMPED ELEMENT RESONATORS AS PROBES OF DIELECTRICS** *T. LINDSTROM[1], J. E. HEALEY[2], Y. HARADA[3], Y. SEKINE[3], M. S.*

COLCLOUGH[2], C. M. MUIRHEAD[2], A. Y. TZALENCHUK[4]; [1]NATIONAL PHYSICAL LABORATORY&ROYAL HOLLOWAY, UNIVERSITY OF LONDON, [2]UNIVERSITY OF BIRMINGHAM, [3]NTT BASIC RESEARCH LABORATORIES, [4]NATIONAL PHYSICAL LABORATORY.

10:45 5EPC-07 / 97 **MICROWAVE PROPERTIES OF FE-BASED SUPERCONDUCTING THIN FILMS** *S. LUO[1], Y. WU[1], S. ZHOU[2], X. WANG[2], L. CAO[2], Y. HE[2], N. T. CHERPAK[3], V. N. SKRESANOV[3], A. BARANNIK[3];* [1]DEPARTMENT OF PHYSICS, UNIVERSITY OF SCIENCE AND TECHNOLOGY BEIJING, [2]INSTITUTE OF PHYSICS, CHINESE ACADEMY OF SCIENCES, [3]INSTITUTE OF RADIO-PHYSICS AND ELECTRONICS, NATIONAL ACADEMY OF SCIENCES OF UKRAINE.

10:45 5EPC-08 / 98 **MICROWAVE DEPENDENCE OF A-AXIS ORIENTED YBA^{2}CU^{3}O7 THIN FILM** *S. SAINI[1], M. TAKAMURA[2], M. MUKAIDA[2], S. KIM[1];* [1]JEJU NATIONAL UNIVERSITY, [2]FACULTY OF ENGINEERING, KYUSHU UNIVERSITY.

10:45 5EPC-09 / 99 **MODELING OF NONLINEAR PROPERTIES OF HIGH TEMPERATURE SUPERCONDUCTING THIN FILMS, USING BARDEEN, COOPER, SCHRIEFFER AND LUMPED ELEMENT CIRCUIT THEORIES, FOR APPLICATIONS IN ULTRA HIGH FREQUENCY MICRO- AND NANO-ELECTRONICS** *D. O. LEDENYOV[1], J. MAZIERSKA[1], V. O. LEDENYOV[2];* [1]JAMES COOK UNIVERSITY, TOWNSVILLE, QUEENSLAND 4811, AUSTRALIA, [2]JAMES COOK UNIVERSITY.

5EPD: 321 MTS FABRICATION *EXHIBIT HALL* FRANCESCO TAFURI (NAPOLI UNIVERSITY) AND NATHAN NEWMAN (ARIZONA STATE UNIVERSITY)

10:45 5EPD-01 / 100 **DESIGN AND ELABORATION OF ^{9}K NBN ADC CIRCUITS** *J. C. VILLEGIER1, D. RENAUD2, C. BORNIER3, P. FEBVRE4, P. DESGREYS5, P. LOUMEAU5, M. MAIGNAN[6];* [1]CEA-GRENOBLE INAC, [2]CEA-GRENOBLE LETI, [3]ID-3 SEMICONDUCTORS, [4]UNIV SAVOIE IMEP-LAHC, [5]TELECOM PARISTECH, [6]THALES ALENIA SPACE.

10:45 5EPD-02 / 101 **NOVEL MATERIAL BASED TUNNEL JUNCTIONS FOR HIGH PERFORMANCE ELECTRONIC REFRIGERATION AND THERMOMETRY.** *S. CHAUDHURI, M. R. NEVALA, I. J. MAASILTA;* UNIVERSITY OF JYVÄSKYLÄ.

10:45 5EPD-03 / 102 **STUDY OF SHUNT RESISTOR MATERIALS FOR MGB2/MGO/MGB2 JOSEPHSON JUNCTIONS** *D. CUNNANE[1], K. CHEN[1], W. DAI[2], C. ZHUANG[1], Q. LI[2], X. X. XI[1];* [1]TEMPLE UNIVERSITY, [2]THE PENNSYLVANIA STATE UNIVERSITY.

10:45 5EPD-04 / 103 **MGB2 JOSEPHSON JUNCTIONS WITH IMPROVED INITIAL GROWTH OF COUNTER ELECTRODE** *N. MITAMURA[1], H. AKAIKE[1], A. FUJIMAKI[1], Y. NIIHARA[2], Y. IWATA[2], M. NAITO[2];* [1]NAGOYA UNIVERSITY, [2]TOKYO UNIVERSITY OF AGRICULTURE AND TECHNOLOGY.

10:45 5EPD-05 / 104 **RESONANT ACTIVATION FROM THE ZERO-VOLTAGE STATE OF A CURRENT-BIASED MGB2 JOSEPHSON JUNCTION** *R. C. RAMOS, J. G. LAMBERT, S. A. CARABELLO, J. T. MLACK, Z. E. THRAILKILL;* DREXEL UNIVERSITY.

10:45 5EPD-06 / 105 **EXPLORING THE SIGMA AND PI BAND GAPS OF MGB2 BY CHARACTERIZING MGB2/INSULATOR/PB AND MGB2/INSULATOR/NB JOSEPHSON JUNCTIONS BELOW 1 KELVIN** *S. CARABELLO, J. LAMBERT, J. MLACK, Z. THRAILKILL, R. RAMOS;* DREXEL UNIVERSITY.

5EPE: 319 NANO DEVICES *EXHIBIT HALL* SERGIO PAGANO (UNIVERSITY OF SALERNO) AND IVAN NEVIRKOVETS (UNIVERSITY OF WOLLONGONG)

10:45 5EPE-01 / 106 **OPTICAL RESPONSES OF SUPERCONDUCTING NANOBRIDGES UNDER THE IRRADIATION OF FEMTOSECOND LASER PULSES** *I. KAWAYAMA[1], K. KAJINO[2], M. INOUE[2], A. FUJIMAKI[2], M. TONOUCHI[1];* [1]OSAKA UNIVERSITY, [2]NAGOYA UNIVERSITY.

10:45 5EPE-02 / 107 **METASTABILITY IN A NB DC SQUID HAVING NANOBRIDGE JUNCTIONS** *E. SEGEV[1], O. SUCHOI[1], D. BIRMAN[1], F. XUE[2], O. SHTEMPLUCK[1], E. BUKS[1];* [1]TECHNION, [2]UNIVERSITY OF BASSEL.

10:45 5EPE-03 / 108 **CURRENT/VOLTAGE CHARACTERISTICS OF LOW TEMPERATURE SUPERCONDUCTING NANOWIRES** *A. JAFARI-SALIM, A. MAJEDI;* ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT AND INSTITUTE FOR QUANTUM COMPUTING, UNIVERSITY OF WATERLOO.

10:45 5EPE-04 / 109 **ANALOG MODELS OF NEURONS USING JOSEPHSON JUNCTIONS** *K. SEGALL, P. CROTTY, D. SCHULT;* COLGATE UNIVERSITY.

10:45 5EPE-05 / 110 **LOCAL SUPERCONDUCTING PROPERTIES THROUGH TORQUE MEASUREMENT AND INTERACTION OF ORDER PARAMETERS UNDER THE PRESSURE AND MAGNETIC FIELD** *Y. JO[1], J. KIM[2], M. EOM[2], S. NA[2];* [1]EWHA UNIVERSITY, [2]POHANG UNIVERSITY OF SCIENCE AND TECHNOLOGY.

10:45 5EPE-06 / 111 **RADIATION HARDNESS OF NANOSTRUCTURED YBA^2CU^3O7 FILM-BASED DETECTORS OPERATING IN ENVIRONMENTS WITH POTENTIAL RADIATION HAZARD** *B. MINETTI[1], R. GERBALDO[1], G. GHIGO[1], L. GOZZELINO[1], F. LAVIANO[1], G. LOPARDO[1], R. CHERUBINI[2], E. MEZZETTI[1];* [1]POLITECNICO DI TORINO, DEPARTMENT OF PHYSICS AND INFN SEZ. TORINO, TORINO, ITALY, [2]INFN, LABORATORI NAZIONALI DI LEGNARO, LEGNARO (PD), ITALY.

5EPF: 300 QUANTUM COMPUTING IV *EXHIBIT HALL* SIYUAN HAN (UNIVERSITY OF KANSAS) AND A. HAMED MAJEDI (UNIVERSITY OF WATERLOO)

10:45 5EPF-01 / 112 **RESONANT ACTIVATION OF CURRENT-BIASED JOSEPHSON JUNCTIONS NEAR THE CLASSICAL QUANTUM CROSSOVER** *Z. THRAILKILL, J. LAMBERT, S. CARABELLO, R. RAMOS;* DREXEL UNIVERSITY.

10:45 5EPF-02 / 113 **RFSQUID-MEDIATED COHERENT TUNABLE COUPLING BETWEEN A SUPERCONDUCTING PHASE QUBIT AND A LUMPED ELEMENT RESONATOR** *M. S. ALLMAN, F. ALTOMARE, J. WHITTAKER;* NIST.

10:45 5EPF-03 / 114 **EVALUATION OF TWO LEVEL SYSTEMS IN SUPERCONDUCTING RESONATORS USING POWER AND TEMPERATURE DEPENDENCE OF Q AND F** *D. P. PAPPAS, D. S. WISBEY, F. C. S. S. DA SILVA, J. S. KLINE, J. GAO, M. VISSERS;* NIST.

10:45 5EPF-04 / 115 **MEASURING ENERGY DISSIPATION IN JOSEPHSON JUNCTIONS USED IN SUPERCONDUCTING QUANTUM BITS** *J. A. STRONG[1], M. S. ALLMAN[2], F. ALTOMARE[2], K. CICAK[2], A. J. SIROIS[2], J. TEUFEL[2], J. D. WHITTAKER[2], R. W. SIMMONDS[2];* [1]NORTHROP GRUMMAN, [2]NIST.

10:45 5EPF-05 / 116 **DESIGN OF SUPERCONDUCTING MICROWAVE RESONATORS FOR QUBIT READ-OUT** *B. SURI[1], S. NOVIKOV[1], Z. KIM[1], V. ZARETSKEY[1], F. C. WELLSTOOD[2], B. S. PALMER[3];* [1]DEPARTMENT OF PHYSICS, UNIVERSITY OF MARYLAND, [2]DEPARTMENT OF PHYSICS, UNIVERSITY OF MARYLAND, JOINT QUANTUM INSTITUTE, CENTER FOR NANOPHYSICS AND ADVANCED MATERIALS, [3]LABORATORY FOR THE PHYSICAL SCIENCES,COLLEGE PARK, MARYLAND.

10:45 5EPF-06 / 117 **SUPERPOSITION OF INDUCTIVE AND CAPACITIVE COUPLING IN SUPERCONDUCTING LC RESONATORS** *S. GLADCHENKO, M. KHALIL, K. OSBORN;* LABORATORY FOR PHYSICAL SCIENCES,UNIVERSITY OF MARYLAND.

10:45 5EPF-07 / 118 **LOSS DEPENDENCE ON GEOMETRY AND APPLIED POWER IN SUPERCONDUCTING COPLANAR RESONATORS** *M. KHALIL[1], S. GLADCHENKO[1], M. STOUTIMORE[1], F. WELLSTOOD[1], K. OSBORN[2];* [1]UNIVERSITY OF MARYLAND-COLLEGE PARK, [2]LABORATORY FOR PHYSICAL SCIENCES.

10:45 5EPF-08 / 119 **MEASURING EXCESS NOISE IN SUPERCONDUCTING MICRO-RESONATORS WITH A JOSEPHSON PARAMETRIC AMPLIFIER** *J. GAO[1], G. C. HILTON[1], K. D. IRWIN[1], L. R. VALE[1], B. A. MATES[1], D. R. SCHMIDT[1], F. MALLET[2], K. W. LEHNERT[2], H. G. LEDUC[3], J. ZMUIDZINAS[3];* [1]NATIONAL INSTITUTE OF STANDARD AND TECHNOLOGY, [2]UNIVERSITY OF COLORADO AT BOULDER, [3]CALIFORNIA INSTITUTE OF TECHNOLOGY.

5EPG: 318 SQUID ARRAYS *EXHIBIT HALL* DEBORAH VAN VECHTEN (ONR) AND ANDREI MATLASHOV (LOS ALAMOS NATIONAL LABORATORY)

10:45 5EPG-01 / 120 **DYNAMIC RANGE STUDIES OF HIGH SENSITIVE MAGNETIC FIELD SQUID ARRAYS SENSORS OF PATTERN YBA^2CU^3O7-Δ BI-CRYSTALS.** *M. C. DE ANDRADE[1], A. M. LEESE DE ESCOBAR[1], S. B. RICE[1], E. H. WONG[1], S. BERKOWITZ[2];* [1]SPAWAR SYSTEMS CENTER, [2]OUT OF THE FOG RESEARCH.

10:45 5EPG-02 / 121 **ARRAY OF NON-LOCALLY COUPLED DC SQUIDS** *P. LONGHINI[1], S. GUYLER[2], A. PALACIOS[2], V. IN[1], A. LEESE DE ESCOBAR[1];* [1]SSC PACIFIC, SPAWAR, [2]SAN DIEGO STATE UNIVERSITY.

10:45 5EPG-03 / 122 **DESIGN AND EXPERIMENTAL EVALUATION OF SQIF ARRAYS WITH LINEAR VOLTAGE RESPONSE** *V. KORNEV[1], I. SOLOVIEV[1], N. KLENOV[1], O. MUKHANOV[2];* [1]MOSCOW STATE UNIVERSITY, [2]HYPRES, 175 CLEARBROOK ROAD, ELMSFORD, NY 10523, USA.

