Appendix B

Los Alamos Unlimited Releases (LA-URs)

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LANL Group	Author(s)	Title	LAUR No.
LANSCE-3 LANSCE-3 LANSCE-3 T-16 T-16	Fotiadis, Nikolaos Nelson, Ronald Devlin, Matthew Chadwick, Mark Talou, Patrick	Cross Sections for Gamma-Ray Production in the ^{191}Iridium(n,n!) Reactions	04-0016
X-5 T-16 X-5	Mashnik, Stepan Gudima, K. Sierk, Arnold Prael, Richard	Improved Intranuclear Cascade Models for the Codes CEM2K and LAQGSM	04-0039
  X-5 T-16 X-5	Iwase, Hiroshi Iwata, Yoshiyuki Mashnik, Stepan Sierk, Arnold Prael, Richard	Neutron Spectra from Intermediate-Energy Nucleus-Nucleus Reactions	04-0040
T-12 MST-STC T-12 T-12 T-11	Redondo, Antonio Reagor, David Choi, Chu Sabourin, Nicaulas Usheva, Anny	Capacitance-Derived Dielectric Constants Demonstrate Differential Preinitiation Complexes in TBP-Independent and TBP-Dependent Transcription	04-0063
T-DO T-DO T-DO	Zurek, Wojciech Cucchietti, Fernando Paz, Juan	Gaussian Decoherence From Random Spin Environments	04-0070
T-8	Habib, Salman *et al*	A Method to Constrain the Mass Power Spectrum Using the Lyman Alpha Forest Without Assumptions About the Absolute Level of the QUASAR Continuum	04-0072
T-16	Pitcher, Eric	^{148}Gd Production Cross Section Measurements for Accelerator Target Facilities	04-0074
T-16 T-16	Buervenich, Thomas Madland, David	Progress in Extended Lagrangians or Relativistic Point-Coupling Models	04-0091
T-1	Schlei, Bernd	Simulations of Relativistic Heavy-ion Collisions: Hydrodynamics at Work!	04-0092
T-DO	Dalvit, Diego	Casimir Force Between Eccentric Cylinders	04-0093
T-12 CNLS T-13	Reichhardt, Cynthia Reichhardt, Charles Hastings, Matthew	Nonlinear Dynamics, Rectification, and Phase Locking for Particles on Symmetrical Two-Dimensional Periodic Substrates with DC and Circular AC Drives	04-0095
T-6 T-6 T-16 T-DO X-4 X-4	Hayes-Sterbenz, A. Jungman, Gerard Lynn, John Solem, Johndale Girard, Britton Sterbenz, Stephen	Effects of the ^{77}Ev Isomer of ^{235}U	04-0170
T-3 T-3	Torres, David Orourke, Peter	Unstructured KIVA	04-0172
T-11	Abanov, Artem	The Spin Resonance and High Frequency Optical Properties of the Cuprates	04-0173
T-6 T-6 T-6	Warren, Michael Fryer, Christopher Goda, Michael Joseph, Ryan	Software Technology to Enable Reliable High-Performance Distributed Disk Arrays: First Year Progress Report	04-0175
T-12 T-12 T-12 T-12	Babikov, Dmitri Kendrick, Brian Walker, Robert Pack, Russell	Quantum Origin of Anomalous Isotope Effect in Ozone Formation	04-0183
T-12	Challacombe, W.	Linear Scaling Electronic Structure Theory: From Density Matrices To Response Functions	04-0185

LANL Group	Author(s)	Title	LAUR No.
