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MARCH 1985

ACCELERATOR AND FUSION RESEARCH

Journal Submissions

- LBL-18545 Rev. (K) Tuneable Coherent X-Rays, Mar. 1985, 38p. Submitted to *Science*, D. Attwood, K. Halbach, and K-J. Kim (LBL) UC34
- LBL-18650 Preprint (K) A Study of the Dynamic Aperture Limit in TRISTAN, Nov. 1984, 45p. To be submitted to *Part. Accel.*, M. Cornacchia (LBL) Y. Chin (CERN) UC28
- LBL-18815 Preprint (K) An Inexpensive Computer Data-Acquisition System, Dec. 1984, 8p. Submitted to *Rev. Sci. Instrum.*, J.E. Galvin, and I.G. Brown (LBL) UC32
- LBL-19050 Preprint (K) Incorporation of Superposition into the Program POISSON, Jan. 1985, 16p. To be submitted for publication, S. Caspi, M. Helm, and L.J. Laslett (LBL) UC32
- LBL-19065 Preprint (K) The Quest for Ultra-High Energies, Feb. 1985, 30p. Submitted to *Am. J. Phys.*, A.M. Sessler (LBL) UC28
- LBL-19068 Preprint (K) A Broadband, Automated, Stripline Technique for the Simultaneous Measurement of Complex Permittivity and Permeability, Feb. 1985, 16p. Submitted to *IEEE Trans. Microwave Theory Tech.*, W. Barry (LBL) UC37
- LBL-19101 Preprint (K) The Weyl Representation for Electromagnetic Waves: The Wave Kinetic Equation, Feb. 1985, 17p. Submitted to *Phys. Rev. A*, S.W. McDonald (LBL, UCB, and Univ. Maryland) A.N. Kaufman (LBL and UCB) UC32,34
- LBL-19151 Preprint (K) Effect of Wall Material on H⁻ Production in a Multicusp Source, Feb. 1985, 14p. Submitted to *Appl. Phys. Lett.*, K.N. Leung, K.W. Ehlers, and R.V. Pyle (LBL) UC20c,20f

Conference Reports/Books

- LBL-18235 Report (K) Heavy Ion Fusion Accelerator Research in the U.S., Sept. 1984, 13p. Presented at the Tenth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, London, England, September 12-19, 1984, R.O. Bangerter (LANL and LLNL) T.F. Godlove (USDOE, Washington, DC) W.B. Herrmannsfeldt (SLAC) D. Keefe (LBL) UC21
- LBL-18490 Report (K) Operation of a Quasioptical Electron Cyclotron Maser, Dec. 1984, 6p. Presented at the Thirty-First National Vacuum Symposium of the American Vacuum Society, Reno, Nevada, December 4-7, 1984, E.C. Morse, and R.V. Pyle (LBL) UC20d
- LBL-19063 Report (K) Report of the Working Group on Other Acceleration Schemes, Feb. 1985, 8p. Presented at the 2nd Workshop on Laser Accelerator Particle 1985, Malibu, CA, January 7-18, 1985, A.M. Sessler (LBL) UC28
- LBL-19064 Report (K) Phase and Amplitude Considerations for the Two-Beam Accelerator, Feb. 1985, 6p. Presented at the 2nd Workshop on Laser Accelerator Particle 1985, Malibu, CA, January 7-18, 1985, R.W. Kuenning, and A.M. Sessler (LBL) J.S. Wurtele (M.I.T.) UC28

Other Reports

- LBL-18528 Report (K) A Method to Render Second Order Beam Optics Programs Symplectic, Oct. 1984, 68p. 32, D. Douglas, and R.V. Servranckx (LBL) UC32

Abstracts

- LBL-18903 Abs. 1-24 (K) A Selection of 1985 Particle Accelerator Conference Abstracts submitted by AFRD/LBL, Jan. 1985, 24p. To be presented at the 1985 Particle Accelerator Conference, Vancouver, British Columbia, May 13-16, 1985, UC28
- LBL-18985 Abs. (K) A Compact Micro-Wave Ion Source, Jan. 1985, 1p. To be presented at the 1985 Particle Accelerator Conference, Vancouver, British Columbia, May 13-16, 1985, K.N. Leung, S. Walther, and H.W. Owren (LBL) UC28
- LBL-19197 Abs. (K) Oscillation Center Theory and Ponderomotive Stabilization of Mirrors, Feb. 1985, 1p. To be presented at the Sherwood Theory Meeting, Madison, WI, April 15-17, 1985, P.L. Similon (LBL) UC20g,34D
- LBL-19198 Abs. (K) Lagrangian Variational-Principle Derivation of a General Theorem for Beat-Resonant Mode Coupling, with Application to Global Modes of a Nonneutral Plasma, Feb. 1985, 1p. To be presented at the Sherwood Theory Meeting, Madison, WI, April 15-17, 1985, C. Oberman (UCSB and Princeton Univ.) J.D. Crawford (UCSB and UCSD) A.N. Kaufman (LBL, UCB and UCSB) UC20g,34D
- LBL-19199 Abs. (K) Covariant Dynamics of Guiding-Center Plasma, of Oscillation-Center Plasma, and of Dissipative Plasma, Feb. 1985, 1p. To be presented at the Sherwood Theory Meeting, Madison, WI, April 15-17, 1985, A.N. Kaufman, and P.L. Similon (LBL and UCB) B.M. Boghosian (LLNL) UC20g

- LBL-19204 Abs. (K) WKB Theory Using Gaussian Wave Packets and Exponential Instability in Wave Systems, Feb. 1985, 1p. To be presented at the Sherwood Theory Meeting, Madison, WI, April 15-17, 1985, R.G. Littlejohn (LBL, UCB and UCSB) UC32,34D
- LBL-19296 Abs. (K) Operation of the Multicusp Plasma Generator as a High-Charge-State Ion Source, Mar. 1985, 1p. To be presented at the 1985 IEEE International Conference on Plasma Science, Pittsburgh, PA., June 3-5, 1985, K.N. Leung, and R.V. Pyle (LBL) UC20f
- LBL-19307 Abs. (K) Progress in Large-Area, Multiple-Aperture Acceleration of Volume-Produced H^- Ions, Mar. 1985, 1p. To be presented at the 1985 IEEE International Conference on Plasma Science, Pittsburgh, PA, June 3-5, 1985, A.F. Lietzke, and C.A. Hauck (LBL) UC20f

APPLIED SCIENCE

Journal Submissions

- LBL-15923 Preprint (J) A Simplified Model of Thermal Comfort, Jan. 1984, 33p. Submitted to *Energy Build.*, M. Sherman (LBL) UC95d
- LBL-17926 Preprint (J) Measured Energy Savings from Residential Retrofits: Updated Results from the BECA-B Project, Dec. 1984, 29p. Submitted to *Energy Build.*, C.A. Goldman (LBL) UC95d
- LBL-18601 Preprint (J) Radiant Refrigeration by Semiconductor Diodes, Sept. 1984, 19p. Submitted to *J. Appl. Phys.*, P. Berdahl (LBL) UC37
- LBL-18747 Preprint (J) The Stoichiometry of Ferrous Nitrosyl Chelates, Nov. 1984, 10p. Submitted to *Inorg. Chem.*, D. Littlejohn, and S.G. Chang (LBL) UC11
- LBL-18924 Preprint (J) Current Research at Lawrence Berkeley Laboratory on Multizone Infiltration, Oct. 1984, 6p. To be published in *Air Infiltration Rev.*, H.E. Feustel (LBL) UC95d
- LBL-19184 (J) Influence of Dangling Bond Defects on Recombination in a-Si:H, Jan. 1985, 14p. Submitted to *Phys. Rev. B*, H. Dersch, A. Skumanich, and N.M. Amer (LBL) UC25,37
- LBL-19185 (J) Urbach Tail and Gap States in Hydrogenated a-SiC and a-SiGe Alloys, Dec. 1984, 19p. Submitted to *Solid State Commun.*, A. Skumanich, and N.M. Amer (LBL) A. Frova (Univ. Rome, Italy, and LBL) UC25,37