10:45 5EPG-04 / 123 **MICROWAVE PARAMETRIC OSCILLATIONS IN OPTICALLY-ILLUMINATED SUPERCONDUCTING MESOSCOPIC STRUCTURES** *B. G. GHAMSARI, A. MAJEDI;* UNIVERSITY OF WATERLOO.

10:45 5EPG-05 / 124 **SUPERCONDUCTING METAMATERIALS FOR CLOAKING DC MAGNETIC FIELDS** *C. NAVAU[1], D. CHEN[2], N. DEL-VALLE[1], A. SANCHEZ[1];* [1]UNIVERSITAT AUTONOMA DE BARCELONA, [2]ICREA AND UNIVERSITAT AUTONOMA DE BARCELONA.

10:45 5EPG-06 / 125 **WITHDRAWN**

10:45 5EPG-07 / 126 **TWO-STAGE DIRECTLY-COUPLED SUPERCONDUCTING QUANTUM INTERFERENCE DEVICE ARRAY MAGNETOMETER** *J. T. JENG[1], M. J. WANG[2], C. H. WU[3], C. C. LU[4];* [1]DEPARTMENT OF MECHANICAL ENGINEERING, NATIONAL KAOHSIUNG UNIVERSITY OF APPLIED SCIENCES, KAOHSIUNG 80778, TAIWAN., [2]ACADEMIA SINICA INSTITUTE OF ASTRONOMY AND ASTROPHYSICS (ASIAA), TAIPEI 10617, TAIWAN, [3]INSTITUTE OF NANOSCIENCE, NATIONAL CHUNG HSING UNIVERSITY, TAICHUNG 40227, TAIWAN., [4]INSTITUTE OF MECHATRONIC ENGINEERING, NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY, TAIPEI 10608, TAIWAN..

10:45 5EPG-08 / 127 **RF MEASUREMENTS OF WIDEBAND VHF-UHF SQIF AMPLIFIER** *G. V. PROKOPENKO[1], O. A. MUKHANOV[1], A. L. DE ESCOBAR[2];* [1]HYPRES, 175 CLEARBROOK RD., ELMSFORD, NY 10523, USA, [2]SPAWAR, SAN DIEGO, CA, USA.

5EPH: 328 SQUIDS FABRICATION AND CHARACTERIZATION II

EXHIBIT HALL MASUMI INOUE (NAGOYA UNIVERSITY) AND SHANE KEENAN

10:45 5EPH-01 / 128 **HIGH-TEMPERATURE SUPERCONDUCTING GRADIOMETER COUPLED WITH LARGE PICKUP COIL MADE OF GDBCO COATED CONDUCTOR** *A. TSUKAMOTO[1], S. ADACHI[1], Y. OSHIKUBO[1], T. HATO[1], K. TANABE[1], K. ENPUKU[2];* [1]ISTEC-SRL, [2]KYUSHU UNIVERSITY.

10:45 5EPH-02 / 129 **FABRICATION OF INTEGRATED TWO AXIS HIGH-TC PLANAR GRADIOMETER** *A. TSUKAMOTO, S. ADACHI, Y. OSHIKUBO, J. KAWANO, T. HATO, K. TANABE;* ISTEC-SRL.

10:45 5EPH-03 / 130 **FABRICATION OF LOW-NOISE HTS-SQUID GRADIOMETERS AND MAGNETOMETERS WITH RAMP-EDGE JOSEPHSON JUNCTIONS** *S. ADACHI, A. TSUKAMOTO, Y. OSHIKUBO, T. HATO, Y. ISHIMARU, K. TANABE;* SRL-ISTEC.

10:45 5EPH-04 / 131 **YBCO STEP-EDGE JUNCTIONS** E.E. MITCHELL AND C.P. FOLEY *CSIRO MATERIALS SCIENCE AND ENGINEERING, PO BOX 218, LINDFIELD, NSW, 2070, AUSTRALIA*

10:45 5EPH-05 / 132 **FABRICATION AND PROPERTIES OF HIGH-TC YBCO SQUID WITH VARIABLE THICKNESS BRIDGES BY FOCUSED ION BEAM** *C. H. WU[1], J. T. JENG[2], J. H. CHEN[3], H. C. YANG[4], F. J. JHAN[1];* [1]DEPARTMENT OF PHYSICS, NATIONAL CHUNG HSING UNIVERSITY, TAICHUNG 402, TAIWAN, [2]DEPARTMENT OF MECHANICAL ENGINEERING, NATIONAL KAOHSIUNG UNIVERSITY OF APPLIED SCIENCES, KAOHSIUNG 80778, TAIWAN.,, [3]DEPARTMENT OF ELECTRICAL ENGINEERING, DA-YEH UNIVERSITY, CHANGHWA 515, TAIWAN, [4]DEPARTMENT OF PHYSICS, NATIONAL TAIWAN UNIVERSITY, TAIPEI 402, TAIWAN.

10:45 5EPH-06 / 133 **FABRICATION OF $BI^2SR^2CACU^2O8$ INTRINSIC DC-SQUID WITH A SHUNT RESISTOR** *T. KATO[1], A. MIWA[1], H. SUEMATSU[1], A. KAWAKAMI[2], K. HAMSAKI[1];* [1]NAGAOKA UNIVERSITY OF TECHNOLOGY, [2]NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY.

10:45 5EPH-07 / 134 **FABRICATION OF HTS MULTILAYER STRUCTURES USING CHEMICAL-MECHANICAL POLISHING** *M. L. CHUKHARKIN[1], A. KALABUKHOV[1], J. SCHNEIDERMAN[1], F. OISJOEN[1], O. V. SNIGIREV[2], D. WINKLER[1];* [1]DEPARTMENT OF MICROTECHNOLOGY AND NANOSCIENCE - MC2, CHALMERS UNIVERSITY OF TECHNOLOGY, [2]DEPARTMENT OF PHYSICS, MOSCOW STATE UNIVERSITY.

10:45 5EPH-08 / 135 **LONG BASELINE PLANAR SQUID GRADIOMETER FOR OPERATION IN A SOFT SHIELDED ENVIRONMENT** *C. GRANATA, A. VETTOLIERE, S. ROMBETTO, M. RUSSO;* ISTITUTO DI CIBERNETICA.

10:45 5EPH-09 / 136 **CLARIFYING FLUX-TO-VOLTAGE TRANSFER FUNCTION AND EFFECTIVE AREA IN SUPERCONDUCTING-QUANTUM-INTERFERENCE-DEVICE SERIES ARRAYS** *J. CHEN[1], C. WU[2], K. CHEN[3], U. SOU[3];* [1]DA-YEH UNIVERSITY, [2]NATIONAL CHUNG HSING UNIVERSITY, [3]NATIONAL TAIWAN UNIVERSITY.

10:45 5EPH-10 / 137 **DIGITAL DROS WITH SFQ UP/DOWN COUNTER FOR WIDE DYNAMIC OPERATION RANGE** *H. MYOREN, Y. KIMIMOTO, K. TERUI, T. TAINO;* SAITAMA UNIVERSITY.

5EPJ: 329 ULF-NMR/MRI AND BIO APPLICATIONS IV *EXHIBIT HALL* JAMES CLAYCOMB (HOUSTON BAPTIST UNIVERSITY) AND AUDRIUS BRAZDEIKIS (UNIVERSITY OF HOUSTON)

10:45 5EPJ-01 / 138 **LOW FIELD MRI DETECTION WITH TUNED HTS SQUID MAGNETOMETER** *H. DONG[1], Y. ZHANG[1], H. KRAUSE[1], X. XIE[2], A. I. BRAGINSKI[1], A. OFFENHÄUSSER[1];* [1]INSTITUTE OF BIO- AND NANOSYSTEMS, FORSCHUNGSZENTRUM JUELICH, GERMANY, [2]SHANGHAI INSTITUTE OF MICROSYSTEM AND INFORMATION TECHNOLOGY, CHINESE ACADEMY OF SCIENCES, P. R. CHINA.

10:45 5EPJ-02 / 139 **HTS SQUID MAGNETOMETER USING RESONANT COUPLING OF COOLED CU PICKUP COIL** *K. ENPUKU, S. HIRAKAWA, Y. TSUJI, R. MOMOTOMI, M. MATSUO, T. YOSHIDA;* KYUSHU UNIVERSITY.

10:45 5EPJ-03 / 140 **AN EXPERIMENTAL STUDY OF ULTRA-LOW FIELD NMR USING A HIGH-TC DC-SQUID** *Y. JIN, N. WANG, S. LI, Y. TIAN, Y. REN, Y. WU, H. DENG, Y. CHEN, J. LI, H. TIAN, G. CHEN, D. ZHENG;* INSTITUTE OF PHYSICS AND BEIJING NATIONAL LABORATORY FOR CONDENSED MATTER PHYSICS, CHINESE ACADEMY OF SCIENCES, BEIJING 100190, CHINA.

10:45 5EPJ-04 / 141 **NUCLEAR MAGNETIC RESONANCE AND MAGNETIC RESONANCE IMAGING USING HIGH-TC SUPERCONDUCTING QUANTUM INTERFERENCE DEVICES IN MICROTESLA MAGNETIC FIELDS** *S. H. LIAO[1], H. C. YANG[1], H. H. CHEN[2], H. E. HORNG[2], S. Y. YANG[3], L. M. WANG[1];* [1]DEPARTMENT OF PHYSICS, NATIONAL TAIWAN UNIVERSITY, [2]INSTITUTE OF ELECTRO-OPTICAL SCIENCE AND TECHNOLOGY, NATIONAL TAIWAN NORMAL UNIVERSITY, [3]MAGQU CO., LTD..

10:45 5EPJ-05 / 142 **LIQUID-STATE NUCLEAR MAGNETIC RESONANCE MEASUREMENTS FOR IMAGING USING HTS-RF-SQUID IN ULTRA-LOW FIELD** *S. FUKUMOTO[1], M. HAYASHI[1], Y. KATSHU[1], Y. HATSUKADE[1], S. TANAKA[1], O. SNIGIREV[2];* [1]TOYOHASHI UNIVERSITY OF TECHNOLOGY, [2]MOSCOW STATE UNIVERSITY.

10:45 5EPJ-06 / 143 **SQUID-BASED LOW FIELD MRI USING A MEG SYSTEM FOR SMALL ANIMALS** *J. HATTA, M. MIYAMOTO, J. KAWAI, G. UEHARA, H. KADO;* KANAZAWA INSTITUTE OF TECHNOLOGY.

10:45 5EPJ-07 / 144 **PROGRESS ON DETECTION OF LIQUID EXPLOSIVES USING SQUID-BASED ULF MRI** *M. A. ESPY, R. H. KRAUS, A. N. MATLASHOV, T. OWENS, I. SAVUKOV, L. J. SCHULTZ, A. URBAITIS, P. L. VOLEGOV;* LANL.

10:45 5EPJ-08 / 145 **STEP-EDGE HIGH-TC SUPERCONDUCTING-QUANTUM-INTERFERENCE-DEVICE MAGNETOMETER FOR LOW-FIELD NUCLEAR MAGNETIC RESONANCE** *S. YANG[1], H. HORNG[2], H. YANG[3], S. LIAO[3], C. HONG[4];* [1]MAGQU CO., LTD., [2]NATIONAL TAIWAN NORMAL UNIVERSITY, [3]NATIONAL TAIWAN UNIVERSITY, [4]NATIONAL CHUNG-HSING UNIVERSITY.

5LPA: 249 CONDUCTOR AND DEVELOP TEST I *EXHIBIT HALL* ALEXANDER VOSTNER (F4E) AND VICTOR KEILIN (KURCHATOV INSTITUTE)

10:45 5LPA-01 / 146 **DESIGN AND FABRICATION OF THE MU2E CABLE TEST SOLENOID** *A. V. MAKAROV[1], N. ANDREEV[1], V. S. KASHIKHIN[1], M. LAMM[1], G. V. VELEV[1], A. YAMAMOTO[2], T. OGITSU[2];* [1]FERMILAB, [2]KEK.

10:45 5LPA-02 / 147 **EFFECT OF BARREL MATERIAL ON CRITICAL CURRENT MEASUREMENTS OF RRP® NB3SN WIRES*** *A. K. GHOSH;* BROOKHAVEN NATIONAL LABORATORY.

10:45 5LPA-03 / 148 **FABRICATION, QUALIFICATION AND TEST OF HIGH JC ROEBEL YBA^{2}CU^{3}O7− Δ COATED CONDUCTOR CABLE FOR HEP MAGNETS** *E.*

BARZI[1], M. LAMM[1], V. LOMBARDO[1], D. TURRIONI[1], A. V. ZLOBIN[1], N. LONG[2]; [1]FERMILAB, [2]INDUSTRIAL RESEARCH LTD.

10:45 5LPA-04 / 149 **BSCCO-2212 WIRE AND CABLE STUDIES** *E. BARZI, V. LOMBARDO, D. TURRIONI;* FERMILAB.

10:45 5LPA-05 / 150 WITHDRAWN

10:45 5LPA-06 / 151 **CABLING AND JOINT METHODS OF HIGH CURRENT CABLES MADE FROM HTS TAPES** *M. TAKAYASU[1], L. CHIESA[2], L. BROMBERG[1], J. MINERVINI[1];* [1]MIT, [2]TUFTS UNIVERSITY.

10:45 5LPA-07 / 152 **EXPERIMENTALLY DETERMINED AC LOSSES OF SMALL CC CABLE MODELS WITH IN-PHASE ALTERNATING CURRENT AND APPLIED FIELD** *J. ŠOUC, M. VOJENČIAK, F. GÖMÖRY;* IEE, SLOVAK ACADEMY OF SCIENCES.