T-12 T-12	Tretiak, Sergei Franco, Ignacio Chernyak, V.	Exciton Sizes in Conducting Polymers Described by Time-dependent Density Functional Theory	04-0187
T-12 T-12	Redondo, Antonio Lesar, Richard	Modeling and Simulation of Biomaterials	04-0188
T-14	Strachan, Alejandro	Non-Equilibrium Melting and Crystallization of a Model Lennard-Jones System	04-0231
T-16	Chadwick, Mark	Surrogate Reaction	04-0239
T-7	Li, Shengtai	Adaptive Mesh Refinement and its Application to MHD	04-0241
T-7 T-7	Loubere, Raphael Shashkov, Mikhail	Polygonal Untangling and Smoothing Used in Arbitrary-Langrangian-Eurlerian Compressible Fluid Flow Context	04-0242
T-16 T-16 T-16	Möller, Peter Madland, David Sierk, Arnold Iwamoto, Akira	Exploring High-Dimensional Fission Potential-Energy Landscapes	04-0245
T-7 T-7	Loubere, Raphael Shashkov, Mikhail	ALE Inc.: A 2D arbitrary-langrangian-eurlerian code on polygonal staggered grids for compressible hydrodynamic problems	04-0247
T-4 T-4	Hakel, Peter Kilcrease, David	Chemeos: a new chemical-picture-based model for plasma equation-of-state calculations	04-0260
T-DO	Bishop, Alan	Theoretical Division Self-Assessment for 2003	04-0268
T-16 T-16	Iwamoto, A. Ichikawa, T. Möller, Peter Sierk, Arnold	Cluster Expression in Fission and Fusion in High-Dimensional Macroscopic-Microscopic Calculations	04-0284 04-0287
T-16	Liu, Lon-Chang Tomaselli, Maeco	Probing Nuclear Correlations with (E,E'P) and E,E'D) Reactions	04-0289
T-8 P-23	Nieto, Michael Charlton, Michael Holzscheiter, M.	The Route to Ultra-Low Energy Antihydrogen	04-0297
T-7	Lipnikov, K.	The Mimetic Finite Difference Discretization of Diffusion Problem or Unstructured Polyhedral Meshes	04-0310
T-4	Sherrill, Manolo	Cats Code Conversion from F77 to F90	04-0343
T-4 T-4 T-4 T-4 T-4 T-4	Abdallah, Joseph Hakel, Peter Kilcrease, David Magee, Norman Mazevet, Stephane Sherrill, Manolo	Atomic, The New T-4 Opacity Code	04-0344
T-4	Colgan, James *et al*	Lattice Calculations of the Photoionization of Li	04-0345
T-4 T-15 X-1	Csanak, George Murillo, Michael Daughton, William	Exact Treatment of Ion Collective Modes in the Fermi Golden Rule (FGR) Description of Temperature Relaxation	04-0346
T-4 T-4	Schneider, Barry Collins, Lee	Finite Element Discrete Variable Method for the Solution of the Time-Dependent Schroedinger Equation	04-0347
T-7 T-7	Tartakovsky, D. Iu, Dongbin	Uncertainty Quantification for Flow in Highly Heterogeneous Porous Media	04-0349
T-7 T-7	Tartakovsky, D. Xiu, Dongbin	A Two-Scale Non-Perturbative Approach to Uncertainty Analysis of Diffusion in Random Composites	04-0350
MST-8 X-7 T-3 T-3 NMT-16	Thissell, William Tonks, Davis Harstad, Eric Maudlin, Paul Schwartz, Daniel	Damage Quantification and Simulation of LFYER Plate Spallation and Round Notched Tensile Experiments	04-0351
T-15	Murillo, Michael	Strongly Coupled Plasma Physics and High Energy-Density	04-0363

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LANL Group	Author(s)	Title	LAUR No.