Conference Reports/Books

- LBL-17530 Report (J) Polarization Dependent Ge and Si(111) 2x1 Surface State Optical Absorption: A Test of Surface Reconstruction Models, Aug. 1984, 7p. Invited paper presented at the XVII International Conference on the Physics of Semiconductors, San Francisco, CA, August 6-10, 1984; and to be published in the Proceedings, M.A. Olmstead, and N.M. Amer (LBL) UC25,37

- LBL-17591 Report (J) A Method to Predict the Hour by Hour Humidity Ratio of Attic Air, Dec. 1984, 21p. Presented at the American Society for Testing Materials Symposium on Thermal Insulation, Materials and Systems, Dallas, TX, December 2-6, 1984, P. Cleary (LBL) R. Sonderegger (Berkeley, CA) UC95d
- LBL-17774 Report (J) Seasonal Storage of Moisture in Roof Sheathing, Dec. 1984, 19p. To be presented at the International Symposium on Moisture and Humidity-1985, Washington, DC, April 15-18, 1985, P. Cleary, and M. Sherman (LBL) UC95d
- LBL-18024 Report (J) Performance of Residential Air-to-Air Heat Exchangers During Operation with Freezing and Periodic Defrosts, Nov. 1984, 40p. Presented at the ASHRAE Winter Meeting in Chicago, IL, January 27-30, 1985; and to be published in ASHRAE Transactions, Vol. 91, Pt. 1B., W. Fisk, K. Archer, R. Chant, D. Hekmat, F. Offermann, and B. Pederson (LBL) UC59
- LBL-18025 Report (J) Onset of Freezing in Residential Air-To-Air Heat Exchangers, Nov. 1984, 35p. Presented at the ASHRAE Winter Meeting, Chicago, IL, January 27-30, 1985; and to be published in ASHRAE Transactions, Vol. 91, Pt. 1B, W. Fisk, R. Chant, K. Archer, D. Hekmat, F. Offermann, and B. Pedersen (LBL) UC59,95d
- LBL-18586 Report (J) Structure and Chemistry of Sol-Gel Derived Transparent Silica Aerogel, Feb. 1985, 15p. Presented at the 2nd International Conference on Ultrastructure Processing of Ceramics, Glasses, and Composites, Palm Coast, FL, February 26-March 1, 1985; and to be published in the Proceedings, P.H. Tewari, K.D. Lofftus, and A.J. Hunt (LBL) UC95d
- LBL-19165 Report (J) LDA Study of the Unburned Gas Motion Induced by Nonsteady Flame Propagation in a Constant Volume Duct, Feb. 1985, 27p. To be presented at the Joint Technical Meeting, Central States Section / Western States Section / The Combustion Institute, San Antonio, TX, April 22-23, 1985, D. Dunn-Rankin, and R.F. Sawyer (LBL) UC92b

Other Reports

- LBL-18258 Report (J) Pollutant Emission Rates from Unvented Infrared and Convective Gas-Fired Space Heaters, Mar. 1984, 29p. 41, G.W. Traynor, M.G. Apte, A.R. Carruthers, J.F. Dillworth, and D.T. Grimsrud (LBL) UC41
- LBL-19035 Report (J) Electrodeless HID Lamp Study: Final Report, Jan. 1985, 60p. 95, J.M. Anderson, P.D. Johnson, C.E. Jones, and T.H. Rautenberg (Schenectady, NY) UC95
- LBL-19126 Report (J) State Survey of Innovative Energy Programs and Projects, Mar. 1985, 48p. 13, E.L. Vine (LBL) UC13
- LBL-19127 Report (J) Low-Income Households and Energy Use in California, Mar. 1985, 66p. 95c, E.L. Vine, and S.J. Gold (LBL) UC95c
- LBL-19146 Report (J) An Experimental Evaluation of the Thermodynamic Properties of Concentrated Aqueous Potassium Hydroxide Solutions, Feb. 1985, 69p. 94c, W.B. Johnson, G.R. St. Pierre, D.D. Macdonald, and M.K. Malhotra (Ohio St. Univ.) UC94c

Abstracts

- LBL-19186 Abs. (J) Two-Dimensional Phase Transition in Lyotropic Liquid Crystals, Dec. 1984, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD, March 25-29, 1985, N.M. Amer, and N.G. Bergstrom (LBL) UC25,37
- LBL-19187 Abs. (J) Temperature Dependence of Surface State Optical Absorption of Cleaved Si and Ge, Dec. 1984, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD, March 25-29, 1985, M.A. Olmstead, and N.M. Amer (LBL) UC25,37
- LBL-19188 Abs. (J) Spatially-Resolved Investigation of Transport and Recombination in Semiconductors, Dec. 1984, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD, March 25-29, 1985, A. Skumanich, and N.M. Amer (LBL) UC25,37
- LBL-19189 Abs. (J) Study of Nonradiative Recombination in Semiconductors by Photothermal Displacement Spectroscopy, Dec. 1984, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD, March 25-29, 1985, H. Dersch, and N.M. Amer (LBL) UC25,37
- LBL-19190 Abs. (J) Optical Properties and Light-Induced Defect Formation in a-SiC:H and a-SiGe:H Alloys, Dec. 1984, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD, March 25-29, 1985, A. Skumanich, and N.M. Amer (LBL) A. Frova (Univ. Rome, Italy and LBL) UC25
- LBL-19289 Abs. (J) A Molecular Beam Mass Spectrometer Study of a Pulsed Plasma Jet Igniter, Mar. 1985, 1p. To be presented at the American Chemical Society National Meeting, Chicago, IL, Sept. 8-13, 1985, D. Lucas, C.F. Edwards, J. Cavolowsky, and A.K. Oppenheim (LBL) UC34A

BIOLOGY AND MEDICINE

Journal Submissions

- LBL-15730 (B) The U.S. Transuranium Registry Report on the ^{241}Am Content of a Whole Body. Part V. Implications for Metabolic Modelling, Feb. 1985, 91p. Submitted to *Health Phys.*, P.W. Durbin, and C.T. Schmidt (LBL) UC48
- LBL-19176 (B) A Comparison of Water Equivalent Thickness Measurements: CT Method vs. Heavy Ion Beam Technique, June 1983, 7p. Submitted to *Br. J. Radiol.*, E.L. Alpen, W. Saunders, A. Chatterjee, J. Llacer, G.T.Y. Chen, and J. Scherer (LBL) UC48
- LBL-19209 (B) Microwaves and the Cell Membrane. II. Temperature, Plasma, and Oxygen Mediate Microwave-Induced Membrane Permeability in the Erythrocyte, Feb. 1985, 16p. Submitted to *Radiat. Res.*, R.P. Liburdy (LBL and NY Univ. Med. Ctr. N.Y.) P.F. Vanek, Jr. (NY Univ. Med. Ctr.) UC48
- LBL-19306 (B) Neuraminidase Increases DNA Synthesis of Spleen Cells Induced by Native and Asialylated Erythropoietin, Mar. 1985, 20p. Submitted to *Exper. Hematol.*, J.C. Schooley (LBL) UC48