10:45 5LPA-08 / 153 **ESTIMATION OF THE CRITICAL CURRENT DENSITY FROM THE MEASURED VALUES OF PERPENDICULAR MAGNETIZATION LOSSES IN HTS COATED CONDUCTORS** *J. LEE1, Y. KIM[2], S. LEE[2], W. KIM[3], C. PARK[4], K. CHOI[2];* [1]WOOSUK UNIVERSITY, [2]KOREA POLYTECHNIC UNIVERSITY, [3]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [4]SEOUL NATIONAL UNIVERSITY.

10:45 5LPA-09 / 154 **AN OPTIMIZATION OF A NBTI SUPERCONDUCTOR HAVING LOW AC-LOSS AND HIGH STABILITY AND CURRENT DENSITY** *M. LYLY, A. STENVALL, R. MIKKONEN;* TAMPERE UNIVERSITY OF TECHNOLOGY.

10:45 5LPA-10 / 155 **DEVELOPMENT OF NB[3]SN RUTHERFORD CABLES WITH CORES FOR LARP QUADRUPOLE MODELS** *D. DIETDERICH[1], A. GODEKE[1], A. K. GHOSH[2];* [1]LAWRENCE BERKELEY NATIONAL LABORATORY, [2]BROOKHAVEN NATIONAL LABORATORY.

10:45 5LPA-11 / 156 **STRAND AND CABLE R&D FOR FAST CYCLED MAGNETS AT CERN** *L. BOTTURA[1], A. BONASIA[1], W. GAERTNER[2], S. LE NAOUR[1], L. R. OBERLI[1], D. RICHTER[1], T. SALMI[1], G. SIKLER[2], G. WILLERING[1];* [1]CERN, [2]BNG.

5LPB: 284 COOLING *EXHIBIT HALL* JUAN ORDONEZ (FLORIDA STATE UNIVERSITY - FSU) AND S.K. JEONG (KAIST)

10:45 5LPB-01 / 157 **DEVELOPMENT OF A CRYOGENIC HELIUM-NEON GAS MIXTURE COOLING SYSTEM FOR USE IN A GD-BULK HTS SYNCHRONOUS MOTOR** *B. FELDER[1], M. MIKI[1], Z. DENG[1], K. TSUZUKI[1], N. SHINOHARA[1], H. HAYAKAWA[2], M. IZUMI[1];* [1]TOKYO UNIVERSITY OF MARINE SCIENCE AND TECHNOLOGY, [2]KITANO SEIKI CO. LTD..

10:45 5LPB-02 / 158 **TEST RESULTS OF A COOLING SYSTEM USING MIXED CRYOGEN FOR HTS SUPERCONDUCTING MAGNETIC ENERGY STORAGE (SMES) SYSTEM** *K. KIM[1], J. SONG[1], K. KIM[1], J. LEE[1], J. CHOI[2], S. KIM[2], D. KOH[3], K. SEONG[4], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]GYEONGSANG NATIONAL UNIVERSITY AND ERI, KOREA, [3]KOREA INSTITUTE OF MACHINERY & MATERIALS, KOREA, [4]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, KOREA.

10:45 5LPB-03 / 159 **EXPERIMENT STUDY ON COOLING SYSTEM OF HTS SYNCHRONOUS MACHINES** *C. BIAO, G. GUOBIAO, Z. GUOQIANG;* THE INSTITUTE OF ELECTRICAL ENGINEERING (IEE), CHINESE ACADEMY OF SCIENCES (CAS).

10:45 5LPB-04 / 160 **HTS (HIGH TEMPERATURE SUPERCONDUCTOR) MOTOR COOLED BY ON-BOARD CRYOCOOLER.** *Y. KIM[1], H. KIM[1], J. KIM[1], S. JEONG[1], Y. KWON[2], S. KIM[2];* [1]KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

10:45 5LPB-05 / 161 **WITHDRAWN**

10:45 5LPB-06 / 162 **STRUCTURAL DESIGN OF TOROIDAL CONFIGURATION OF HTS SMES COOLING SYSTEM** *H. YEOM[1], J. KO[1], D. KOH[1], Y. HONG[1], S. KIM[2], K. SUNG[2];* [1]KIMM, [2]KERI.

10:45 5LPB-07 / 163 WITHDRAWN

10:45 5LPB-08 / 164 **WITHDRAWN**

10:45 5LPB-09 / 165 **AN INNOVATIVE CONCEPT OF STORING COLD ENERGY FOR SFES (SUPERCONDUCTOR FLYWHEEL ENERGY STORAGE) SYSTEM** *J. LEE[1], S. JEONG[1], Y. HAN[2], B. PARK[2];* [1]KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, [2]KOREA ELECTRIC POWER RESEARCH INSTITUTE.

10:45 5LPB-10 / 166 **HELIUM BASED PULSATING HEAT PIPE FOR SUPERCONDUCTING MAGNETS** *J. M. PFOTENHAUER[1], D. M. GRANT[1], E. W. STAUTNER[2];* [1]UNIVERSITY OF WISCONSIN - MADISON, [2]GE GLOBAL RESEARCH, NISKAYANA ,NY.

5LPC: 254 DESIGN TOOLS AND NOVEL CONFIGURATIONS I *EXHIBIT HALL* LUISA CHIESA (TUFTS UNIVERSITY) AND JOE MINERVINI (MIT)

10:45 5LPC-01 / 167 **PROPERTIES OF AN HTS MAGNET HAVING OPTIMIZED AIR GAP BETWEEN PANCAKE WINDINGS** *Y. KIM[1], M. KU[1], G. CHA[1], S. PARK[2];* [1]SOONCHUNHYANG UNIV., [2]KOREA LIFT COLLEGE..

10:45 5LPC-02 / 168 **EFFECT OF DIFFERENT INNER DIAMETER OF OUTSERT PANCAKE WINDINGS ON AN HTS MAGNET WITH AN INSERT AND AN OUTSERT WINDING** *M. KU[1], M. KANG[1], H. LEE[1], G. CHA[1], K. RYU[2];* [1]SOONCHUNHYANG UNIV., [2]CHONNAN NATIONAL UNIV..

10:45 5LPC-03 / 169 **MAGNETIC FIELD AND STORED ENERGY OF A BSCCO HTS MAGNET AT VARIOUS ASPECT RATIO** *M. KANG[1], Y. KIM[1], H. LEE[1], G. CHA[1], K. RYU[2];* [1]SOONCHUNHYANG UNIVERSITY, [2]CHONNAM NATIONAL UNIVERSITY.

10:45 5LPC-04 / 170 **FUNDAMENTAL DESIGN SPECIFICATION FOR GJ CLASS SUPERCONDUCTING MAGNETIC ENERGY STORAGE** *S. H. HWANG[1], A. R. KIM[1], K. M. KIM[1], J. G. KIM[1], M. W. PARK[1], I. K. YU[1], S. H. KIM[2], K. D. SIM[2], K. C. SEONG[2];* [1]CHANGWON NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

10:45 5LPC-05 / 171 **DESIGN OF COIL BOBBIN STRUCTURE FOR 2.5 MJ HTS SMES THROUGH STRESS ANALYSIS** *K. KIM[1], S. LEE[2], S. KIM[3], M. PARK[1], I. YU[1], G. CHOI[4], K. SEONG[3], J. LEE[5], S. LEE[4];* [1]CHANGWON NATIONAL UNIVERSITY, [2]UIDUK UNIVERSITY, [3]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [4]KOREA POLYTECHNIC UNIVERSITY, [5]WOOSUK UNIVERSITY.

10:45 5LPC-06 / 172 **AN OPTIMAL CONFIGURATION DESIGN OF SUPERCONDUCTING MAGNETS FOR DC REACTOR TAKING LOSS INTO ACCOUNT** *S. NOGUCHI[1], K. YOSHIZAWA[1], M. TSUDA[2];* [1]HOKKAIDO UNIVERSITY, [2]TOHOKU UNIVERSITY.

5LPD: 251 DESIGN TOOLS AND NOVEL CONFIGURATION II *EXHIBIT HALL* JIM KERBY (FERMILAB) AND STEPHAN RUSSENSCHUCK (CERN)

10:45 5LPD-01 / 173 **ANALYSIS OF FACTORS AFFECTING FIELD QUALITY AND HEAT RELEASES OF THE QUADRUPOLE MAGNET FOR THE SIS 300** *L. M. TKACHENKO, S. S. KOZUB, P. A. SHCHERBAKOV, V. V. SYTNIK, V. V. ZUBKO;* INSTITUTE FOR HIGH ENERGY PHYSICS (IHEP).

10:45 5LPD-02 / 174 **DESIGN AND ANALYSIS OF A SELF-CENTERED COLD MASS SUPPORT FOR THE MICE COUPLING MAGNETS** *L. WANG[1], H. WU[2], S. LI[3], M. GREEN[4], X. GUO[2], H. PAN[2], S. ZHENG[2];* [1]SHANGHAI INSTITUTE OF APPLIED PHYSICS,CAS,SHANGHAI 201204,CHINA, [2]INSTITUTE OF CRYOGENICS AND SUPERCONDUCTIVITY TECHNOLOGY, HIT, HARBIN150080, CHINA, [3]HILONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, HARBIN 150027, CHINA, [4]LAWRENCE BERKELEY LABORATORY, BERKELEY CA 94720, USA.

10:45 5LPD-03 / 175 **AN OPTIMAL DESIGN TECHNIQUE OF HTS COILS BY CHANGING OUTER DIAMETERS AND THE GAP DISTANCES BETWEEN PANCAKES** *M. AHN[1], S. LEE[2], H. LEE[3], D. BAE[4], H. KANG[4], Y. CHUNG[5], Y. YOON[6], T. KO[7];* [1]KUNSAN NATIONAL UNIVERSITY, [2]UIDUK UNIVERSITY, [3]KOREA UNIVERSITY, [4]CHUNGJU NATIONAL UNIVERSITY, [5]UNIVERSITY OF SUWON, [6]ANSAN COLLEGE OF TECHNOLOGY, [7]YONSEI UNIVERSITY.

10:45 5LPD-04 / 176 **STRESS ANALYSIS OF A ^{7}T SUPERCONDUCTING MAGNET FOR ANIMAL MRI** *J. CHEN, X. JIANG, G. CHAI;* TSINGHUA UNIVERSITY, BEIJING, CHINA.

10:45 5LPD-05 / 177 **MECHANICAL OPTIMIZATION OF A HIGH FIELD NB^{3}AL COMMON COIL MAGNET** *Q. XU, K. SASAKI, T. NAKAMOTO, A. TERASHIMA, A. YAMAMOTO;* CRYOGENICS SCIENCES CENTER, HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION.

10:45 5LPD-06 / 178 **DESIGN STUDY ON DC SUPERCONDUCTING MAGNETS WITH CONDUCTIVE SHEETS BETWEEN TURNS** *S. IMAGAWA;* NATIONAL INSTITUTE FOR FUSION SCIENCE.

5LPE: 286 DIELECTRICS: TRANSFORMERS *EXHIBIT HALL* MASATAKA IWAKUMA (KYUSHU UNIVERSITY) AND JOHN WEISEND (FRIB)

10:45 5LPE-01 / 179 **HIGH VOLTAGE DIELECTRIC CHARACTERISTICS OF EPOXY NANOCOMPOSITES IN LIQUID NITROGEN FOR SUPERCONDUCTING TRANSFORMER** *Y. J. LEE[1], S. H. LEE[1], K. J. LIM[2], J. J. PARK[3], J. Y. KOO[1], B. W. LEE[1];* [1]HANYANG UNIVERSITY, [2]CHUNGBUK NATIONAL UNIVERSITY, [3]JOONGBU UNIVERSITY.

10:45 5LPE-02 / 180 **BREAKDOWN CHARACTERISTICS OF THE LIQUEFIED SF6 GAS AND CF4 GAS IN LIQUID NITROGEN FOR HIGH VOLTAGE BUSHINGS IN CRYOGENIC ENVIRONMENT** *S. H. LEE, W. J. SHIN, U. A. KHAN, J. K. SEONG, S. H. OH, B. W. LEE;* HANYANG UNIVERSITY.

10:45 5LPE-03 / 181 **CORRELATION BETWEEN PARTIAL DISCHARGE AND FLASHOVER CHARACTERISTICS OF THE INSULATION COMPONENTS OF 154KV REAL SCALE HTS TRANSFORMER** *S. H. LEE, I. J. SEO, J. W. KOO, B. W. LEE;* HANYANG UNIVERSITY.

10:45 5LPE-04 / 182 **THE BARRIER EFFECT ON BREAKDOWN IN 154 KV CLASS HTS TRANSFORMER** *H. CHEON[1], J. CHOI[1], J. LEE[2], H. LEE[2], S. KIM[1];* [1]DEPARTMENT OF ELECTRICAL ENGINEERING, GYEONGSANG NATIONAL UNIVERSITY AND ERI, [2]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, KOREA UNIVERSITY, SEOUL, KOREA.

10:45 5LPE-05 / 183 **INTER-TURN DIELECTRIC PROPERTIES OF YBCO COILS** *H. RODRIGO[1], G. H. HELLER[1], R. E. MCCLELLAN[1], J. KVITKOVIC[1], S. PAMIDI[1], W. D. MARKIEWICZ[2];* [1]CENTER FOR ADVANCED POWER SYSTEMS, FLORIDA STATE UNIVERSITY, [2]NATIONAL HIGH MAGNETIC FIELD LABORATORY, FLORIDA STATE UNIVERSITY.

10:45 5LPE-06 / 184 **ELECTRICAL INSULATION PAPER AND ITS PHYSICAL PROPERTIES AT CRYOGENIC TEMPERATURES** *E. TUNCER, G. POLIZOS, I. SAUERS, R. JAMES;* OAK RIDGE NATIONAL LABORATORY.