T-8 T-8	Xu, Yongzhong Habib, Salman	Measurements of Cosmological Parameters Using Long Duration Gamma-Ray Bursts	04-0364
T-16	Jones, E. Buervenich, T.	Unexpected Decrease in Moment of Inertia Between N=98-100 in ^{162,164}Gd	04-0367
T-16 T-16 T-16	Hale, Gerald Page, Philip Carlson, Joseph	Data for the Thermonuclear Reactions	04-0368
T-12 CNLS MST-7 MST-7 MST-8 MST-8 MST-8	Hanson, David Hawley, Marilyn Wrobleski, Debra Orler, Edward Houlton, Robert Chitanvis, Kiran Brown, Geoffrey	Mechanical Properties and Filler Distribution as a Function of Filler Content in Silica Filled PDMS Samples	04-0378
LANSCE-3 LANSCE-3 LANSCE-3 T-16 T-16 T-16 D-5 T-6 T-6 X-5	Nelson, Ronald Fotiadis, Nikolaos Devlin, Matthew Talou, Patrick Chadwick, Mark Macfarlane, Robert Trellue, Holly Hayes-Sterbenz, A. Jungman, Gerard White, Morgan	New ^{193}I(n,n'!)^{193}Ir Evaluated Nuclear Cross Sections for Radchem	04-0387
T-14	Strachan, A.	Equilibrium Melting Point and Solid-Liquid Interfacial Energy Determined from Non-Equilibrium Melting and Crystallization	04-0390
T-11 T-11 T-DO	Ahn, Keun Hyuk Lookman, Turab Bishop, Alan	Model for Multiphase Coexistence in Perovskite Manganites	04-0397
T-11	Ruden, P. Smith, Darryl	Theory of Spin Injection Into Conjugated Organic Semiconductors	04-0398
T-11 X-7 X-4 T-12	Kadau, Kai Germann, Timothy Hadjiconstan, N. Dimonte, Guy Holian, Brad	Nanohydrodynamics Simulations of the Rayleigh-Taylor Instability	04-0400
T-16 T-16	Möller, Peter Sierk, Arnold Ichikawa, T. Iwamoto, Akira	Fission and Fusion at the End of the Periodic System	04-0405
T-6 T-8	Warren, Michael Teodoro, Luis	How Precise Are the Mass Distributions Derived from n-body Simulations?	04-0425
T-10	Mokili, John *et al*	Genetic Diversification and Recombination of HIV-1 Group M in Kinshasa, Democratic Republic of Congo	04-0447
T-16	Möller, Peter	Global Calculations of Fission Barriers and Beta-Decay Properties of Neutron-Rich Nuclei	04-0448
T-16	Lynn, John	The Role of Intermediate Structure and Level Fluctuations in Fission Cross Section Calculations	04-0449
T-DO	Milonni, Peter	Simplified Derivation of the Hawking-unruh Temperature for an Accelerated Observer in . . .	04-0450
T-12 CNLS	Reichhardt, C. Reichhardt, Charles	Rectification and Flux Reversals for Vortices Interacting with Triangular Traps	04-0451
CNLS	Kos, Simon	Effect of Particle Motion on Spin Noise	04-0457
T-10	Hershberger, Karen Kurian, Jessica Korber, Bette Letvin, Norman	Killer-Cell IG-Like Receptors (KIRS) of the African-Origin Sabaeus Monkey: Evidence for Recombination Events in the Evolution of KIRs	04-0463

LANL Group	Author(s)	Title	LAUR No.
T-3 T-3 T-3	Addessio, Francis Zuo, Qiuhai Maudlin, Paul	Materials Modeling with Application to the Actinides	04-0482
X-5 T-16	Mashnik, Stepan Gudima, K. Sierk, Arnold	LAQGSM - A Code for Simulating Particle-Particle, Particle-Nucleus, and Nucleus-Nucleus Interactions at Intermediate and Higher Energies	04-0542
MST-8 T-3 MST-8	Lebensohn, R. Maudlin, Paul Tome, Carlos	Viscoplastic Self Consistent Modeling of the Anisotropic Behavior of Voided Polycrystals	04-0551
T-12	Voter, Arthur	Accelerated Molecular Dynamics Methods	04-0555
T-12	Lesar, Richard	Computational Modeling of Materials	04-0556
T-12	Goupalov, Serguei Sunis, Robert	Relative Intensities of Zero Phononline and Acoustic Phonon Sidebands in Linear Absorption Spectra of Semiconductor Quantum Dots	04-0557
T-3 T-14	Zuo, Qiuhai Dienes, John	Modeling Fracture and Damage in Ceramics Via Statistical Crack Mechanics	04-0568
T-16	Pitcher, Eric	MCNPX Extensions Version 2.5.0	04-0570
T-16	Möller, Peter	Cranking the Folded-Yukawa Potential	04-0601
T-8 T-8	Mottola, Emil Mazur, Pawel	Dark Energy and Condensate Stars: Casimir Energy in the Large . . .	04-0659
T-8 T-8	Mottola, Emil Mazur, Pawel	Gravitational Vacuum Condensate Stars	04-0660