- LBL-19343 (B) Absorption Flattening in the Circular Dichroism Spectra of Small Membrane Fragments, Mar. 1985, 14p. Submitted to *Biochemistry*, R.M. Glaeser, and B.K. Jap (LBL and UCB) UC48
- LBL-19361 (B) Fibronectin-Collagen Interaction in Culture and *In Vitro*, Feb. 1985, 25p. Submitted to *Exp. Cell Res.*, L-M. Chan (Jackson St. Univ.) C. Hatier, G. Parry, and M.J. Bissell (LBL) UC48
- LBL-19363 (B) Quantitation of Shrinkage During Preparation for Scanning Electron Microscopy: Human Lung, Mar. 1985, 23p. Submitted to *Scanning*, J. Bastacky, T.L. Hayes, and R.P. Gelinas (LBL) UC48

Abstracts

- LBL-19152 Abs. (B) The Molecular Basis for Phenotypic Modulation in Cells Containing an Integrated Viral src Oncogene, Feb. 1985, 1p. To be presented at the Tissue Culture Association Conference, New Orleans, LA, June 2-6, 1985, J.A. Wyke, D.A.F. Gillespie, and P. Levantis (London, U.K.) M.J. Bissell (LBL and London, U.K.) UC48
- LBL-19153 Abs. (B) Expression of Major Milk Proteins in Mouse Primary Mammary Epithelial Cells, Feb. 1985, 1p. To be presented at the Tissue Culture Association Conference, New Orleans, LA, June 2-6, 1985, E.Y.-H. Lee (UCSD, LBL and UCB) M.J. Bissell (LBL and UCB) UC48
- LBL-19154 Abs. (B) Temporal Expression of Microinjected RSV *in Ovo* and After Transfer to Cell Culture, Feb. 1985, 1p. To be presented at the 1985 West Coast Regional Developmental Biology Conference, Pacific Grove, CA, March 24-27, 1985, M.J. Bissell, D.S. Dolberg, A.R. Howlett, and B. Cullen (LBL) UC48
- LBL-19309 Abs. (B) Small Spot Illumination for High Resolution Electron Microscopy of Beam-Sensitive Specimens, Mar. 1985, 2p. To be presented at the Electron Microscopy Society of America Annual Meeting, Louisville, KY, August 5-9, 1985, K.H. Downing, and R.M. Glaeser (LBL) UC48

CENTER FOR ADVANCED MATERIALS

Abstracts

- LBL-19018 Abs. (L) Scanning Tunneling Microscopy: Preliminary Results in Microfabrication and Computer-Aided Imaging, Dec. 1984, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD., March 25-29, 1985, D.W. Abraham, E.D. Ganz, H.J. Mamin, and J. Clarke (LBL and UCB) UC37
- LBL-19019 Abs. (L) Measurements of Orientation of Surfactant Molecules at a Liquid-Air Interface by Optical Second Harmonic Generation, Dec. 1984, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD, March 25-29, 1985, Th. Rasing, and Y.R. Shen (UCB and LBL) M.W. Kim, P.K. Valint, Jr., and J. Bock (Exxon Res. Eng. Co.) UC4

CHEMICAL BIODYNAMICS

Journal Submissions

- LBL-19107 Preprint (D) The Lignans of *Myristica otoa*, Jan. 1985, 9p. Submitted to *Phytochemistry*, E.K. Nemethy, D. Hawkins, and M. Calvin (UCB and LBL) R. Lago (Rio de Janeiro, Brasil) UC61B
- LBL-19119 (D) Synthesis and Uptake of Cytoplasmically Synthesized Pyruvate Pi Dikinase Polypeptide by Chloroplasts, Feb. 1985, 23p. Submitted to *Plant Physiol.*, K. Aoyagi, and J.A. Bassham (LBL) UC48
- LBL-19170 (D) Infrared Induced Photochemical Processes in Matrices, Feb. 1985, 60p. Submitted to *Ann. Rev. Phys. Chem.*, H. Frei, and G.C. Pimentel (LBL) UC4
- LBL-19317 (D) Localization of Photosynthetic Enzymes of Maize Leaves by Immunochemical Methods: Presence of Pyruvate, Pi Dikinase in Bundle Sheath Strands, Mar. 1985, 22p. Submitted to *Plant Physiol.*, K. Aoyagi (LBL) H. Nakamoto (Washington St. Univ.) UC48
- LBL-19318 (D) Carbon Pathways During Photoheterotrophic Hydrogen Production in *Rhodospseudomonas sphaeroides*. I. Catabolism of Glucose and Malate by the Wild Type and a Glucose Utilizing Mutant, Mar. 1985, 29p. Submitted to *J. Bacteriol.*, B.A. Macler (LBL and UCB) J.A. Bassham (LBL) UC48

COMPUTING

Other Reports

- LBL-14996 Report (P) Hydrolysis, Formation and Ionization Constants at 25°C, and at High Temperature-High Ionic Strength, Feb. 1985, 401p. S.L. Phillips, C.A. Phillips, and J. Skeen (LBL) UC70
- LBL-18718 Report (P) Hodgkin's Disease Incidence in the United States by Age, Sex, Geographic Region and Rye Histologic Subtype, Nov. 1984, 278p. Ph.D., S.L. Glaser (LBL and UCB) UC48

EARTH SCIENCES

Journal Submissions

- LBL-13945 (W) Numerical Simulation of Advective-Dispersive Solute Transport Through an Infinite Porous Medium With a Second-Order Rate of Interphase Mass Transfer, Feb. 1985, 78p. Submitted to *Water Resour. Res.*, J.S. Remer, and C.L. Carnahan (LBL) UC11
- LBL-16391 (W) Weathering Characteristics of Natural Glass and Influences on Associated Water Chemistry, Oct. 1984, 20p. Published in *J. Non-Cryst. Solids*, 67, 225-244 (1984), A.F. White (LBL) UC66e

LBL-16781 (W) Can Water Injection Tests Reveal the Potential for Fault Movements?, Feb. 1984, 19p. To be published in *J. Pure Appl. Geophys.*, J. Noorishad, and P.A. Witherspoon (LBL) UC11

LBL-18434 (W) Applications of ART to Crosshole Seismic Data, Feb. 1985, 34p. Submitted to *Geophysics*, J.E. Peterson, Jr., B.N.P. Paulsson, and T.V. McEvelly (LBL) UC11

LBL-19020 (W) Porous Media Gas Diffusivity from a Free Path Distribution Model, Jan. 1985, 5p. Submitted to *Chem. Phys.*, T.K. Tokunaga (LBL) UC66b