10:45 5LPE-07 / 185 **UNIFYING DATA HAVING DIFFERENT STRESSED AREA AND VOLUME EFFECTS ON LIQUID NITROGEN BREAKDOWN FIELD** *M. O. PACE, I. SAUERS, D. R. JAMES, E. TUNCER, G. POLIZOS;* OAK RIDGE NATIONAL LABORATORY.

10:45 5LPE-08 / 186 **A STUDY ON INSULATION CHARACTERISTICS OF NOMEX PAPER FOR AN HTS CABLE** *Y. ZHANG, Y. WANG, X. LI;* NORTH CHINA ELECTRIC POWER UNIVERSITY.

5LPF: 285 DIELECTRICS: SFCL AND SMES *EXHIBIT HALL* ISIDOR SAUERS (OAK RIDGE NATIONAL LABORATORY) AND HORATIO RODRIGO (FLORIDA STATE UNIVERSITY)

10:45 5LPF-01 / 187 **INSULATION TEST OF MINI-MODEL FOR DEVELOPMENT OF A 2.5 MJ CLASS CONDUCTION-COOLED HTS SMES** *J. CHOI[1], H. CHEON[1], H. KIM[2], K. SEONG[2], K. KIM[3], H. LEE[3], S. KIM[1];* [1]DEPARTMENT OF ELECTRICAL ENGINEERING, GYEONGSANG NATIONAL UNIVERSITY AND ERI, [2]SUPERCONDUCTIVITY RESEARCH CENTER, KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, [3]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, KOREA UNIVERSITY, SEOUL, KOREA.

10:45 5LPF-02 / 188 **EXPERIMENTAL STUDY ON THE BARRIER EFFECTS IN GASEOUS HELIUM FOR THE INSULATION DESIGN OF A SUPERCONDUCTING FAULT CURRENT LIMITER USING A SUB-COOLED NITROGEN COOLING METHOD** *H. KANG[1], J. NAH[2], D. BAE[1], Y. CHUNG[3], T. KO[2];* [1]CHUNGJU NATIONAL UNIVERSITY, [2]YONSEI UNIVERSITY, [3]THE UNIVERSITY OF SUWON.

10:45 5LPF-03 / 189 **ANALYSIS ON THE DIELECTRIC CHARACTERISTICS OF INSULATION GASES FOR DEVELOPING A HIGH VOLTAGE SUPERCONDUCTING FAULT CURRENT LIMITER** *H. KANG[1], J. NAH[2], T. KO[2];* [1]CHUNGJU NATIONAL UNIVERSITY, [2]YONSEI UNIVERSITY.

10:45 5LPF-04 / 190 **EXPERIMENTAL STUDY ON THE LIGHTNING IMPULSE DIELECTRIC CHARACTERISTICS OF SUB-COOLED LIQUID NITROGEN FOR A HIGH VOLTAGE SUPERCONDUCTING FAULT CURRENT LIMITER** *J. NA[1], K. CHANG[1], Y. KIM[1], Y. HWANG[1], H. KANG[2], T. KO[1];* [1]YONSEI UNIVERSITY, [2]CHUNGJU NATIONAL UNIVERSITY.

10:45 5LPF-05 / 191 **NUMERICAL ANALYSIS AND CONCEPTUAL INSULATION DESIGN OF A SINGLE-PHASE 154 KV CLASS SOLENOID TYPE**

SUPERCONDUCTING COIL FOR FAULT CURRENT LIMITER *J. NA[1], Y. KIM[1], K. CHANG[1], H. KANG[2], T. KO[1];* [1]YONSEI UNIVERSITY, [2]CHUNGJU NATIONAL UNIVERSITY.

5LPG: 268 FAST CYCLED MAGNETS AND MAGNETS FOR RADIOACTIVE ION BEAMS *EXHIBIT HALL*
TATSUSHI NAKAMOTO (KEK) AND PAOLO FERRACIN (LAWRENCE BERKELEY NATIONAL LABORATORY)

10:45 5LPG-01 / 192 **QUENCH MEASUREMENTS ON ONE SIS100 DIPOLE** *E. FLOCH;* GSI.

10:45 5LPG-02 / 193 **SUPERCONDUCTING MAGNETS FOR THE NICA ACCELERATOR COMPLEX IN DUBNA** *H. G. KHODZHIBAGIYAN, V. V. BORISOV, A. V. BYCHKOV, A. D. KOVALENKO, O. S. KOZLOV, O. A. KUNCHENKO, G. L. KUZNETSOV, V. A. MIKHAILOV, E. V. MURAVIEVA, A. V. SHABUNOV, A. Y. STARIKOV;* JOINT INSTITUTE FOR NUCLEAR RESEARCH.

10:45 5LPG-03 / 194 **FIELD MEASUREMENTS ON CURVED SUPERCONDUCTING MAGNETS** *P. SCHNIZER[1], E. FISCHER[1], A. MIERAU[1], B. SCHNIZER[2], H. R. KIESEWETTER[1];* [1]GSI HELMHOLTZZENTRUM FÜR SCHWERIONENFORSCHUNG MBH, [2]TECHNISCHE UNIVERSITÄT GRAZ.

10:45 5LPG-04 / 195 **EFFECT OF AN IRON YOKE ON THE FIELD HOMOGENEITY IN A SUPERCONDUCTING DOUBLE-HELIX BENT DIPOLE** *P. J. MASSON, R. B. MEINKE;* ADVANCED MAGNET LAB.

10:45 5LPG-05 / 196 **A MODEL DIPOLE FOR FAIR SIS300: ^{3}D DESIGN OF THE MECHANICAL STRUCTURE** *S. FARINON[1], P. FABBRICATORE[1], R. MUSENICH[1], R. MARABOTTO[2], F. ALESSANDRIA[3], G. BELLOMO[3], M. SORBI[3], G. VOLPINI[3], U. GAMBARDELLA[4];* [1]INFN - SEZIONE DI GENOVA, [2]ASG SUPERCONDUCTORS, [3]INFN - SEZIONE DI MILANO, [4]INFN - FRASCATI LABORATORY.

10:45 5LPG-06 / 197 **THE PREPARATION OF THE LASA TEST STATION FOR THE SIS300 MODEL DIPOLE** *M. SORBI[1], F. ALESSANDRIA[2], G. BELLOMO[1], P. FABBRICATORE[3], S. FARINON[3], U. GAMBARDELLA[4], R. MUSENICH[3], G. VOLPINI[2];* [1]MILAN UNIVERSITY & INFN, [2]INFN SEZ. DI MILANO, [3]INFN SEZ. DI GENOVA, [4]INFN-LNF.

10:45 5LPG-07 / 198 **MAGNETIC DESIGN OPTIMIZATION AND QUENCH STUDY OF A HIGHLY SATURATED SUPERFERRIC QUADRUPOLE FOR FAIR SUPER-FRS MULTIPLETS** *I. RODRIGUEZ, F. TORAL, L. GARCÍA-TABARÉS, E. MOLINA;* CIEMAT.

10:45 5LPG-08 / 199 **RADIATION RESISTANT SUPERFERRIC QUADRUPOLE MAGNETS WITH WARM IRON** *S. CHOUHAN, D. COLE, J. DEKAMP, C. WILSON, A. F. ZELLER;* NATIONAL SUPERCONDUCTING CYCLOTRON.

5LPH: 266 LARP AND LHC *EXHIBIT HALL* EGBERT FISCHER (GSI HELMHOLTZZENTRUM FÜR SCHWERIONENFORSCHUNG MBH) AND PASQUALE FABBRICATORE (ISTITUTO NAZIONALE DI FISICA NUCLEARE)

10:45 5LPH-01 / 200 **ALTERNATIVE MECHANICAL STRUCTURE FOR LARP NB^{3}SN QUADRUPOLES** *M. ANERELLA[1], J. COZZOLINO[1], G. AMBROSIO[2], S. CASPI[3], H. FELICE[3], P. KOVACH[1], M. LAMM[2], G. SABBI[3], J. SCHMALZLE[1], P. WANDERER[1];* [1]BROOKHAVEN NATIONAL LABORATORY, [2]FERMI NATIONAL ACCELERATOR LABORATORY, [3]LAWRENCE BERKELEY NATIONAL LABORATORY.

10:45 5LPH-02 / 201 **FABRICATION AND TEST OF 90MM NB^{3}SN MODEL BASED ON DIPOLE TYPE COLLAR** *R. C. BOSSERT, N. ANDREEV, G. CHLACHIDZE, V. S. KASHIKHIN, V. V. KASHIKHIN, M. J. LAMM, F. NOBREGA, I. NOVITSKI, M. TARTAGLIA, G. VELEV, A. V. ZLOBIN;* FERMI NATIONAL ACCELERATOR LABORATORY.

10:45 5LPH-03 / 202 **DESIGN VARIANTS OF A NESTED ORBIT CORRECTOR MAGNET FOR AN LHC INNER TRIPLET UPGRADE** *B. AUCHMANN, M. KARPPINEN;* CERN, TE-MSC.

10:45 5LPH-04 / 203 **THERMODYNAMIC MODELING OF NEW LHC INNER TRIPLET QUADRUPOLE MAGNETS** *D. BOCIAN[1], F. BORGNOLUTTI[2], G. AMBROSIO[1], F. CERUTTI[2], P. FESSIA[2], G. KIRBY[2], M. LAMM[1], A. MEREGHETTI[2], N. MOKHOV[1];* [1]FERMI NATIONAL ACCELERATOR LABORATORY, P.O. BOX 500, BATAVIA, IL 60510-0500, USA, [2]CERN, CH 1211, GENEVA 23, SWITZERLAND.

10:45 5LPH-05 / 204 **THERMAL RUNAWAYS IN LHC INTERCONNECTIONS: EXPERIMENTS** *G. P. WILLERING, L. BOTTURA, P. FESSIA, G. PEIRO, S. LE NAOUR, R. PRINCIPE, T. REGNALIA, D. RICHTER, C. SCHEUERLEIN, A. VERWEIJ;* CERN.

10:45 5LPH-06 / 205 **PRODUCTION AND QUALITY ASSURANCE OF THE INTERCONNECTION SPLICES OF THE MAIN BUS BARS DURING THE LHC 2008-2009 SHUTDOWN** *F. BERTINELLI[1], L. BOTTURA[1], J. DALIN[1], P. FESSIA[1], R.*

H. FLORA[2], S. J. HECK[1], H. PFEFFER[2], H. PRIN[1], C. E. SCHEUERLEIN[1], P. A. THONET[1], J. TOCK[1], L. R. WILLIAMS[1]; [1]CERN, GENEVA, [2]FERMILAB, BATAVIA.

10:45 5LPH-07 / 206 **ELECTRICAL INTERCONNECTION OF SUPERCONDUCTING STRANDS BY ELECTROLYTIC CU DEPOSITION** *C. E. SCHEUERLEIN[1], D. SCHÖRLING[1], S. J. HECK[1], A. AMS[2];* [1]CERN, GENEVA, [2]TECHNISCHE UNIVERSITÄT BERGAKADEMIE FREIBERG.

10:45 5LPH-08 / 207 **SUPERCONDUCTING LINK BUS DESIGN FOR THE ACCELERATOR PROJECT FOR UPGRADE OF LHC** *F. NOBREGA, J. BRANDT, S. CHEBAN, S. FEHER, M. KADUCAK, V. KASHIKHIN, T. PETERSON;* FERMILAB.

5LPJ: 253 MEASUREMENTS AND ANALYSIS *EXHIBIT HALL* AMALIA BALLARINO (CERN) AND HUBERTUS WEIJERS (NHMFL)

10:45 5LPJ-01 / 208 **SHIELDING OF MAGNETIC FIELDS BY REBCO COATED CONDUCTORS** *S. MATSUMOTO, T. KIYOSHI, A. UCHIDA;* NIMS.

10:45 5LPJ-02 / 209 **CONDUCTION-COOLED SUPERCONDUCTING MAGNET WITH 250MM BORE SIZE** *Q. WANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

10:45 5LPJ-03 / 210 **COUPLED THERMAL-MAGNETIC ANALYSIS ON THERMALLY ACTUATED SUPERCONDUCTING FLUX PUMP** *Y. MURATA[1], Z. HONG[2], Y. YAN[2], T. COOMBS[2];* [1]HITACHI, LTD., [2]UNIVERSITY OF CAMBRIDGE.

10:45 5LPJ-04 / 211 **CRYO-COOLING SYSTEM OF A HTS CONDUCTOR CHARACTERISTICS MEASUREMENT APPARATUS** *A. CHEN, F. XU, X. LIU, J. CAO, L. LI;* HARBIN INSTITUTE OF TECHNOLOGY.

10:45 5LPJ-05 / 212 **MAGNETIZATION OF SUPERCONDUCTING PELLETS IN HIGHLY INHOMOGENEOUS MAGNETIC FIELD** *J. LOPEZ[1], R. MAYNOU[1], X. GRANADOS[2], R. TORRES[1], R. BOSCH[3];* [1]EUETIB (UPC), [2]ICMAB-CSIC, [3]UPC.

10:45 5LPJ-06 / 213 WITHDRAWN

5LPK: 252 MEASUREMENTS AND DIAGNOSTICS *EXHIBIT HALL* LANCE COOLEY (FERMILAB) AND JEONWOOK CHO (KERI)

10:45 5LPK-01 / 214 **COLDDIAG: A COLD VACUUM CHAMBER FOR DIAGNOSTICS** *S. CASALBUONI[1], T. BAUMBACH[1], S. GERSTL[1], A. GRAU[1], M. HAGELSTEIN[1], D. SAEZ DE JAUREGUI[1], C. BOFFO[2], G. SIKLER[2], V. BAGLIN[3], R. CIMINO[4], M. COMMISSO[4], B. SPATARO[4], M. COX[5], J. SCHOUTEN[5], E. WALLÈN[6], R. WEIGEL[7], J. CLARKE[8], T. BRADSHAW[9];* [1]INSTITUTE FOR SYNCHROTRON RADIATION, KARLSRUHE INSTITUTE OF TECHNOLOGY, [2]BABCOCK NOELL GMBH, [3]CERN, [4]INFN, [5]DIAMOND LIGHT SOURCE, [6]MAXLAB, [7]MAX-PLANCK INSTITUTE FOR METAL RESEARCH, [8]STFC DARESBURY LABORATORY, [9]STFC RUTHERFORD APPLETON LABORATORY.