CNLS CNLS T-11 T-DO	Voulgarakis, Nikos Kaloskas, George Rasmussen, Kim Bishop, Alan	Temperature Dependent Signatures of Coherent Vibrational Openings in DNA	04-0662
T-3	Jones, Philip	Conservative Regridding for Geodessic Climate Models	04-0690
T-3 T-3 T-3	Vanderheyden, W. Zhang, Duan Zuo, Qiuhai	Development of Advanced Computational Algorithms for the Virtual Testing of Military Systems for Survivability and Design Studies	04-0711
T-3 T-3	Mousseau, Vincent Knoll, Dana	A Comparison Between an Implicitly Balanced Solution and a Linearized and Operator Split Solution of the Thermal Hydraulic Equations	04-0712
T-3 EES-IGPP	Maltrud, Mathew Peacock, Synte	Transit Time Distributions in a Global Ocean Circulation Model	04-0714
EES-IGPP T-3	Peacock, Synte Maltrud, Mathew	The Functional Form of the Ocean Transit Time Distributions, and Potential for Prediction of Interior Tracer	04-0715
MST-8 CNLS T-3 MST-8 T-3 MST-8	Cerreta, Ellen Gray, George Maudlin, Paul Xue, Qing Bronkhorst, Curt Cady, Carl	Shear Localization: Experiments and Characterization	04-0719
T-7 CCS-2	Shashkov, Mikhail Carlson, Neil	Numerical Methods for Simulation of Heating Through Electromagnetic Induction	04-0721
T-7 T-7	Garimella, Rao Shashkov, Mikhail	Polygonal Surface Mesh Optimization	04-0722
T-7	Austin, Travis	A Least-Squares Method for the Linear Boltzmann Equation in Fokker-Planck Limit	04-0723
T-6	Herwig, Falk	The s-Process in Low- and Intermediate Mass Stars	04-0724
T-6 X-1 T-6 T-16 CCS-4	Heger, Alexander Li, Hui Fryer, Christopher Carlson, Joseph Budge, Kent	Coming Out of the Cosmic Dark Ages - the First Stars in the Universe	04-0725

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LANL Group	Author(s)	Title	LAUR No.
CCS-4 T-3 T-3	Carrington, David Mousseau, Vincent Knoll, Dana	Preconditioning Radiation Diffusion	04-0726
T-12	Hanson, David	Micro-mechanical Modeling of Binder	04-0740
T-15	Lapenta, Giovanni	Reply to the Comment on the "Solitonlike Solutions of the Grad-Shafranov Equation"	04-0751
T-12 T-12 T-12	Chao, Sheng Der Kress, Joel Redondo, Antonio	A Coarse-grained Rigid Blub Model for Polymer Simulations	04-0752
T-12	Chao, Sheng Der	Multiscale Molecular Simulations: From Atomistic to Coarse Grained Models	04-0753
T-12	Lesar, Richard	Computational Modeling of Materials: Metals to Biomaterials	04-0754
T-12	Voter, Arthur	Accelerated Molecular Dynamics Methods	04-0755
T-3	Eggert, Kenneth	Computing Surface Water Hydraulics for the Amazon Basin Using a Topographically Conforming Grid on Parallel Computing Clusters	04-0776
T-3 T-3	Kashiwa, Bryan Rauenzahn, Rick	A Study of Two-Body Forces in Fluidization	04-0777
T-3	Beyerlein, Irene *et al*	Heterogeneity in Texture Development in Single Pass Equal Channel Angular Extrusion	04-0778
T-3	Beyerlein, Irene	Three Dimensional Modeling of Plastic Deformation Flow During ECAP	04-0779
T-3 MST-6	Beyerlein, Irene Alexander, David	Mechanical Properties of High Purity Copper Processed by Equal Channel Angular Extrusion	04-0780
T-3	Beyerlein, Irene Tome, Carlos	Analytical Modeling of Material Flow in Equal Channel Angular Extrusio (ECAE)	04-0781
T-3	Zhou, Chaohui Schadler, Linda Beyerlein, Irene	Stress Concentrations in Graphite/Epoxy Model Composites During Creep at Room Temperature and Elevated Temperatures	04-0782
T-13 T-13 T-13	Berman, Gennady Borgonovi, Fausto Tsifrinovich, V.	A Model for Quantum Jumps in Magnetic Resonance Force Microscopy	04-0794
T-6	Colgate, Stirling	Star Formation and Cosmic Massive Black Hole Formation, a Universal Process Organized by Angular Momenta	04-0818
T-3	Dukowicz, John	Improved Density Coordinates of the Potential Density Type for Layer Models	04-0819
T-12 B-4 T-12	Sansinena, J.-M. Swanson, Basil Redondo, Antonio *et al*	Micro-patterning of Ionic Reservoirs Within a Double Bilayer Lipid Membrane to Fabricate a 2D Array of Ion-Channel Switch Based Electrochemical Biosensors	04-0820