Conference Reports/Books

LBL-15343 Reprint (W) A New Model for Well Test Data Analysis for Naturally Fractured Reservoirs, Mar. 1983, 14p. Presented at the 1983 California Regional Meeting of the SPE-AIME, Ventura, CA, March 23-25, 1983; and published in the Society of Petroleum Engineers Proceedings, pp. 213-226, C.H. Lai, G.S. Bodvarsson, C.F. Tsang, and P.A. Witherspoon (LBL) UC66a

LBL-17513 Report (W) The Effect of Deformability on Fluid Flow Through a Fractured-Porous Medium, Oct. 1984, 15p. Presented at the 17th International Congress International Association of Hydrogeologists, Tucson, AZ, January 7-12, 1984, C.F. Tsang, J. Noorishad, and P.A. Witherspoon (LBL) UC11

LBL-18438 Report (W) Nonisothermal Injection Tests in Fractured Reservoirs, Jan. 1985, 12p. Presented at the 10th Annual Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, January 22-24, 1985; and to be published in the Proceedings, B.L. Cox, and G.S. Bodvarsson (LBL) UC66a

LBL-18439 Report (W) Flow Rate Decline of Steam Wells in Fractured Geothermal Reservoirs, Jan. 1985, 9p. Presented at the 10th Annual Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, January 22-24, 1985; and to be published in the Proceedings, G.S. Bodvarsson, and P.A. Witherspoon (LBL) UC66a

LBL-18440 Report (W) Numerical Studies of Silica Precipitation/Dissolution, Jan. 1985, 8p. Presented at the 10th Annual Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, January 22-24, 1985; and to be published in the Proceedings, C.H. Lai, G.S. Bodvarsson, and P.A. Witherspoon (LBL) UC11

LBL-18441 Report (W) A New Model for Well Test Analysis in a Purely Fractured Medium, Jan. 1985, 6p. Presented at the 10th Annual Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, January 22-24, 1985; and to be published in the Proceedings, K. Karasaki, J.C.S. Long, and P.A. Witherspoon (LBL) UC66a

LBL-18443 Report (W) Recommendations of the Industry Advisory Panel on Geothermal Reservoir Definition, Jan. 1985, 7p. Presented at the 10th Annual Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, January 22-24, 1985; and to be published in the Proceedings, M.S. Gulati (Santa Rosa, CA) M.J. Lippmann (LBL) UC66i

- LBL-18563 Report (W) Mass Transport in Low Permeability Rocks Under the Influence of Coupled Thermomechanical and Hydrochemical Effects—An Overview, Oct. 1984, 13p. Presented at the 17th International Congress of the International Association of Hydrogeologists, Tucson, AZ, January 7–12, 1985, C.-F. Tsang (LBL) UC11
- LBL-18565 Report (W) Mechanical Transport and Porous Media Equivalence in Anisotropic Fracture Networks, Jan. 1985, 20p. Presented at the 17th International Congress of the International Association of Hydrogeologists, Tucson, AZ, January 7–12, 1985, H.K. Endo (LBL and Honolulu, HI) P.A. Witherspoon (LBL) UC11
- LBL-18833 Report (W) Detailed Validation of a Liquid and Heat Flow Code Against Field Performance, Feb. 1985, 19p. Presented at the Eighth SPE Symposium on Reservoir Simulation, Dallas, TX, February 10–13, 1985, C.-F. Tsang, and C. Doughty (LBL) UC94a
- LBL-18849 Report (W) Fracture Detection and Characterization for Geothermal Reservoir Definition, Dec. 1984, 11p. Presented at the 10th Annual Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, January 22–24, 1985; and to be published in the Proceedings, N.E. Goldstein (LBL) UC66b
- LBL-18947 Report (W) The Dynamics of Thin-Film Breakup in a Constricted Pore, Jan. 1985, 15p. To be presented to the Spring 1985 National Meeting of the AIChE, Houston, TX, March 24–28, 1985, P.A. Gauglitz, and C.J. Radke (UCB and LBL) UC92a
- LBL-19092 Report (W) CO₂ Trends in the Depletion of the Larderello Vapor-Dominated Reservoir, Jan. 1985, 6p. Presented at the 10th Annual Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, January 22–24, 1985, K. Pruess (LBL) R. Celati, C. Calore, and F. D'Amore (Pisa, Italy) UC66a
- LBL-19106 Report (W) Monitoring of Subsurface Contaminants with Borehole/Surface Resistivity Measurements, Feb. 1985, 12p. Presented at the 2nd National Conference and Exposition on Surface & Borehole Geophysical Methods in Ground Water Investigations, National Water Well Association, Ft. Worth, TX, February 12–14, 1985, M.J. Wilt, and C.-F. Tsang (LBL) UC11

Other Reports

- LBL-18146 Report (W) Fracture Detection and Mapping for Geothermal Reservoir Definition: An Assessment of Current Technology, Research, and Research Needs, Nov. 1984, 61p. 66b, N.E. Goldstein (LBL) UC66b
- LBL-18451 Report (W) Hydrothermal Conditions and Resaturation Times in Underground Openings for a Nuclear Waste Repository in the Umtanum Flow at the Basalt Waste Isolation Project, Jul. 1982, 134p. 70, K. Pruess, and G. Bodvarsson (LBL) UC70
- LBL-18552 Report (W) Numerical Studies of Fluid and Heat Flow Near High-Level Nuclear Waste Packages Emplaced in Partially Saturated Fractured Tuff, Nov. 1984, 48p. 70, K. Pruess, Y.W. Tsang, and J.S.Y. Wang (LBL) UC70

Abstracts

- LBL-17955 Abs. (W) Structure of Aluminosilicate Glasses: A Silicon-29 Nuclear Magnetic Resonance Study, June 1984, 1p. Presented at the 1984 Annual Meeting of the Geological Society of America, Reno, NV, November 5-8, 1984, J.F. Stebbins, J.B. Murdoch, and I.S.E. Carmichael (LBL) UC4
- LBL-17956 Abs. (W) Silicon-29 MAS Nuclear Magnetic Resonance Study of the Structure of Feldspathoid Minerals, June 1984, 1p. Presented at the 1984 Annual Meeting of the Geological Society of America, Reno, NV, November 5-8, 1984, J.B. Murdoch, J.F. Stebbins, and I.S.E. Carmichael (LBL) UC4
- LBL-17960 Abs. (W) Albite Solubility in the Aqueous Phase to 350°C., June 1984, 1p. Presented at the 1984 Annual Meeting of the Geological Society of America, Reno, NV, November 5-8, 1984, J.A. Apps (LBL) J.M. Neil (USGS) UC4
- LBL-18429 Abs. (W) Utilizing Seismological Techniques for Monitoring Hydrofracture Geometry, Oct. 1984, 1p. Presented at the AGU 1984 Fall Meeting, San Francisco, CA, December 3-7, 1984, E.L. Majer (LBL) F.J. Mauk, and G.G. Sorrells (Garland, TX) UC11
- LBL-18433 Abs. (W) Progressive Inversion for P-wave and S-wave Velocity Structure and Hypocenters: Application to the Geysers Geothermal Field, Oct. 1984, 1p. Presented at the AGU 1984 Fall Meeting, San Francisco, CA, December 3-7, 1984, D.R. O'Connell (LBL) L.R. Johnson (UCB) UC66b
- LBL-18516 Abs. (W) New Measurements of Liquid Densities in the System Na₂O-Al₂O₃-SiO₂, Oct. 1984, 1p. Presented at the AGU 1984 Fall Meeting, San Francisco, CA, December 3-7, 1984, D.J. Stein, J.F. Stebbins, and I.S.E. Carmichael (LBL) UC4
- LBL-18756 Abs. (W) Chemical Evolution of Hydrothermal Fluids in the Valles Caldera, New Mexico, Nov. 1984, 1p. Presented at the AGU 1984 Fall Meeting, San Francisco, CA, December 3-7, 1984; and published in *Eos*, A.F. White, and N. Chuma (LBL) UC66b