10:45 5LPK-02 / 215 **AN FBG SENSOR FOR STRAIN MEASUREMENT IN SUPERCONDUCTING MAGNETS** *H. ZHANG;* INSTITUTE OF ELECTRICAL ENGINEERING, CHINESE ACADEMY OF SCIENCES.

10:45 5LPK-03 / 216 **HIGH-TEMPERATURE SUPERCONDUCTING YBACUO DEVICE FOR MEASURING WEAK MAGNETIC FIELDS** *N. D. KUZMICHEV[1], V. V. SLAVKIN[2];* [1]MACHINE-BUILDING INSTITUTE, [2]SARANSK COOPERATIVE INSTITUTE, RUSSIAN UNIVERSITY OF COOPERATION.

10:45 5LPK-04 / 217 **SOME ASPECTS OF WINDING GEOMETRY CONTROL FOR ITER SUPERCONDUCTING COILS FROM MAGNETIC MEASUREMENTS** *I. Y. RODIN[1], V. M. AMOSKOV[2], V. A. BELYAKOV[2], S. A. EGOROV[2], A. A. FIRSOV[2], I. V. GORNIKEL[3], V. G. IVKIN[2], V. P. KUCHTIN[2], V. P. KUCHTIN[2], E. A. LAMZIN[2], A. A. LANCETOV[2], M. S. LARIONOV[2], N. A. MAXIMENKOVA[2], N. A. SHATIL[2], S. E. SYTCHEVSKY[2], V. N. VASILIEV[1];* [1]THE D.V. EFREMOV SCIENTIFIC RECEARCH INSTITUTE OF ELECTROPHYSICAL APPARATUS (NIIEFA), [2]THE D.V.EFREMOV SCIENTIFIC RECEARCH INSTITUTE OF ELECTROPHYSICAL APPARATUS (NIIEFA), [3]ALPHYSICA INC..

10:45 5LPK-05 / 218 **INSTRUMENTATION FOR LOCAL AND INTEGRAL MAGNETIC FIELD MEASUREMENTS OF SUPERCONDUCTING UNDULATOR COILS** *A. GRAU, T. BAUMBACH, S. CASALBUONI, S. GERSTL, M. HAGELSTEIN, D. SAEZ DE JAUREGUI;* INSTITUTE FOR SYNCHROTRON RADIATION, KARLSRUHE INSTITUTE OF TECHNOLOGY.

10:45 5LPK-06 / 219 **A HIGH ACCURACY HALL PROBES TEST BENCH FOR SMALL MULTIPOLES FIELD MEASUREMENTS** *M. STATERA[1], L. BARION[2], P. BENATI[1], S.*

BERTELLI[1], G. CIULLO[1], M. CONTALBRIGO[2], P. F. DALPIAZ[1], G. GUIDOBONI[1], P. LENISA[1], L. PAPPALARDO[1]; [1]FERRARA UNIVERSITY - INFN, [2]INFN.

10:45 5LPK-07 / 220 **NOVEL SET-UP FOR THE DEFINITION OF THE MAGNETIC FIELD QUALITY OF SUPER- AND NORMALLY CONDUCTING ACCELERATOR MAGNETS** *Y. A. KLIMCHENKO, V. G. IVKIN, A. A. LANCETOV, I. Y. RODIN;* THE D.V. EFREMOV SCIENTIFIC RESEARCH INSTITUTE OF ELECTROPHYSICAL APPARATUS.

5LPL: 248 STABILITY HTS IV *EXHIBIT HALL* SHIGERU HORII (KOCHI UNIVERSITY OF TECHNOLOGY) AND ANDREA AUGIERI (ENEA)

10:45 5LPL-01 / 221 **QUENCH DETECTION METHOD OF HTS MODEL COIL USING A SERIES-TYPE THERMOCOUPLE** *D. KIM[1], J. KIM[1], A. KIM[1], M. PARK[1], I. YU[1], K. SIM[2], S. KIM[2], J. CHO[2];* [1]CHANGON NATIONAL UNIVERSITY, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE.

10:45 5LPL-02 / 222 WITHDRAWN

10:45 5LPL-03 / 223 **THERMAL/ELECTRICAL STABILITIES OF YBCO COATED CONDUCTOR (CC) TAPES IMPREGNATED WITH A SOLID ARGON (SAR)-LN2 MIXTURE** *J. SONG[1], K. KIM[1], K. KIM[1], J. LEE[1], H. KIM[2], H. CHEON[3], S. KIM[3], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE, KOREA, [3]DEPARTMENT OF ELECTRICAL ENGINEERING, GYEONGSANG NATIONAL UNIVERSITY AND ERI, KOREA.

10:45 5LPL-04 / 224 **AC LOSS OF SUPERCONDUCTING RACETRACK COIL IN VARIOUS MAGNETIC CONDITIONS** *Z. HONG, M. AINSLIE, W. YUAN, R. PEI, Y. YAN, W. XIAN, T. COOMBS;* CAMBRIDGE UNIVERSITY.

10:45 5LPL-05 / 225 **ACHIEVEMENT OF HIGH HEAT REMOVAL CHARACTERISTIC OF SUPERCONDUCTING MAGNETS WITH BUILT-IN OSCILLATING HEAT PIPES** *T. MITO[1], K. NATSUME[2], N. YANAGI[1], H. TAMURA[1], T. TAMADA[3], K. SHIKIMACHI[3], N. HIRANO[3], S. NAGAYA[3];* [1]NATIONAL INSTITUTE FOR FUSION SCIENCE, [2]THE GRADUATE UNIVERSITY FOR ADVANCED STUDIES, [3]CHUBU ELECTRIC POWER CO., INC..

5LPM: 267 VARIOUS ACCELERATOR MAGNET TOPICS *EXHIBIT HALL* RAMESH GUPTA (BROOKHAVEN NATIONAL LABORATORY) AND LUCA BOTTURA (CERN)

10:45 5LPM-01 / 226 **CERTIFICATION OF SUPERCONDUCTING SOLENOID-BASED FOCUSING LENSES** *J. DIMARCO, D. F. ORRIS, T. M. PAGE, R. H. RABEHL, M. A. TARTAGLIA, I. TERECHKINE, J. C. TOMPKINS;* FERMILAB.

10:45 5LPM-02 / 227 **DESIGN AND PERFORMANCE OF FOCUSING LENSES FOR INSTALLATION INTO SUPERCONDUCTING CRYOMODULES OF A PROTON LINAC** *T. H. NICOL, D. A. SERGATSKOV, M. A. TARTAGLIA, I. TERECHKINE, J. C. TOMPKINS;* FERMILAB.

10:45 5LPM-03 / 228 **CONCEPTUAL DESIGN OF AN OPEN MIDPLANE DIPOLE MODEL FOR MUON COLLIDER RING** *A. V. ZLOBIN, N. ANDREEV, R. BOSSERT, V. V. KASHIKHIN, N. V. MOKHOV, I. NOVITSKI;* FERMILAB.

10:45 5LPM-04 / 229 **DESIGN AND CONSTRUCTION OF THE FINAL FOCUS QUADRUPOLE R&D MAGNET FOR SUPER-KEKB** *N. OHUCHI, K. TSUCHIYA, M. TAWADA, N. HIGASHI, Z. ZHANGUO;* KEK.

10:45 5LPM-05 / 230 **MAGNETIC FIELD DESIGN OF DIPOLE MAGNET WOUND WITH HIGH TC SUPERCONDUCTOR TAPE CONSIDERING CURRENT TRANSPORT CHARACTERISTICS WITH ANISOTROPIC MAGNETIC FIELD DEPENDENCE** *K. TAKAHASHI[1], N. AMEMIYA[1], N. OKADA[1], T. NAKAMURA[1], T. OGITSU[2], T. TOSAKA[3], T. KURUSU[3], T. YOSHIYUKI[3], K. NODA[4];* [1]KYOTO UNIVERSITY, [2]HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION, [3]TOSHIBA CORPORATION, [4]NATIONAL INSTITUTE OF RADIOLOGICAL SCIENCES.

10:45 5LPM-06 / 231 **DESIGN STUDY OF 4 T SUPERCONDUCTING SECTOR MAGNETS IN A 450 MEV/NUCL BOOSTER CYCLOTRON FOR CARBON-ION THERAPY** *S. SANFILIPPO, M. SCHIPPERS, M. NEGRAZUS, M. CALVI, A. GABARD;* PAUL SCHERRER INSTITUT.

10:45 5LPM-07 / 232 WITHDRAWN

10:45 5LPM-08 / 233 WITHDRAWN

10:45 5LPM-09 / 234 WITHDRAWN

5MPA: 234 BULK REBCO I *EXHIBIT HALL* BYUNG JUN PARK (KOREA ELECTRIC POWER RESERACH INSTITUTE) AND HIROYUKI FUJIMOTO (RAILWAY TECHNICAL RESEARCH INSTITUTE)

10:45 5MPA-01 / 235 **THERMODYNAMIC PARAMETERS OF $SMBA^2CU^3OX$ WITH VARYING OXYGEN CONTENT** *A. KORTYKA[1], R. PUZNIAK[1], A. WISNIEWSKI[1], H. W. WEBER[2], C. Y. TANG[3], X. YAO[3], K. CONDER[4];* [1]INSTITUTE OF PHYSICS POLISH ACADEMY OF SCIENCES, [2]ATOMINSTITUT, VIENNA UNIVERSITY OF TECHNOLOGY, 1020 VIENNA, AUSTRIA, [3]DEPARTMENT OF PHYSICS, SHANGHAI JIAO TONG UNIVERSITY, SHANGHAI 200240, P. R. CHINA, [4]LABORATORY FOR DEVELOPMENTS AND METHODS, PAUL SCHERRER INSTITUTE, CH-5232 VILLIGEN PSI, SWITZERLAND.

10:45 5MPA-02 / 236 **NEW APPROACHES FOR ENHANCEMENT OF JC FOR RE123 MELT-SOLIDIFIED BULKS** *T. AKASAKA, J. SHIMOYAMA, Y. ISHI, H. OGINO, K. KISHIO;* UNIVERSITY OF TOKYO.

10:45 5MPA-03 / 237 **EFFECT OF NANO-SCALE OF Y^2BA^4CUMOY (M:AG, CE) ADDITION IN BULK Y-BA-CU-O SUPERCONDUCTORS** *P. CHEN[1], S. LIU[1], S. CHEN[2], I. CHEN[1], M. WU[3];* [1]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL CHENG KUNG UNIVERSITY, TAINAN, TAIWAN, [2]DEPARTMENT OF POLYMER ENGINEERING, NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, TAIPEI, TAIWAN, [3]INSTITUTES OF PHYSICS, ACADEMIA SINICA, TAIPEI, TAIWAN.

10:45 5MPA-04 / 238 **INFLUENCE OF MAGNETIC SECONDARY PHASES ON SUPERCONDUCTING AND MAGNETIC PROPERTIES OF MELT-TEXTURED $GDSR^2RUCU^2O8$-DELTA SAMPLES** *R. CIANCIO[1], M. GOMBOS[2], S. PACE[2], M. POLICHETTI[2], A. VECCHIONE[2], D. ZOLA[2];* [1]UNIVERSITÀ DI SALERNO, DIP. FISICA "E.R.CAIANIELLO" AND CNR-IOM TRIESTE, [2]CNR-SPIN SALERNO AND UNIVERSITÀ DI SALERNO, DIP. FISICA "E.R.CAIANIELLO".

10:45 5MPA-05 / 239 **STRUCTURAL PARAMETERS AND GRANULARITY IN RUTHENOCUPRATES: IMPACT OF SR/GD AND SR/ND RATIO** *A. ROY, A. K. GHOSH;* DEPARTMENT OF PHYSICS, JADAVPUR UNIVERSITY, KOLKATA 700032, INDIA.

10:45 5MPA-06 / 240 WITHDRAWN.

5MPB: 233 BULK REBCO II *EXHIBIT HALL* HARI BABU NADENDLA (BRUNEL UNIVERSITY) AND KAZUMASA IIDA (IFW DRESDEN)

10:45 5MPB-01 / 241 **ENHANCEMENT OF CRITICAL CURRENT DENSITIES AND TRAPPED FLUX OF GD-BA-CU-O BULK HTS DOPED WITH MAGNETIC ALLOY PARTICLES** *K. TSUZUKI[1], S. HARA[1], Y. XU[1], M. MORITA[2], H. TESHIMA[2], O. YANAGISAWA[3], J. NOUDEM[3], C. HARNOIS[3], M. IZUMI[1];* [1]TOKYO UNIVERSITY OF MARINE SCIENCE AND TECHNOLOGY, [2]NIPPON STEEL CORPORATION, [3]ECOLE NATIONALE SUPERIEURE D'INGENIEURS DE CAEN.

10:45 5MPB-02 / 242 **PREPARATION AND PROPERTIES OF HIGH-QUALITY MELT GROWTH GD123 BULKS WITH LOW VOID DENSITY - FLEXURAL STRENGTH AT 7^7K -** *H. FUJIMOTO[1], A. MURAKAMI[2];* [1]RAILWAY TECHNICAL RESEARCH INSTITUTE, [2]HIROSAKI UNIV..