T-1	George, Denise Johnson, James	Grizzly User's Manual Addendum	04-0830
CNLS	Ramaprabhu, P. Andrews, M	On the Use of Experimental Data to Initialize Rayleigh-Taylor Simulations	04-0867
CNLS	Neufeld, Zoltan	Synchronization of Oscillatory Media by Stirring	04-0868
CNLS MST-10	Zhang, Jinsuo Li, Ning	Review of the Studies on Fundamental Issues in LBE Corrosion	04-0869
T-DO CNLS	Milonni, Peter Eberly, Joseph	Lasers-Second Edition	04-0870
T-7	Garimella, Rao	MSTK: mesh toolkit, V 1.2-draft	04-0878
T-11 T-11 T-11	Ahn, Keun Hyuk Lookman, Turab Saxena, Avadh	Unified Description of Lattice Distortions from Atomic Scale to Continuum and its Application to CMR Manganites	04-0880

LANL Group	Author(s)	Title	LAUR No.
T-11 T-11 T-11	Ahluwalia, Rajeev Lookman, Turab Saxena, Avadh	Three Dimensional Simulations of Martensitic Transformations with Volume Changes	04-0882
T-12 T-12	Pack, Russell Walker, Robert	Some Symmetry-Induced Isotope Effects in the Kinetics of Recombination Reactions	04-0884
T-DO	Bishop, Alan, *et al*	Theoretical Division Activities in Support of the Nuclear Weapons Program for 2003 (multiple articles)	04-0916
T-3 T-3 T-	Zhang, Duan Vanderheyden, W. Zou, Qisu	Progress in HE Ignition Modeling	04-0921
T-3	Kashiwa, Bryan	An Eulerian-Lagrangian Approach for Large Deformation Fluid Structure Interaction Problems	04-0922
T-3 T-14	Zuo, Qiuhai Dienes, John	On the Stability of Penny-Shaped Cracks with Friction: The Five Types of Brittle Behavior	04-0923
T-10 T-10	Young, Cho Foley, Brian *et al*	Molecular Study on HIV-1 Outbreak in Korean Hemophhilicas B Through Clotting Factor 9	04-0964
T-10	Ventura, Alejandra *et al*	Inferring the Underlying Calcium Currents from Fluorescent Images: A model independent method to determine CA2+ release fluxes from fluorescent images.	04-0965
T-10 T-10	Faeder, James Torigoe, Chikako Goldstein, Byron	Is There Kinetic Proofreading Beyond Lat?	04-0966
T-10 T-10 T-10 T-10	Faeder, James Blinov, Mikhail Hlavacek, William Goldstein, Byron	Investigating the Role of Complex Formation in Immunoreceptor Signaling Using Mathematical Modeling	04-0967
T-16	Reddy, Sanjay	The Micro-Physics of Neutrino Transport at Extreme Density	04-0969
T-15	Lapenta, Giovanni Zuccaro, G. Maizza, G.	Particle in Cell Simulation of Combustion Synthesis of Tic Nanoparticles	04-0994
CNLS T-13	Kamenev, Dmitry Berman, Gennady *et al*	Modeling Full Adder in Ising Spin Quantum Computer with 1000 Qubits Using Quantum Maps	04-1072
T-13	Ben-Naim, Eli Krapivsky, Paul	Size of Outbreaks Near the Epidemic Threshold	04-1073
T-12 T-12	Nemeth, Karoly Challacombe, W.	A New View on the Geometry Optimization of Large Molecules	04-1097
CCS-2 T-16 T-16	Hanson, Kenneth Talou, Patrick Kawano, Toshihiko	Probabilistic Interpretation of Peelle's Pertinent Puzzle and Its Resolution	04-1101
T-8	Abazajian, Kevork *et al*	Cosmology and the Halo Occupation Distribution from Small-scale Galaxy Clustering in the SDSS	04-1121
T-8 EES-11 EES-11 T-6 D-1	Habib, Salman Tencate, James Pasqualini, D. Heitmann, Katrin Higdon, David	Nonlinear Dynamics of Driven Sandstone Rods	04-1122
T-7	Kurien, Susan	Symmetry Breaking in Turbulent Flow Statistics – Rotation and Reflection	04-1123
T-7	Kurien, Susan	Helicity and the Kolmogorov Phenomenology of Turbulent Flow	04-1124
T-10 T-10	Perelson, Alan Dixit, Narendra	Influence of Drug Pharmacokinetics on HIV Pathogenesis and Therapy	04-1125
T-10	Perelson, Alan De Boer, Rob	Estimating Division and Death Rates from CPSE Data	04-1126
T-10	Leitner, Thomas *et al*	Development of HIV-1 X4 Pheotype in Two Non-Subtype B Infected Children Born to Mothers Carrying X4 Virus Is Not Linked To HIV-1 Transmission of X4	04-1127

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LANL Group	Author(s)	Title	LAUR No.