ENGINEERING AND TECHNICAL SERVICES

Journal Submissions

- LBL-18676 Preprint (E) Millimeter-Wave Detection of Free Radicals Using Pulsed Laser Photolysis, Nov. 1984, 17p. Submitted to *Rev. Sci. Instrum.*, W.F. Kolbe, and B. Leskovar (LBL) UC37,4
- LBL-19196 Preprint (E) Direct ZAAS Analysis of Solid Samples: Early Development, Mar. 1985, 10p. Submitted to *Fresenius Z. Anal. Chem.*, T. Hadeishi, and R. McLaughlin (LBL) UC37

Conference Reports/Books

- LBL-17780 Report (E) Germanium Detectors with a Built-in Transverse Drift Field, Nov. 1984, 6p. Presented at the IEEE 1984 Nuclear Science Symposium, Orlando, FL, October 31–November 2, 1984; and to be published in IEEE Transactions on Nuclear Science, P.N. Luke, N.W. Madden, and F.S. Goulding (LBL and UCB) UC37
- LBL-18043 Report (E) The LBL/UCSB ^{76}Ge Double Beta Decay Experiment: First Results, Oct. 1984, 8p. Presented at the IEEE 1984 Nuclear Science Symposium, Orlando, FL., October 31–November 2, 1984; and to be published in IEEE Transactions on Nuclear Science, F.S. Goulding, C.P. Cork, D.A. Landis, P.N. Luke, N.W. Madden, D.F. Malone, R.H. Pehl, and A.R. Smith (LBL) D.O. Caldwell, R.M. Eisberg, D.M. Grumm, D.L. Hale, and M.S. Witherell (UCSB) UC37

Other Reports

- LBL-19252 Report (E) Simulation of Automatic Control of MFTF-B Neutral Beams, Mar. 1985, 14p. 20f, E. Theil (LBL) UC20f

Abstracts

- LBL-19217 Abs. (E) Beryllium-hydrogen and Zinc-hydrogen Complexes in Germanium, Jan. 1985, 1p. To be presented at the American Physical Society March Meeting, Baltimore, MD, March 25–29, 1985; and to be published in the Bulletin of the American Physical Society Series II, no.3, p. 367 (1985), R.E. McMurray, Jr., E.E. Haller, and N.M. Haegel (LBL and UCB) UC25,37

MATERIALS AND MOLECULAR RESEARCH

Journal Submissions

- LBL-17965 Preprint (H) The Hydrogenation of Carbon Monoxide over Model Rhenium Catalysts: Additive Effects and A Comparison with Iron, Apr. 1984, 21p. Submitted to *Langmuir*, E.L. Garfunkel, J. Parmeter, B.M. Naasz, and G.A. Somorjai (LBL and UCB) UC90d
- LBL-17971 Rev. Preprint (O) AES and TDS Studies of Electrochemically Oxidized Pt(100), Dec. 1984, 42p. Submitted to *Surf. Sci.*, F.T. Wagner, and P.N. Ross (LBL) UC94c
- LBL-18373 (I) The Elimination of Surface Voids in Ceramics, Feb. 1985, 32p. Submitted to *J. Am. Ceram. Soc.*, M.D. Drory, and A.G. Evans (LBL and UCB) UC25
- LBL-18497 Rev. Preprint (I) Stability of Nonaqueous Electrolytes for Ambient Temperature Rechargeable Lithium Cells, Feb., 1985, 20p. Submitted to *Chem. Eng. Commun.*, Gh. Nazri (LBL and Warren, MI) R.H. Muller (LBL) UC94c
- LBL-18657 Preprint (H) Surface Science and Catalysis, Dec. 1984, 50p. Submitted to *Science*, G.A. Somorjai (LBL and UCB) UC4
- LBL-18670 Preprint (H) Electron Energy Loss Spectroscopy of CH_3NH_2 Adsorbed on Ni(100), Ni(111), Cr(100), and Cr(111), Feb. 1985, 35p. Submitted to *J. Chem. Phys.*, A.G. Baca, M.A. Schulz, and D.A. Shirley (LBL and UCB) UC4

- LBL-18694 Preprint (H) Chemisorption Geometry of Pyridine on Pt(111) by NEXAFS, Feb. 1985, 24p. Submitted to *J. Phys. Chem.*, A.L. Johnson, and E.L. Muetterties (LBL and UCB) J. Stöhr (Annandale, NJ) F. Sette (Murray Hill, NJ) UC90d
- LBL-18717 Preprint (H) Deuterium Isotope Effects on Hydrogenation of Carbon Monoxide Over Rhodium, Dec. 1984, 10p. Submitted to *J. Catal.*, M.A. Logan, and G.A. Somorjai (LBL and UCB) UC4
- LBL-18722 Preprint (H) Experimental and Theoretical Investigations of Cr(001) Surface Electronic Structure, Jan. 1985, 39p. Submitted to *Phys. Rev. B*, L.E. Klebanoff, R.H. Victora, L.M. Falicov, and D.A. Shirley (LBL and UCB) UC25
- LBL-18766 Preprint (O) Photoelectrochemical Devices for Solar Energy Conversion, Jan. 1985, 62p. Submitted to *Chem. Eng. Sci.*, M.E. Orazem (Univ. of Virginia) J. Newman (LBL and UCB) UC63
- LBL-18783 Preprint (I) Carbonization and Graphitization of Coal-Tar Pitch Mixed with Trinitrophenol, Jan. 1985, 30p. Submitted to *Carbon*, K. Kawamura (Yokosuka, Japan, LBL, and UCB) R.H. Bragg (LBL and UCB) S. Kimura (Yokohama, Japan) UC90a
- LBL-18893 (I) Flicker (1/f) Noise in Copper Films Irradiated with 500 keV Electrons: Dependence of the Noise on Induced Defects, Nov. 1984, 14p. Submitted to *Phys. Rev. Lett.*, J. Pelz, and J. Clarke (UCB and LBL) UC37
- LBL-18894 Preprint (I) Effect of Specimen Thickness on Symmetry Determinations by Convergent-Beam Electron Diffraction, Jan. 1985, 14p. To be submitted to *J. Ultramicroscopy*, J.M. Howe, and R. Gronsky (LBL and UCB) UC25
- LBL-19006 (I) Chemical Bonding Concepts Applied to Metals and Their Alloys, Sept. 1984, 35p. Submitted to *J. Mater. Educ.*, L. Brewer (LBL and UCB) UC4
- LBL-19022 Preprint (H) Synthesis, Bulk and Surface Characterization of Niobium Doped Fe₂O₃ Single Crystals, Jan. 1985, 22p. Submitted to *J. Solid State Chem.*, C. Sanchez, M. Hendewerk, K.D. Sieber, and G.A. Somorjai (LBL) UC25
- LBL-19053 Preprint (N) Intensities and Asymmetries of Electronic Raman Scattering in ErPO₄ and TmPO₄, Jan. 1985, 38p. Submitted to *Phys. Rev. B*, P.C. Becker, N. Edelstein, G.M. Williams, J.J. Bucher, and R.E. Russo (LBL and UCB) J.A. Koningstein (Carleton Univ., Canada) L.A. Boatner, and M.M. Abraham (ORNL) UC4
- LBL-19124 (H) Nonradiative Damping of Molecular Electronic Excited States by Metal Surfaces, Aug. 1984, 43p. Submitted to *Surf. Sci.*, D.H. Waldeck, A.P. Alivisatos, and C.B. Harris (LBL and UCB) UC25,37
- LBL-19205 Preprint (H) Inhibition of Natural-Gas Hydrates, Feb. 1985, 49p. Submitted to *AIChE J.*, F.E. Anderson, and J.M. Prausnitz (LBL and UCB) UC4
- LBL-19279 (H) Kinetic Study of the NO₃-CH₂O Reaction and Its Possible Role in Nighttime Tropospheric Chemistry, July 1984, 8p. Submitted to *J. Phys. Chem.*, 89, 139 (1985). C.A. Cantrell, and W.R. Stockwell (NCAR and Boulder, CO) L.G. Anderson (NCAR and Univ. Colo.) K.L. Busarow (NCAR and Wittenberg Univ.) D. Perner (NCAR and Max Planck Inst., W. Germany) A. Schmeltekopf (Boulder, CO) J.G. Calvert (NCAR) H.S. Johnston (NCAR, LBL and UCB) UC11