10:45 5MPB-03 / 243 **INFLUENCE OF OXYGEN HEAT TREATMENT FOR YBCO BULK OF 100 KWH CLASS SUPERCONDUCTOR FLYWHEEL ENERGY STORAGE SYSTEM BEARING** *B. J. PARK[1], S. Y. JUNG[1], C. H. KIM[1], S. D. PARK[2], S. G. DOO[1], J. P. LEE[1], B. C. PARK[1], S. C. HAN[1], Y. H. HAN[1];* [1]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [2]KOREA ATOMIC ENERGY RESEARCH INSTITUTE.

10:45 5MPB-04 / 244 **ANALYSIS OF TEMPERATURE AND MAGNETIC FIELD DISTRIBUTION IN SUPERCONDUCTING BULK DURING PULSED FIELD MAGNETIZATION** *H. FUJISHIRO, T. NAITO, D. FURUTA;* IWATE UNIVERSITY.

10:45 5MPB-05 / 245 **DRILLED BULK HIGH-TEMPERATURE SUPERCONDUCTORS: ENHANCING THE TRAPPED MAGNETIC FLUX BY FILLING THE HOLES WITH A FERROMAGNETIC POWDER** *G. P. LOUSBERG, J. FAGNARD, M. AUSLOOS, P. VANDERBEMDEN, B. VANDERHEYDEN;* UNIVERSITY OF LIEGE, BELGIUM.

10:45 5MPB-06 / 246 **EFFECT OF FILLER ON TRAPPED FIELD CHARACTERISTICS OF HTS BULKS WITH ARTIFICIAL HOLES** *G. JANG[1], S. HAN[2], C. KIM[3], Y. HAN[4], S. JUNG[4], T. SUNG[5];* [1]CHUNGBUK NATIONAL UNIVERSITY, [2]MASSACHUSETTS INSTITUTE

OF TECHNOLOGY, [3]KOREA ATOMIC ENERGY RESEARCH INSTITUTE, [4]KOREA ELECTRIC POWER RESEARCH INSTITUTE, [5]HANYANG UNIVERSITY.

5MPC: 236 MGB2 MATERIALS SCIENCE I *EXHIBIT HALL* DURVAL RODRIGUES JR. (ENGINEERING SCHOOL OF LORENA - UNIVERSITY OF SÃO PAULO) AND LANCE COOLEY (FERMILAB)

10:45 5MPC-01 / 247 **IMPURITIES FORMATION AND ITS EFFECT ON FIELD DEPENDENT PROPERTIES IN THE NANO SIC DOPED MGB2** *W. YEOH[1], R. ZHENG[1], S. RINGER[1], S. CHEN[2], J. MACMANUS-DRISCOLL[3], X. XU[4], W. LI[1], S. DOU[4];* [1]ELECTRON MICROSCOPE UNIT, UNIVERSITY OF SYDNEY, [2]PHYSICS DEPARTMENT, UNIVERSITI PUTRA MALAYSIA, [3]DEPARTMENT OF MATERIALS SCIENCE AND METALLURGY, UNIVERSITY OF CAMBRIDGE, [4]INSTITUTE FOR SUPECONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG.

10:45 5MPC-02 / 248 **INFLUENCE OF HEMOGLOBIN ADDITION ON SUPERCONDUCTING PROPERTIES OF HIGHLY DENSE MGB2 BULK** *M. MAEDA[1], Y. NAKAYAMA[2], Y. ZHAO[1], J. H. KIM[1], Y. KUBOTA[2], S. X. DOU[1];* [1]INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, [2]COLLEGE OF SCIENCE AND TECHNOLOGY, NIHON-UNIVERSITY.

10:45 5MPC-03 / 249 **STRUCTURAL AND SUPERCONDUCTING PROPERTIES OF HIGHLY DENSE MGB2 BULK WITH PYRENE ADDITION** *M. MAEDA[1], Y. ZHAO[1], J. H. KIM[1], Y. NAKAYAMA[2], Y. KUBOTA[2], S. X. DOU[1];* [1]INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, [2]COLLEGE OF SCIENCE AND TECHNOLOGY, NIHON-UNIVERSITY.

10:45 5MPC-04 / 250 **OPTIMISING THE METHOD OF INCORPORATING SI AND C INTO MGB2** *K. Y. TAN[1], S. CHEN[1], K. P. LIM[1], K. B. TAN[1], A. H. SHAARI[1], J. L. MACMANUS-DRISCOLL[2];* [1]UNIVERSITI PUTRA MALAYSIA, [2]UNIVERSITY OF CAMBRIDGE.

10:45 5MPC-05 / 251 **FABRICATION AND SUPERCONDUCTING PROPERTIES OF MGB2 DOPED WITH POLYSILOXANE BASED COPOLYMERS** *V. SANDU[1], G. ALDICA[1], E. SANDU[2], E. CIMPOIASU[3], N. HURDUC[4], I. NOR[4];* [1]NATIONAL INSTITUTE OF MATERIALS PHYSICS-BUCHAREST, [2]HORIA HULUBEI NATIONAL INSTITUTE OF PHYSICS AND NUCLEAR ENGINEERING, MAGURELE, [3]US NAVAL ACADEMY, USA, [4]GHEORGHE ASACHI TECHNICAL UNIVERSITY IASI.

10:45 5MPC-06 / 252 **THE EFFECT OF ADDITION OF GRAPHENE ON THE SUPERCONDUCTING PROPERTIES OF MG(B,C0.04)2** *K. S. B. DE SILVA, X. XU, Y. ZHANG, W. X. LI, X. L. WANG, S. X. DOU;* INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS.

10:45 5MPC-07 / 253 **THE EFFECTS OF LATTICE DISTORTION ON THE SUPERCONDUCTIVITY FOR NANO-SIC DOPED MGB2** *W. LI[1], R. CHEN[1], Y. LI[2], R. ZENG[1], S. DOU[1];* [1]INSTITUTE FOR SUPERCONDUCTING AND ELECTRONIC MATERIALS, UNIVERSITY OF WOLLONGONG, WOLLONGONG, NSW 2522, AUSTRALIA, [2]SCHOOL OF MATERIALS SCIENCE AND ENGINEERING, SHANGHAI UNIVERSITY, 149 YANCHANG RD., SHANGHAI, 200072 P.R. CHINA.

10:45 5MPC-08 / 254 **INFLUENCE OF NANOPARTICLE ANTIMONY TRIOXIDE POWDER ON SUPERCONDUCTIVITY IN MGB2 BULK** *Y. ZHANG;* INSTITUTE FOR SUPERCONDUCTING & ELECTRONIC MATERIALS.

5MPD: 237 MGB2 MATERIALS SCIENCE II *EXHIBIT HALL* SOO CHEN (UNIVERSITI PUTRA MALAYSIA) AND WAI KONG YEOH (ELECTRON MICROSCOPE UNIT)

10:45 5MPD-01 / 255 **INFILTRATION AND GROWTH OF HIGH DENSITY, NEAR-NET SHAPED BULK MGB2 WITH IMPROVED SUPERCONDUCTING PROPERTIES** *N. HARI BABU[1], A. YAMAMOTO[2], Y. H. SHI[3], D. A. CARDWELL[3];* [1]BRUNEL UNIVERSITY, [2]FLORIDA STATE UNIVERSITY, [3]CAMBRIDGE UNIVERSITY.

10:45 5MPD-02 / 256 **MGB2 SUPERCONDUCTORS WITH ADDITION OF OTHER DIBORIDES AND SIC** *L. B. S. DA SILVA[1], D. RODRIGUES JR.1, G. D. SERRANO[2], V. C. V. METZNER[1], V. A. CHITTA[3], M. T. MALACHEVSKY[2], A. C. SERQUIS[2];* [1]ESCOLA DE ENGENHARIA DE LORENA - UNIVERSIDADE DE SÃO PAULO, [2]CENTRO ATÓMICO BARILOCHE, [3]UNIVERSIDADE DE SÃO PAULO.

10:45 5MPD-03 / 257 **ANISOTROPY OF LI, AL, C AND MN SUBSTITUTED MGB2 SINGLE CRYSTALS STUDIED BY THERMOPOWER AND UPPER CRITICAL FIELD** *K. OGANISIAN[1], K. ROGACKI[1], N. D. ZHIGADLO[2], S. KATRYCH[2], J. KARPINSKI[2];*

[1]INSTITUTE OF LOW TEMPERATURE AND STRUCTURE RESEARCH,50-950 WROCLAW, POLAND, [2]LABORATORY FOR SOLID STATE PHYSICS, ETH, 8093 ZÜRICH, SWITZERLAND.

10:45 5MPD-04 / 258 **BORON NANO-SIZED POWDER SYNTHESIZED IN A PLASMA AS A PRECURSOR FOR MGB2 POWDER AND WIRES** *J. V. MARZIK[1], M. RINDFLEISCH[2], D. K. FINNEMORE[3];* [1]SPECIALTY MATERIALS, INC., [2]HYPER TECH RESEARCH, INC., [3]AMES LABORATORY.

10:45 5MPD-05 / 259 **PROPERTIES OF MGB2 SYNTHESIZED FROM MGB^{2}H8 BY THERMAL DECOMPOSITION** *J. M. ANDRES[1], C. MAYORAL[1], E. MARTÍNEZ[2], R. NAVARRO[2];* [1]CSIC (ICB), [2]ICMA (CSIC-UNIVERSIDAD DE ZARAGOZA).

10:45 5MPD-06 / 260 **MECHANICALLY ALLOYED IN-SITU MGB2: INFLUENCE OF THE PRECURSOR REACTIVITY ON DEFORMABILITY, MICROSTRUCTURE AND SUPERCONDUCTING PROPERTIES** *M. HERRMANN[1], W. HÄßLER[1], C. RODIG[1], M. SCHUBERT[1], A. KARIO[1], K. NENKOV[1], J. SCHEITER[1], L. SCHMOLINGA[2], A. AUBELE[3], B. SAILER[3], K. SCHLENGA[3], B. HOLZAPFEL[1], L. SCHULTZ[1];* [1]IFW DRESDEN, [2]BRUKER HTS GMBH, [3]BRUKER EAS GMBH.

5MPE: 239 REBCO AND RUTHENATE PROPERTIES *EXHIBIT HALL* ALEXEY PAN (UNIVERSITY OF WOLLONGONG) AND ANKE KIRCHNER (IFW DRESDEN)

10:45 5MPE-01 / 261 **SUPERCONDUCTING PROPERTIES OF BORON DOPED YBA^{2}CU^{3}O7-Y HTS** *N. MARGIANI[1], T. MEDOIDZE[1], I. METSKHVARISHVILI[2], I. MZHAVANADZE[1], N. PAPUNASHVILI[1], V. ZHGHAMADZE[1];* [1]INSTITUTE OF CYBERNETICS, [2]IV. JAVAKHISHVILI TBILISI STATE UNIVERSITY.

10:45 5MPE-02 / 262 **CORRELATION BETWEEN ENHANCED TC, AC IRREVERSIBILITY LINE AND HEAT TREATMENT IN HTC SUPERCONDUCTORS.** *A. NAFIDI1, E. Y. EL YAKOUBI[1], M. BRAIGUE[1], R. MORGHI[1], M. D'ASTUTO[2], E. G. MICHEL[3];* [1]GROUP OF CONDENSED MATTER PHYSICS, UNIVERSITY IBN ZOHR, [2]IMPMC, CNRS UMR7590 UPMC, 75015 PARIS, [3]DTO. DE FÍSICA DE LA MATERIA CONDENSADA, UNIVERSIDAD AUTÓNOMA DE MADRID.

10:45 5MPE-03 / 263 **CORRELATION BETWEEN ENHANCED TC, THE UNIT CELL VOLUME AND AC MAGNETIC SHIELDING IN ARGON PREHEATED (Y1-XEUX)(SRBA)CU^{3}O6+Z** *A. NAFIDI1, E. Y. EL YAKOUBI[1], R. MORGHI[1], M. BRAIGUE[1], M. D'ASTUTO[2], E. G. MICHEL[3];* [1]GROUP OF CONDENSED MATTER PHYSICS, UNIVERSITY IBN ZOHR, [2]IMPMC, CNRS UMR7590 UPMC, 140 RUE DE LOURMEL, 75015 PARIS, FRANCE, [3]DTO. DE FÍSICA DE LA MATERIA CONDENSADA, UNIVERSIDAD AUTÓNOMA DE MADRID, 28049 MADRID, SPAIN.

10:45 5MPE-04 / 264 **EVALUATIONS OF SUPERCONDUCTING PROPERTIES IN REBCO COATED CONDUCTORS HEAT-TREATED UNDER A REDUCED OXYGEN PARTIAL PRESSURE FOR A SUPERCONDUCTING JOINT** *J. LEE[1], H. KIM[1], J. SONG[1], M. AHN[2], K. CHANG[3], T. KO[3], H. LEE[1];* [1]KOREA UNIVERSITY, KOREA, [2]KUNSAN NATIONAL UNIVERSITY, KOREA, [3]YONSEI UNIVERSITY, KOREA.

10:45 5MPE-05 / 265 **TEMPERATURE DEPENDENCE OF THERMAL EXPANSION AND INELASTIC PROPERTIES OF YBACUO HTSC** *E. E. SANAIA[1], I. KURASHVILI[1], M. DARCHIASHVILI[2], G. DARSAVELIDZE[2];* [1]ILIA VEKUA SOKHUMI INSTITUTE OF PHYSICS AND TECHNOLOGY, [2]F. TAVADZE INSTITUTE OF METALLURGY AND MATERIAL SCIENCE.

10:45 5MPE-06 / 266 **AGING EFFECT IN DIFFERENTLY COATED BAZRO3-DOPED GDBACUO THIN FILMS** *K. SCHLESIER, H. HUHTINEN, P. PATURI;* UNIVERSITY OF TURKU.