T-10	Korber, Bette *et al*	Analysis of HIV-1 GP 120 Subtype B and C V3 Peptide Motifs For Induction of Neutralizing Antibodies Against HIV-1 Primary Isolates	04-1128
T-10 T-10	Tung, C.-S. Leitner, Thomas *et al*	Recombination, 3D Network Structure Multiple Transmission and Subpopulation Frequency Shifts in a Mother-to-Child Transmission Care	04-1129
T-15 T-15 P-22 MST-10 MST-10	Daligault, Jerome Murillo, Michael Benage, John Clarke, Steven Rodriguez, George	Molecular Dynamics Studies of Neon Diffusion in Carbon-Oxygen White Dwarfs	04-1130
T-10 T-10 T-10	Goldstein, Byron Coombs, Daniel Wofsy, Carla Dembo, Micah	Equilibrium Thermodynamics of Cell-Cell Adhesion Mediated by Multiple Ligand-Receptor Pairs	04-1131
T-10	Leitner, Thomas *et al*	Shifts in Evolving Subpopulation Frequencies After Multiple HIV-1 Mother-To-Child Transmission	04-1132
T-DO	Milonni, Peter	Fast Light, Slow Light, and Left-Handed Light	04-1143
T-4 X-7 T-6	Mazevet, Stephane Saumon, Didier Herwig, Falk	White Dwarf Cosmochronology	04-1155
T-6 T-6	Timmes, Francis Herwig, Falk	The Second Stars	04-1158
T-8	Friedland, A. *et al*	Solar Neutrinos and NSI	04-1159
CNLS	Neufeld, Zoltan *et al*	Noise-sustained Oscillation and Synchronization of Excitable Media with Stirring	04-1163
T-10 T-10	McMahon, B. Fenimore, Paul	Protein Dynamics	04-1164
T-10 T-10 T-10 T-10	Goldstein, Byron Blinov, Mikhail Hlavacek, William Goldstein, Byron	Dynamics Restriction Network Flows During Signal Transduction	04-1165
T-10 T-10	McMahon, B. Labute, Montiago	Protein Structure	04-1166
T-6 CCS-1 X-4	Timmes, Francis Starrfield, Sumner Hix, W Sion, E Sparks, Warren	Surface Hydrogen Burning Modeling of super Soft X-ray Binaries: They are supernova IA progenitors	04-1167
T-4 X-5 X-5	Abdallah, Joseph Fontes, Christopher Zhang, Honglin	An Overview of Relativistic Distorted-Wave Cross Sections	04-1172
T-3 T-3 CCS-2 EES-2	Hunke, Elizabeth Maltrud, Mathew Hecht, Matthew Bleck, Rainer	An Eddy-Admitting Global Ice-Ocean Simulation	04-1182
T-14 T-14 T-14	Strachan, A. Jaramillo, Eugenio Sewell, Thomas	Molecular-Level Studies of Relaxation and Plastic Deformation in Molecular Crystal Under Static and Dynamic Loading	04-1204
T-3	Jones, Philip	Data Requirement for Climate Modeling	04-1207
T-8	Gupta, Rajan *et al*	Crisis Negotiation	04-1253
T-8	Gupta, Rajan	Crisis Negotiation: A Bio-Terrorism Game Scenario for the International Relations Classroom	04-1257
X-5 T-16	Mashnik, Stepan Pronskikh, V. Sierk, Arnold	Analysis of the JINR P (660 MeV) + ^{129}I, ^{237}Np, and ^{241}Am Measurements with Eleven Different Models	04-1258

LANL Group	Author(s)	Title	LAUR No.