LBL-19284 (I) Evidence for a Floating Phase in the Exactly Soluble Uniaxial Brickwork Model, Mar. 1985, 16p. To be submitted for publication, A. Finel, and D. de Fontaine (LBL) UC25

Conference Reports/Books

LBL-17552 Report (I) Resolution at its Current Limit: Applications of the Berkeley ARM, Mar. 1984, 12p. Presented at the Electron Microscopy Society of America Conference, Detroit, MI, August 12-17, 1984, R. Gronsky (LBL) UC37

LBL-17991 Report (O) Corrosion-Erosion Rates/Mechanisms of 9Cr1Mo Steel, Jan. 1985, 35p. Presented at the Corrosion 85 Conference, Boston, MA, March 25-29, 1985; and submitted to *Wear*, A. Levy, and Y.-F. Man (LBL) UC25

LBL-18254 Report (O) Elevated Temperature Erosion Corrosion of 9Cr1Mo Steel, Jan. 1985, 33p. Presented at the TMS-AIME Fall Meeting, Detroit, MI, September 17-21, 1984; and submitted to *Wear*, A. Levy, and Y.-F. Man (LBL) UC25

LBL-18255 Report (O) Erosion of Corrosion-Resistant Surface Treatments on Alloy Steels, Jan. 1985, 43p. To be presented at the International Conference on Wear of Materials—1985, Vancouver, British Columbia, April 14-18, 1985; and submitted to *Wear*, A. Levy, and G. Hickey (LBL) UC25

LBL-18256 Report (O) Elevated Temperature Erosion of Steels, Jan. 1985, 42p. To be presented at the International Conference on *Wear* of Materials—1985, Vancouver, British Columbia, April 14-18, 1985; and submitted to *Wear*, A. Levy, J. Yan, and J. Patterson (LBL) UC25

LBL-18281 Report (I) New Catalysts and New Electrolytes for Acid Fuel Cells, Feb. 1985, 13p. Presented at the Philadelphia ACS Meeting on The New Surface Science in Catalysis, Philadelphia, PA, August 26-31, 1984; and to be published in the Proceedings, P.N. Ross (LBL) A.J. Appleby (EPRI, Palo Alto, CA) UC94c

LBL-18457 Report (I) Near-Threshold Fatigue: An Overview of the Role of Microstructure and Environment, Sept. 1984, 62p. Presented at the Second International Conference on Fatigue and Fatigue Thresholds, University of Birmingham, U.K., September 3-7, 1984; and to be published in the Proceedings, R.O. Ritchie (LBL and UCB) UC25

LBL-18641 Report (O) The Effect of Temperature on the Corrosion-Erosion of 9Cr1Mo Steel, Jan. 1985, 29p. Presented at the Corrosion 85 Conference, Boston, MA, March 25-29, 1985; and submitted to *Wear*, A. Levy, and Y.-F. Man (LBL) UC25

LBL-18651 Report (H) Adiabatic Approach in the Theory of Polyatomic Photodissociation: Application to C_2N_2 , Nov. 1984, 9p. Presented at the International Conference on Lasers 1984, San Francisco, CA, November 26-30, 1984, W.A. Lester, Jr., and C.E. Dateo (LBL and UCB) V.Z. Kresin (LBL) UC4

LBL-18686 Report (O) Surface Degradation of Ductile Metal in Elevated Temperature Gas-Particle Streams, Jan. 1985, 32p. Presented at the American Society of Mechanical Engineers International Gas Turbine Conference, Houston, TX, March 17-21, 1985; and submitted to *Wear*, A. Levy, and Y.-F. Man (LBL) UC25

- LBL-18778 Report (O) The Electronic and Magnetic Properties of Am and Cm, Feb. 1985, 19p. Presented at the International Symposium on Americium and Curium Chemistry and Technology, 1984 International Chemical Congress of Pacific Basin Societies, Honolulu, HI, December 16–21, 1984, N. Edelstein (LBL) UC25
- LBL-19013 Report (I) Overview of Applications of SQUIDS, Nov. 1984, 6p. Presented at the SQUID Magnetometry Workshop, Berkeley Springs, WV, November 12–14, 1984; and to be published in the Proceedings, J. Clarke (LBL and UCB) UC37
- LBL-19109 Report (H) Relativistic Effects in Chemical Systems, Feb. 1985, 54p. To be published as a chapter in the **Annual Review of Physical Chemistry**, B.S. Rabinovitch, Ed., Annual Reviews, Inc. P.A. Christiansen (Clarkson Univ., NY) W.C. Ermler (Stevens Inst. Tech., NJ) K.S. Pitzer (LBL and UCB) UC4
- LBL-19130 Report (I) TEM Combined with $\text{Al}_x\text{Ga}_{1-x}$ as Marker Layers as a Technique for the Study of GaAs MBE Growth, Jan. 1985, 16p. Presented at the Arizona State University Centennial Symposium on High Resolution Electron Microscopy, Scottsdale, AZ, January 7–11, 1985; and submitted to *Ultramicroscopy*, J.H. Mazur, and J. Washburn (LBL and UCB) R. Fischer, T. Henderson, J. Klem, W.T. Masselink, W. Kopp, and H. Morkoç (Univ. of Illinois) UC25