10:45 5MPE-07 / 267 **MAGNETIC ORIENTATION OF SUPERCONDUCTORS WITH LAYERED CRYSTAL STRUCTURES** *S. HORII[1], M. YAMAKI[2], T. MAEDA[2], J. SHIMOYAMA[3];* [1]KOCHI UNIVERSITY OF TECHNOLOGY AND JST-RIP, [2]KOCHI UNIVERSITY OF TECHNOLOGY AND JST-TRIP, [3]UNIVERSITY OF TOKYO AND JST-TRIP.

10:45 5MPE-08 / 268 **LOW FIELD MAGNETO RESISTANCE IN RU-1222 SUPERCONDUCTOR** *R. MOHAN[1], S. KIM2, N. K. GAUR[3], S. BHATTACHARYA[4], S. K. GUPTA[4];* [1]DEPARTMENT OF MECHATRONICS ENG. & RESEARCH INSTITUTE OF ADVANCED TECHNOLOGY, JEJU NATIONAL UNIVERSITY, [2]DEPARTMENT OF MECHATRONICS ENG. & RESEARCH INSTITUTE OF ADVANCED TECHNOLOGY,, [3]DEPARTMENT OF PHYSICS, BARKATULLAH UNIVERSITY,

BHOPAL-462 026 INDIA, [4]TPPED, BHABHA ATOMIC RESEARCH CENTRE (BARC), MUMBAI 400085, INDIA.

14:00 ORAL SESSIONS

5EX: 163 SNSPD

EXECUTIVE HIROYUKI SHIBATA (NTT BASIC RESEARCH LABORATORY) AND GREGORY GOLTSMAN (MOSCOW STATE PEDAGOGICAL UNIVERCITY)

14:00 5EX-01 ***(INVITED)*** **AVALANCHE-MODE SINGLE PHOTON DETECTOR BASED ON 30 NM-WIDE SUPERCONDUCTING NANOWIRES** *F. MARSILI[1], F. NAJAFI[1], X. HU[1], C. HERDER[1], J. YANG[1], E. DAULER[2], R. MOLNAR[2], K. BERGGREN[1];* [1]DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 77 MASSACHUSETTS AVENUE, CAMBRIDGE, MASSACHUSETTS 02139, USA, [2]LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY,244 WOOD ST., LEXINGTON, MASSACHUSETTS 02420, USA.

14:30 5EX-02 ***(INVITED)*** **OPTICAL-ANTENNA INTEGRATED SUPERCONDUCTING NANOWIRE SINGLE-PHOTON DETECTORS** *X. HU[1], E. A. DAULER[2], F. NAJAFI[1], F. MARSILI[1], R. J. MOLNAR[2], K. K. BERGGREN[1];* [1]MASSACHUSETTS INSTITUTE OF TECHNOLOGY, [2]LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

15:00 5EX-03 ***(INVITED)*** **SUPERCONDUCTING NANOWIRE SINGLE ELECTRON DETECTOR** *M. ROSTICHER1, F. LADAN[1], J. MANEVAL[1], T. ZIJLSTRA[2], T. M. KLAPWIJK[2], S. N. DORENBOS[3], V. ZWILLER[3], A. LUPASCU[4], G. NOGUES[5];* [1]LABORATOIRE PIERRE AIGRAIN, ENS, [2]PHYSICS OF NANOELECTRONICS, KAVLI INSTITUTE OF NANOSCIENCE, TU DELFT, [3]QUANTUM TRANSPORT, KAVLI INSTITUTE OF NANOSCIENCE, TU DELFT, [4]INSTITUTE FOR QUANTUM COMPUTING, UNIVERSITY OF WATERLOO, [5]CEA-CNRS JOINT TEAM "NANOPHYSIQUE DES SEMICONDUCTEURS, INSTITUT NÉEL & LABORATOIRE KASTLER BROSSEL ENS.

15:30 5EX-04 **SUPERCONDUCTING SINGLE PHOTON DETECTORS FOR QUANTUM OPTICS AND QUANTUM PLASMONICS** *S. N. DORENBOS, R. W. HEERES, T. A. BAART, E. BERMUDEZ UREÑA, L. P. KOUWENHOVEN, T. ZIJLSTRA, T. M. KLAPWIJK, V. ZWILLER;* DELFT UNIVERSITY OF TECHNOLOGY.

15:45 5EX-05 **QUANTUM WAVEGUIDE CIRCUITS CHARACTERIZED WITH SUPERCONDUCTING SINGLE PHOTON DETECTORS** *R. H. HADFIELD[1], C. NATARAJAN[1], A. PERUZZO[2], S. MIKI[3], Z. WANG[3], B. BAEK[4], S. NAM[4], J. L. O'BRIEN[2];* [1]HERIOT-WATT UNIVERSITY, UK, [2]UNIVERSITY OF BRISTOL, UK, [3]NICT, JAPAN, [4]NIST, USA.

5EY: 154 MICROWAVE SYSTEMS AND DEVICES

DIPLOMAT DANIEL OATES (MIT LINCOLN LABORAOTRY) AND ANNA LEESE DE ESCOBAR (SPAWAR SYSTEMS CENTER PACIFIC)

14:00 5EY-01 **RECENT PROGRESS ON RESEARCH AND APPLICATIONS OF HTS FILTER SUBSYSTEMS FOR MOBILE COMMUNICATION IN BEIJING** *B. CAO, X. ZHANG, B. WEI, X. GUO;* TSINGHUA UNIVERSITY.

14:15 5EY-02 **REALIZATION OF A HIGHLY MINIATURIZED WIDEBAND BANDPASS FILTER AT THE UHF BAND** *S. SETOODEH[1], P. D. LAFORGE[2], R. R. MANSOUR[1];* [1]UNIVERSITY OF WATERLOO, [2]UNIVERSITY OF REGINA.

14:30 5EY-03 **A HIGH POWER HANDLING HTS FILTER AND ITS APPLICATION IN TD-SCDMA MOBILE COMMUNICATION NETWORK** *Y. HE, X. ZHANG, H. LI, Q. ZHANG, C. LI;* INSTITTUTE OF PHYSICS, CHINESE ACADEMY OF SCIEMCES.

14:45 5EY-04 **SUPERCONDUCTING MULTIPLEXER FILTER BANK FOR A FREQUENCY SELECTIVE POWER LIMITER** *E. ROCAS[1], J. MATEU[2], A. PADILLA[2], N. D. ORLOFF[1], J. M. O'CALLAGHAN[2], C. COLLADO[1], J. C. BOOTH[1];* [1]NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, [2]UNIVERSITAT POLITECNICA DE CATALUNYA.

15:00 5EY-05 **DESCRIPTION OF SELF-HEATING MECHANISMS IN HIGH TEMPERATURE SUPERCONDUCTOR MICROWAVE DEVICES** *J. C. BOOTH[1], E. ROCAS[1], C. COLLADO[1], N. ORLOFF[1], K. DUSTAKAR[2], S. BERKOWITZ[2];* [1]NIST, [2]OUT OF THE FOG RESEARCH.

15:15 5EY-06 WITHDRAWN.

15:30 5EY-07 **EXPERIMENTAL CHARACTERIZATION OF OPTICALLY TUNABLE YBCO MICROWAVE RESONATORS AND DELAY LINES** *H. ATIKIAN, B. GHAMSARI, A. H. MAJEDI;* UNIVERSITY OF WATERLOO.

15:45 5EY-08 **HTS JOSEPHSON JUNCTION CANTILEVER WITH INTEGRATED NEAR FIELD THZ-ANTENNA** *M. SCHILLING, C. BRENDEL, J. M. SCHOLTYSSEK;* TU BRAUNSCHWEIG.

5LX: 128 CONDUCTOR DEVELOP AND TEST II

EMPIRE KIYOSUMI TSUCHIYA (KEK) AND ARUP GHOSH (BROOKHAVEN NATIONAL LABORATORY)

14:00 5LX-01 ***(INVITED)*** **UTILIZATION OF LARGE HEAT CAPACITY SUBSTANCES FOR IMPROVING THE STABILITY OF SUPERCONDUCTING MAGNETS (REVIEW OF EXPERIMENTAL RESULTS)** *V. E. KEILIN;* KURCHATOV INSTITUTE.

14:30 5LX-02 **NB^{3}SN CONDUCTOR AND CABLE DEVELOPMENT FOR HIGH FIELD ACCELERATOR MAGNETS AT CERN** *L. BOTTURA[1], C. BERRIAUD[2], B. BORDINI[1], L. OBERLI[1], G. DE RIJK[1], L. ROSSI[1];* [1]CERN, [2]CEA-SACLAY.

14:45 5LX-03 **CONDUCTOR DEVELOPMENT FOR ACCELERATOR MAGNETS** *E. BARZI[1], N. ANDREEV[1], M. LAMM[1], V. LOMBARDO[1], D. TURRIONI[1], A. RUSY[1], R. YAMADA[1], A. V. ZLOBIN[1], L. MOTOWIDLO[2];* [1]FERMILAB, [2]SUPRAMAGNETICS INC..

15:00 5LX-04 **CRITICAL CURRENT AND STABILITY OF HIGH-JC NB^{3}SN RUTHERFORD CABLES FOR ACCELERATOR MAGNETS** *W. DE RAPPER[1], R. OBERLI[2], B. BORDINI[2], E. TAKALA[2], H. TEN KATE[1];* [1]CERN/UNIVERSITY OF TWENTE, [2]CERN.

15:15 5LX-05 WITHDRAWN

15:45 5LX-07 WITHDRAWN

5LY: 133 HTS POWER CABLES II

PALLADIAN JONATHAN DEMKO (ORNL) AND JEONWOOK CHO (KERI)

14:00 5LY-01 **ENDESA SUPERCABLE, A 3.2 KA, 138 MVA, MEDIUM VOLTAGE SUPERCONDUCTING POWER CABLE** *R. SOIKA[1], X. GRANADOS GARCIA[2], S. CASCANTE NOGALES[3];* [1]NEXANS DEUTSCHLAND GMBH, [2]ICMAB-CSIC, [3]ENDESA.

14:15 5LY-02 **DEVELOPMENT OF 275 KV 3 KA HTS POWER CABLE** *S. MUKOYAMA[1], M. YAGI[1], T. YONEMURA[1], T. NOMURA[1], N. FUJIWARA[2], Y. ICHIKAWA[2], Y. AOKI[3], T. SAITOU[4], N. AMEMIYA[5], A. ISHIYAMA[6], N. HAYAKAWA[7];* [1]FURUKAWA ELECTRIC, [2]ISTEC SRL, [3]SHOWA CABLE SYSTEM, [4]FUJIKURA, [5]KYOTO UNIVERSITY, [6]WASEDA UNIVERSITY, [7]NAGOYA UNIVERSITY.

14:30 5LY-03 **ANALYSIS OF CURRENT LIMIT CHARACTERISTIC ON 110KV HTS CABLE** *Q. SUN, H. ZHANG, H. LIU, Y. WANG;* NORTH CHINA ELECTRIC POWER UNIVERSITY.

14:45 5LY-04 **CONCEPTUAL DESIGN OF A SUPERCONDUCTING POWER TRANSMISSION CABLE FOR SPECIALIZED HIGH POWER APPLICATIONS** *T. J. HAUGAN, P. N. BARNES;* U.S. AIR FORCE RESEARCH LABORATORY.

15:00 5LY-05 **SYSTEM OPTIMIZATION CALCULATIONS FOR A PULSE OR RAMP DC YBCO CABLE WITH CONDUCTION OR GAS COOLING** *M. D. SUMPTION;* THE OHIO STATE UNIVERSITY.

15:15 5LY-06 **YBCO COATED CONDUCTOR CABLING FOR LOW AC-LOSS AND HIGH-FIELD MAGNET APPLICATIONS** *D. VAN DER LAAN[1], F. DOUGLAS[1], R. DUCKWORTH[2], T. HA[2], Y. ZHANG[2], V. SELVAMANICKAM[3];* [1]NIST, [2]ORNL, [3]UNIVERSITY OF HOUSTON.

15:30 5LY-07 **ALTERNATIVE DESIGN CONCEPTS FOR MULTI-CIRCUIT HTS LINK SYSTEMS** *A. BALLARINO;* CERN.

15:45 5LY-08 **NAVAL SHIP TO SHORE HIGH TEMPERATURE SUPERCONDUCTING POWER TRANSMISSION CABLE FEASIBILITY** *P. FERRARA, J. KEPHART, B. FITZPATRICK, N. SPIVEY, J. PIENKOS, M. PYRYT, M. UVA;* NAVAL SURFACE WARFARE CENTER - CARDEROCK DIVISION.

5LZ: 130 HTS APPLICATION AND SMALL DEMONSTRATORS *HAMPTON* JEAN-MICHEL REY (CEA) AND MATTHIEU DALBAN-CANASSY (NHMFL - FSU)

14:00 5LZ-01 **RECENT DEVELOPMENTS IN ^{2}G HTS COIL TECHNOLOGY** *D. HAZELTON;* SUPERPOWER, INC..

14:15 5LZ-02 **A BI-2223 LAYER-WINDING COIL USING 550M TAPE INCLUDING A JOINT INSIDE THE WINDING** *H. KITAGUCHI[1], T. HAYASHI[2], H. KUMAKURA[1];* [1]NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [2]SUMITOMO ELECTRIC INDUSTRIES, LTD..

14:30 5LZ-03 **ISSUES WITH THE THERMAL PROCESSING OF BI-2212 WIND & REACT SOLENOIDS** *D. MYERS, U. TROCIEWITZ, J. JIANG, Y. VIOUCHKOV, E. HELLSTROM, D. LARBALESTIER;* NATIONAL HIGH MAGNETIC FIELD LABORATORY.

14:45 5LZ-04 **FLUX PUMP FOR HTS MAGNETS** *C. HOFFMANN[1], D. POOKE[2], D. CAPLIN[3];* [1]INDUSTRIAL RESEARCH LTD., [2]HTS-110 LTD., [3]IMPERIAL COLLEGE.

15:00 5LZ-05 **TRAPPED FIELD CHARACTERISTICS OF YBCO THIN PLATES AND BULK ANNULI FOR COMPACT NMR MAGNET APPLICATIONS** *S. HAHN[1], S. BERMOND[1], D. PARK[1], S. KIM[2], J. BASCUÑÁN[1], J. VOCCIO[3], M. TOMITA[4], A. ZHUKOVSKY[1], Y. IWASA[1];* [1]MASSACHUSETTS INSTITUTE OF TECHNOLOGY, [2]OKAYAMA NATIONAL UNIVERSITY, [3]AMERICAN SUPERCONDUCTOR CORPORATION, [4]RAILWAY TECHNICAL RESEARCH INSTITUTE.

15:15 5LZ-06 **ACOUSTIC EMISSION IN A SUPERCONDUCTING FORCE-BALANCED HELICAL COIL** *S. NOMURA[1], K. TSUBOI[1], K. ITO[1], H. TSUTSUI[1], S. TSUJI-IIO[1], A. NINOMIYA[2], R. SHIMADA[1];* [1]TOKYO INSTITUTE OF TECHNOLOGY, [2]SEIKEI UNIVERSITY.

15:30 5LZ-07 **REDUCTION IN THE MAGNITUDE OF SCREENING CURRENT-INDUCED MAGNETIC FIELD FOR YBCO COILS** *Y. YANAGISAWA[1], H. NAKAGOME[1], T. TAKEMATSU[2], R. HU[2], T. TAKAO[2], D. UGLIETTI[3], T. KIYOSHI[3], M. TAKAHASHI[4], H. MAEDA[4];* [1]GRADUATE SCHOOL OF ENGINEERING, CHIBA UNIVERSITY, [2]FACULTY OF SCIENCE AND TECHNOLOGY, SOPHIA UNIVERSITY, [3]SUPERCONDUCTING MATERIALS CENTER, NATIONAL INSTITUTE FOR MATERIALS SCIENCE, [4]SYSTEMS AND STRUCTURAL BIOLOGY CENTER, RIKEN.

5MX: 115 HTS FLUX PINNING AND DYNAMICS: HIGH FIELDS *BLUE* STUART WIMBUSH (UNIVERSITY OF CAMBRIDGE) AND JENS HAENISCH (IFW DRESDEN)

14:00 5MX-01 ***(INVITED)*** **VORTEX LIQUID-GLASS TRANSITION UP TO 60 T IN NANO-ENGINEERED REBCO COATED CONDUCTORS GROWN BY METAL ORGANIC DEPOSITION** *M. MIURA[1], S. A. BAILY[1], B. MAIOROV[1], L. CIVALE[1], J. O. WILLIS[1], T. IZUMI[2], K. TANABE[2], Y. SHIOHARA[2];* [1]LOS ALAMOS NATIONAL LABORATORY, [2]SUPERCONDUCTIVITY RESEARCH LABORATORY, ISTEC.

14:30 5MX-02 **ANGULAR CRITICAL CURRENT IN YBCO COATED TAPES AT VERY STRONG MAGNETIC FIELDS** *A. XU[1], J. JAROSZYNSKI[1], F. KAMETANI[1], D. LARBALESTIER[1], Y. CHEN[2], Y. XIE[3], V. SELVAMANICKAM[2];* [1]NHMFL, [2]UNIVERSITY OF HUSTON, [3]SUPERPOWER.

14:45 5MX-03 **MICROSTRAIN, UPPER CRITICAL FIELD ANISOTROPY AND VORTEX PINNING IN YBCO NANOCOMPOSITES** *A. PALAU[1], A. LLORDES[1], T. PUIG[1], P. ABELLAN[1], F. SANDIUMENGE[1], S. RICART[1], A. POMAR[1], X. OBRADORS[1], J. GUTIERREZ[2], G. ZHANG[2], J. VANACKEN[2], V. V. MOSHCHALKOV[2], J. GAZQUEZ[3];* [1]INSTITUT DE CIENCIA DE MATERIALS DE BARCELONA (ICMAB-CSIC), [2]INPAC-INSTITUTE FOR NANOSCALE PHYSICS AND CHEMISTRY, K.U. LEUVEN, BELGIUM, [3]OAK RIDGE NATIONAL LABORATORY, OAK RIDGE, TENNESSEE, USA.

15:00 5MX-04 **ANGULAR DEPENDENCE OF THE IRREVERSIBILITY FIELD IN DOPED REBCO UP TO 45 T** *C. TARANTINI[1], F. KAMETANI[1], J. JAROSZYNSKI[1], A. GUREVICH[1], D. C. LARBALESTIER[1], Y. L. ZUEV[2], D. K. CHRISTEN[2];* [1]APPLIED SUPERCONDUCTIVITY CENTER, NATIONAL HIGH MAGNETIC FIELD LABORATORY, FSU, [2]OAK RIDGE NATIONAL LABORATORY.

15:15 5MX-05 **IN-FIELD, CRITICAL CURRENT ANISOTROPY MEASUREMENTS OF HIGH JC 12MM WIDE YBA^{2}CU^{3}O7− Δ COATED CONDUCTOR FOR HEP MAGNETS APPLICATIONS** *E. BARZI, V. LOMBARDO, D. TURRIONI, A. V. ZLOBIN;* FERMILAB.

15:30 5MX-06 **SYSTEMATIC STUDY OF EFFECTS OF BZO NANORODS ON THE JC OF YBCO FILMS AT BROAD TEMPERATURE AND MAGNETIC FIELDS REGIME** *A. XU[1], J. JAROSZYNSKI[1], F. KAMETANI[1], D. LARBALESTIER[1], S. WEE[2], A. GOYAL[2];* [1]NATIONAL HIGH MAGNETIC FIELD LABORATORY, [2]OAK RIDGE NATIONAL LABORATORY.

5MY: 122 REBCO AND MGB2 BULK *BLUE PRE-FUNC.* MARKO HERRMANN (IFW DRESDEN) AND HAIYAN WANG (TEXAS A AND M)

14:00 5MY-01 **SEEDED INFILTRATION AND GROWTH OF BULK (RE)BCO NANO-COMPOSITES** *N. HARI BABU[1], Y. SHI[2], A. DENNIS[2], S. PATHAK[2], D. CARDWELL[2];* [1]BRUNEL UNIVERSITY, [2]CAMBRIDGE UNIVERSITY.

14:15 5MY-02 **THE JC ENHANCEMENT OF SINGLE DOMAIN YBCO BULK BY UTILIZING ZNO-NANORODS GROWN PRECURSOR IN TSMTG PROCESS** *C. WANG[1], S. HUANG[1], C. CHU[1], S. WANG[1], I. CHEN[1], M. WU[2];* [1]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL CHENG KUNG UNIVERSITY, TAINAN, TAIWAN, [2]INSTITUTES OF PHYSICS, ACADEMIA SINICA, TAIPEI, TAIWAN.

14:30 5MY-03 **MASS PRODUCTION OF LOW-COST GDBACUO BULK SUPERCONDUCTORS USING A NOVEL SEED IN THE BATCH PROCESS** *M. MIRYALA, K. SUZUKI, Y. FUKUMOTO, A. ISHIHARA, M. TOMITA;* RAILWAY TECHNICAL RESEARCH INSTITUTE.

14:45 5MY-04 **PEAK EFFECT IN BULK Y-BA-CU-O SUPERCONDUCTORS WITH CEO2-DOPING BY INFILTRATION GROWTH METHOD** *P. CHEN[1], S. CHEN[2], I. CHEN[1], M. WU[3];* [1]DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL CHENG KUNG UNIVERSITY, TAINAN, TAIWAN, [2]DEPARTMENT OF POLYMER ENGINEERING, NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, TAIPEI, TAIWAN, [3]INSTITUTES OF PHYSICS, ACADEMIA SINICA, TAIPEI, TAIWAN.

15:00 5MY-05 **MAGNETIC FIELD TRAPPING IN MGB2 BULKS AND INSERTS** *E. PERINI[1], G. GIUNCHI[1], L. SAGLIETTI[1], A. FIGINI ALBISETTI[1], A. MATRONE[2], V. CAVALIERE[2];* [1]EDISON SPA, [2]C.R.I.S..

15:15 5MY-06 **HIGH-PRESSURE SYNTHESIZED NANOSTRUCTURAL MGB2-BASED MATERIALS WITH HIGH SC PERFORMANCE FOR FAULT CURRENT LIMITATION AND OTHER CRYOGENIC APPLICATIONS** *T. PRIKHNA[1], W. GAWALEK[2], Y. SAVCHUK[1], V. SOKOLOVSKY[3], M. EISTERER[4], M. SERGA[1], V. TKACH[1], N. DANILENKO[5], M. WENDT[2], J. DELLITH[2], H. WEBER[4], M. TOMPSIC[6], S. DUB[1], A. SHAPOVALOV[1], V. MOSHCHIL[1], N. SERGIENKO[1], V. MEEROVICH[3], T. HABISREUTHER[2], D. LITZKENDORF[2], C. SCHMIDT[2], V. MELNIKOV[1], P. NAGORNY[1], V. SVERDUN[1];* [1]INSTITUTE FOR SUPERHARD MATERIALS OF THE NATIONAL ACADEMY OF SCIENCES OF UKRAINE, [2]INSTITUT FÜR PHOTONISCHE TECHNOLOGIEN, JENA, GERMANY, [3]BEN-GURION UNIVERSITY OF THE NEGEV, BEER-SHEVA, ISRAEL, [4]ATOMINSTITUT, VIENNA, AUSTRIA, [5]FRANTSEVICH INSTITUTE FOR PROBLEMS OF MATERIALS SCIENCE NATIONAL ACADEMY OF SCIENCE OF UKRAINE, [6]HYPERTECH RESEARCH INC., COLUMBUS, OH, USA.

15:30 5MY-07 ***(INVITED)*** **EXPLORING THE LIMITS OF BC2 AND DOPANT SOLUBILITY IN MGB2 USING HIGH TEMPERATURE AND HIGH PRESSURE PROCESSING** *S. BOHNENSTIEHL, M. D. SUMPTION, E. COLLINGS;* OHIO STATE UNIVERSITY.

5MZ: 123 SRF CAVITIES - MATERIALS II *CONGRESSIONAL* CLAIRE ANTOINE (CEA) AND GIANLUIGI CIOVATI (JEFFERSON LAB)

14:00 5MZ-01 ***(INVITED)*** **IMPACT OF FORMING, WELDING, AND ELECTROPOLISHING ON SURFACE FINISH OF NIOBIUM COUPONS AND SUPERCONDUCTING RF CAVITY EQUATOR REGIONS** *L. D. COOLEY, C. M. THOMPSON, D. T. HICKS, D. BURK, R. SCHUESSLER, A. ROMANENKO, G. WU;* FERMILAB.

14:30 5MZ-02 **SUPPRESSED SUPERCONDUCTIVITY ON THE SURFACE OF SRF QUALITY NIOBIUM FOR PARTICLE ACCELERATING CAVITIES** *Z. H. SUNG[1], A. A. POLYANSKII[1], P. J. LEE[1], A. GUREVICH[1], D. C. LARBALESTIER[1], E. ZELDOV[2], Y. MYASOEDOV[2], M. POLAK[3];* [1]ASC/NHMFL/FSU, [2]THE WEIZMANN INSTITUTE OF SCIENCE, ISRAEL, [3]THE SLOVAK ACADEMY OF SCIENCE, SLOVAKIA.

14:45 5MZ-03 **NONLINEAR NEAR-FIELD MICROWAVE MICROSCOPY OF NB SURFACES** *T. TAI, S. M. ANLAGE;* CENTER FOR NANOPHYSICS AND ADVANCED MATERIALS, DEPARTMENT OF PHYSICS, UNIVERSITY OF MARYLAND, COLLEGE PARK, MD 20742-4111 USA.

15:00 5MZ-04 **MAGNETIC IMPURITIES AS A POSSIBLE ORIGIN FOR DISSIPATION IN NIOBIUM SUPERCONDUCTING RF CAVITIES** *T. PROLIER[1], J. ZASADZINSKI[2], J. A. KLUG[1], M. PELLIN[1], J. ELAM[1], L. COOLEY[3], A. GUREVICH[4];* [1]ARGONNE NATIONAL LABORATORY, [2]ILLINOIS INSTITUTE OF TECHNOLOGY, [3]FERMI NATIONAL ACCELERATOR LABORATORY, [4]NATIONAL HIGH MAGNETIC FIELD LABORATORY, FSU.

15:15 5MZ-05 **MODEL FOR INITIATION OF QUALITY FACTOR DEGRADATION AT HIGH ACCELERATING GRADIENTS IN SUPERCONDUCTING RADIO-FREQUENCY CAVITIES BASED ON A CONFORMAL MAPPING TECHNIQUE** *A. DZYUBA, A. ROMANENKO, G. WU, L. COOLEY;* FERMI NATIONAL ACCELERATOR LABORATORY.

15:30 5MZ-06 **PROGRESS IN DEVELOPMENT OF SUPERCONDUCTING RF CAVITY TECHNOLOGY FOR THE ILC** *C. ADOLPHSEN[1], H. CARTER[2], S. FUKUDA[3], R. GENG[4], H. HAYANO[3], J. KERBY[2], C. NANTISTA[1], N. OHUCHI[3], T. PETERSON[2], T. SHIDARA[3], A. YAMAMOTO[3];* [1]SLAC, [2]FERMILAB, [3]KEK, [4]JEFFERSON LAB.