Other Reports

- LBL-18335 Report (I) On the Electrochemistry of Halogen Electrodes in Propylene Carbonate, Dec. 1984, 229p. Ph.D., K.J. Hanson (LBL and UCB) UC94c
- LBL-18646 Report (O) Studies on Zinc Nodules Electrodeposited from Acid Electrolytes, Dec. 1984, 166p. M.S.*, R. Anderson*, and C.W. Tobias (LBL and UCB) UC94c
- LBL-18901 Report (I) Microstructural Aspects of Gas-Solid Reactions, Jan. 1985, 138p. Ph.D., M.-F. Rau (LBL and UCB) UC4

Abstracts

- LBL-19014 Abs. (I) Detection of Magnetic Resonance Using a dc SQUID as a Radio-Frequency Amplifier, Dec. 1984, 1p. Presented at the American Physical Society March Meeting, Baltimore, MD, March 25–29, 1985, C. Hilbert, and J. Clarke (UCB and LBL) T. Sleator, and E.L. Hahn (UCB) UC37
- LBL-19015 Abs. (I) Dependence of $1/f$ Noise in Copper Films on Defects Induced by 500 keV Electron Irradiation, Dec. 1984, 1p. Presented at the American Physical Society March Meeting, Baltimore, MD, March 25–29, 1985, J. Pelz, and J. Clarke (UCB and LBL) UC37
- LBL-19016 Abs. (I) Thermal Noise Magnetic Resonance Spectroscopy Using a dc SQUID Amplifier, Dec. 1984, 1p. Presented at the American Physical Society March Meeting, Baltimore, MD, March 25–29, 1985, T. Sleator, and E.L. Hahn (UCB) E. Hilbert, and J. Clarke (UCB and LBL) UC37

- LBL-19017 Abs. (I) Quantization of Energy Levels and Macroscopic Quantum Tunneling in the Current Biased Josephson Junction, Dec. 1984; 1p. Presented at the American Physical Society March Meeting, Baltimore, MD, March 25-29, 1985, J. Martinis (UCB) UC38
- LBL-19123 Abs. (H) Picosecond Far-Infrared Generation by Parametric Mixing, Dec. 1984, 3p. Presented at the International Conference on Lasers '84, San Francisco, CA, November 26-30, 1984, M. Berg, C.B. Harris, T.W. Kenney, and P.L. Richards (LBL and UCB) UC34A,37
- LBL-19288 Abs. (H) Atomic Physics with Very Fast- and Very Slow-Ions, Mar. 1985, 3p. To be presented at the Atomic Physics Program Contractors Workshop, Chapel Hill, N.C., May 13-14, 1985, H. Gould, R. Marrus, C. Munger, and M. Prior (LBL and UCB) UC34A,34C
- LBL-19298 Abs. (H) Uranium 92+, Oct. 1984, 2p. Submitted to *Phys. Today*, H. Gould (LBL) UC34A,34C
- LBL-19311 Abs. (I) HREM Studies on a New Zeolite $\text{AlPO}_4\#5$, Mar. 1985, 2p. To be presented at the Electron Microscopy Society of America Annual Meeting, Louisville, KY, August 5-9, 1985, R.S. Rai, M.A. O'Keefe, and G. Thomas (LBL) UC90d,25
- LBL-19312 Abs. (I) Voltage and Orientation Dependence of Characteristic X-Ray Production in Thin Crystals, Mar. 1985, 2p. To be presented at the Electron Microscopy Society of America Annual Meeting, Louisville, KY, August 5-9, 1985, G. Thomas, and K.M. Krishnan (LBL) Y. Yokota, and H. Hashimoto (Osaka Univ., Japan) UC25
- LBL-19313 Abs. (I) HREM Profile Image Interpretation in MgO Cubes, Mar. 1985, 2p. To be presented at the Electron Microscopy Society of America Annual Meeting, Louisville, KY, August 5-9, 1985, M.A. O'Keefe (LBL) J.C.H. Spence (LBL and Arizona St. Univ.) J.L. Hutchinson, and W.G. Waddington (LBL and Univ. of Oxford, U.K.) UC25
- LBL-19315 Abs. (I) Titanium-Silicide Contacts on GaAs, Mar. 1985, 2p. To be presented at the Electron Microscopy Society of America Annual Meeting, Louisville, KY, August 5-9, 1985, Z. Liliental, J. Washburn, and R. Gronsky (LBL) A. Wakita, and C. Kocot (Palo Alto, CA) UC25
- LBL-19327 Abs. (H) The Infrared Spectroscopy of Weakly Bound Hydrogen Cluster Ions, Mar. 1985, 1p. To be presented at the XIV International Conference on the Physics of Electronic and Atomic Collisions, Stanford, CA, July 24-30, 1985, L.I. Yeh, M. Okumura, and Y.T. Lee (LBL and UCB) UC4
- LBL-19344 Abs. (H) Parity Nonconservation in Atoms, Mar. 1985, 4p. To be presented at the Atomic Physics Contractors Workshop, Chapel Hill, NC, May 13-14, 1985, E.D. Commins (LBL and UCB) UC34A

NUCLEAR SCIENCE

Journal Submissions

- LBL-17660 Rev. Preprint (S) A Microscopic Calculation of Fragment Formation in Nucleus-Nucleus Collisions, Jan. 1985, 43p. Submitted to *Nucl. Phys. A*, B.G. Harvey (LBL) UC34C
- LBL-17919 Preprint (S) Simple Estimates for Fermi Jets, Oct. 1984, 47p. Submitted to *Nucl. Phys. B.*, K. Möhring (LBL and Hahn Meitner Inst., Berlin, W. Germany) W.J. Swiatecki (LBL) M. Zielinska-Pfabe (LBL and Smith College, MA) UC34C,34D
- LBL-18118 Preprint (S) Shapes and Alignments at High Spin in Some Rare-Earth Nuclei, Jan. 1985, 96p. Submitted to *Nucl. Phys. A* M.A. Deleplanque, R.M. Diamond, and F.S. Stephens (LBL and UCB) A.O. Macchiavelli (LBL and Buenos Aires, Argentina) Th. Døssing (LBL and Univ. of Copenhagen, Denmark) J.E. Draper, and E.L. Dines (UCB) UC34C
- LBL-18771 Preprint (S) On the Validity of the Mean Field Approach for the Description of Pairing Collapse in Finite Nuclei, Jan. 1985, 17p. Submitted to *Phys. Lett. B*, J.L. Egido (LBL and Madrid, Spain) P. Ring (LBL and Univ. Munchen, W. Germany) S. Iwasaki (Univ. Chiba, Japan and Univ. Munchen, W. Germany) H.J. Mang (Univ. Munchen, W. Germany) UC34D
- LBL-18950 Preprint (S) Neutrino Astronomy: A New Window on the Universe, Jan. 1985, 20p. Submitted to *Sky Telesc.*, E.B. Norman (LBL) UC34B
- LBL-18956 Preprint (S) Are Fundamental Constants Really Constant?, Jan. 1985, 18p. Submitted to *Am. J. Phys.*, E.B. Norman (LBL) UC34
- LBL-19000 Preprint (S) Beta-Delayed Proton Precursors with $59 \leq Z \leq 62$, Jan. 1985, 3p. Submitted to *Z. Phys. A*, P.A. Wilmarth, J.M. Nitschke, P.K. Lemmert, and R.B. Firestone (LBL) UC4,34C

Conference Reports/Books

- LBL-19031 Report (S) Range-Energy Relation for Au Ions, $E \leq 152$ MeV/amu, Jan. 1985, 22p. Invited talk presented at the Second International Workshop on Atomic Physics for Ion Fusion, Chilton, Oxon, United Kingdom, September 11-14, 1984, H.H. Heckman, H.R. Bowman, Y.J. Karant, J.O. Rasmussen, and A.I. Warwick (LBL) Z.Z. Xu (LBL and Fudan Univ., Shanghai, China) UC21,34C
- LBL-19032 Report (S) Soliton Matter as a Model of Dense Nuclear Matter, Jan. 1985, 16p. Presented at Gross Properties of Nuclei and Nuclear Reactions Conference, Hirschegg, Austria, January 13-19, 1985, N.K. Glendenning (LBL) UC34D
- LBL-19057 Report (S) Two Particle Correlations from Relativistic Nuclear Collisions, Jan. 1985, 17p. Presented at the 7th High Energy Heavy Ion Study, Darmstadt, FRG, October 8-13, 1984, H. Wieman, K.G.R. Doss, H.A. Gustafsson, H.H. Gutbrod, B. Kolb, H. Löhner, B. Ludewigt, A.M. Poskanzer, T. Renner, H.G. Ritter, and A. Warwick (GSI and LBL) UC34C,34D

- LBL-19096 Report (S) Plastic Scintillator Detectors for the Study of Transfer and Breakup Reactions at Intermediate Energies, Oct. 1984, 18p. Presented at the Conference on Instrumentation for Heavy-Ion Nuclear Research, Oak Ridge, TN, October 22–24, 1984, H.R. Schmidt, Y.D. Chan, S.B. Gazes, C. Albiston, and R.G. Stokstad (LBL) M. Bantel (LBL and Max Planck Inst., W. Germany) R. Kamermans (LBL and Univ. of Utrecht, Netherlands) S. Wald (LBL and Weizmann Inst., Israel) UC37
- LBL-19114 Report (S) Pion Production and the Nuclear Equation of State, Oct. 1984, 20p. Presented at the 7th High Energy Heavy Ion Study, Darmstadt, West Germany, October 8–13, 1984, J.W. Harris, G. Odyniec, H.G. Pugh, L.S. Schroeder, and M.L. Tincknell (LBL) R. Bock, R. Brockmann, A. Sandoval, R. Stock, and H. Ströbele (GSI) R.E. Renfordt, and D. Schall (Univ. Heidelberg, W. Germany) D. Bangert, and W. Rauch (Univ. Marburg, W. Germany) A. Dacal, K. Guerra, and M.E. Ortiz (Mexico City, Mexico) K.L. Wolf (Texas A&M Univ.) UC34C

Abstracts

- LBL-19177 Abs. (S) The Pion Thermometer: A Probe of Hot, Dense Nuclear Matter and the Nuclear Equation of State, Feb. 1985, 3p. To be presented at the 2nd International Conference on Nucleus-Nucleus Collisions, Visby, Sweden, June 10–14, 1985, J.W. Harris, G. Odyniec, H.G. Pugh, L.S. Schroeder, and M.L. Tincknell (LBL) R. Bock, R. Brockmann, A. Sandoval, R. Stock, and H. Ströbele (GSI) R.E. Renfordt, and D. Schall (Univ. Heidelberg, W. Germany) D. Bangert, and W. Rauch (Univ. Marburg, W. Germany) A. Dacal, K. Guerra, and M.E. Ortiz (Univ. of Mexico, Mexico) K.L. Wolf (Texas A&M Univ.) UC34C,34D
- LBL-19181 Abs. (S) Collective Motion in Relativistic Nuclear Collisions, Feb. 1985, 3p. To be presented at the 2nd International Conference on Nucleus-Nucleus Collisions, Visby, Sweden, June 10–14, 1985, G. Odyniec, J.W. Harris, H.G. Pugh, L.S. Schroeder, and M.L. Tincknell (LBL) P. Danielewicz (LBL and Univ. Warsaw, Poland) R. Bock, R. Brockmann, A. Sandoval, R. Stock, and H. Ströbele (GSI) R.E. Renfordt, and D. Schall (Univ. Heidelberg, W. Germany) D. Bangert, and W. Rauch (Univ. Marburg, W. Germany) UC34C,34D

PHYSICS

Journal Submissions

- LBL-18761 (F) Measurement of K^\pm and K^0 Inclusive Rates in e^+e^- Annihilation at 29 GeV, Dec. 1984, 15p, SLAC-PUB-3521, Submitted to *Phys. Rev. D*, H. Schellman, G.H. Trilling, G.S. Abrams, D. Amidei, A.R. Baden, J. Boyer, F. Butler, J.B. Dillon, G. Gidal, M.S. Gold, G. Goldhaber, L.J. Golding, J. Haggerty, D. Herrup, I. Juricic, J.A. Kadyk, M.E. Nelson, P.C. Rowson, W.B. Schmidke, P.D. Sheldon, C. de la Vaissiere, and D.R. Wood (LBL) T. Barklow, A.M. Boyarski, M. Breidenbach, P.R. Burchat, D.L. Burke, J.M. Dorfan, G.J. Feldman, L. Gladney, G. Hanson, K. Hayes, T. Himel, R.J. Hollebeek, W.R. Innes, J.A. Jaros, D. Karlen, A.J. Lankford, R.R. Larsen, B.W. LeClaire, N.S. Lockyer, V. Lüth, C. Matteuzzi, R.A. Ong, M.L. Perl, B. Richter, K. Riles, M.C. Ross, D. Schlatter, J.M. Yelton, and C. Zaiser (SLAC) M.E. Levi, and T. Schaad (Harvard Univ.) UC34C,34D

- LBL-18848 (F) Λ Production in e^+e^- Annihilation at 29 GeV, Feb. 1985, 13p, SLAC-PUB-3419, Submitted to *Phys. Rev. Lett.*, C. de la Vaissiere, V. Lüth, G.S. Abrams, D. Amidei, A.R. Baden, T. Barklow, A.M. Boyarski, J. Boyer, M. Breidenbach, P. Burchat, D.L. Burke, F. Butler, J.W. Dillon, J.M. Dorfan, G.J. Feldman, G. Gidal, L. Gladney, M.S. Gold, G. Goldhaber, L.G. Golding, G. Hanson, J. Haggerty, D. Herrup, T. Himel, R.J. Hollebeek, W.R. Innes, J.A. Jaros, I. Juricic, J.A. Kadyk, S.R. Klein, A.J. Lankford, R.R. Larsen, B.W. LeClaire, M.E. Levi, N.S. Lockyer, C. Matteuzzi, M.E. Nelson, R.A. Ong, M.L. Perl, B. Richter, M.C. Ross, P.C. Rowson, T. Schaad, H. Schellman, W.B. Schmidke, P.D. Sheldon, G.H. Trilling, J.M. Yelton, D.R. Wood, and C. Zaiser (SLAC, LBL, UCB, and Harvard Univ.) UC34C,34D
- LBL-18873 Preprint (F) Comments on "Locality, Bell's Theorem, and Quantum Mechanics," Dec. 1984, 8p. To be published in *Found. Phys.*, H.P. Stapp (LBL) UC34D
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