T-8 T-8 T-8	Habib, Salman Jacobs, Kurt Shizume, Kosuke	The Quantum Emergence of Chaos	04-1259
T-15 T-15 D-3	Finn, John Nebel, Richard Bathke, Charles	Single Helicity and Quasi-Single Helicity States in Reversed Field Pinches	04-1260
T-3	Jones, Philip	Collaborative Development of the Community Climate System For Terascale Computers	04-1269
T-DO	Milonni, Peter	Spontaneous Emission in a Dielectric	04-1280
T-15 T-3	Chacon, Luis Knoll, Dana	A Fully Implicit 3D MHD Newton-Krylov Algorithm: A Numerical Proof-of-Principle	04-1282
T-3 T-3	Williams, Todd Beyerlein, Irene	Modeling Damage Evolution in Materials: Concepts, Approaches and Issues	04-1301
T-4 T-4 T-4 T-4 T-4 T-4 X-5 X-5	Hakel, Peter Kilcrease, David Abdallah, Joseph Magee, Norman Mazevet, Stephane Sherrill, Manolo Fontes, Christopher Zhang, Honglin	Los Alamos Opacities: Transition from LEDCOP to ATOMIC	04-1311
T-DO	Younger, Stephen	Discrete Agent Simulation of the Inheritance of Norms of Reciprocity	04-1313
T-8	Abazajian, Kevork	Neutrino Dark Matter Clustering: Analytic and numerical predictions	04-1317
T-13 T-13 CNLS	Mackerrow, E. Berman, Gennady Wang, Xidi	Automated Rule Discovery for Detection of Criminal Behavior in Transactional Database	04-1318
T-7 T-7	Staley, Martin Shashkov, Mikhail	Core: A Software Component for Conservative Remapping	04-1319
T-13 T-13	Sharp, David Kosman, David	Dynamical Analysis of Regulatory interactions in the Gap Gene System of drosophila melanogaster	04-1332
T-12 MST-8 MST-8 MST-8 MST-8 NMT-15 T-DO T-12 T-12	Voter, Arthur Valone, Steven Baskes, Michael Stan, Marius Lawson, Andrew Mulford, Roberta Chen, Shao Ping Martin, Richard Uberuaga, Blas	Atomistic Models of Radiation Damage in Plutonium	04-1339
T-12 T-12 T-12	Thomson, Robb Koslowski, Marisol Lesar, Richard	Noise in Deforming Systems	04-1352
T-12 T-12	Asthagiri, Dilipkumar Pratt, Lawrence	The Potential Distribution Theorem in Modeling of Molecular Solutions	04-1354
T-12	Martin, Richard *et al*	Hybrid DFT Studies of Bulk Plutonium Dioxide	04-1355
T-12 T-12 T-12	Koslowski, Marisol Thomson, Robb Lesar, Richard	Dislocation Structures and the Deformation of Materials	04-1356 04-1353
T-12 T-6	Koslowski, Marisol Ariza, Maria Cuitino, Albert Ortiz, Michael	A Multi-Phase Field of Dislocation Dynamics	04-1357

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LANL Group	Author(s)	Title	LAUR No.
T-6 T-6	Fryer, Christopher Warren, Michael	Giant Planetary Collision	04-1364
T-6 T-6 T-16	Heger, Alexander Luu, Thomas Möller, Peter	Detailed Modeling of X-ray Burst Physics	04-1375
T-10 T-10	Tung, C.-S. Macken, Catherine	Homology Model of the Structure of Influenza B Haemagglutinin	04-1376
T-15 T-15	Chacon, Luis Finn, John	Control of Resistive Wall Modes-Nonlinear Saturation and Comparison of Normal and Tangential B Sensing	04-1377
T-14 X-7	Strachan, A. Germann, Timothy	Atomistic Studies of Fast Chemical Processes in Nano-Structured Metastable Composites	04-1378
T-14 T-12	Strachan, A. Holian, Brad	New Computational Technique for Particle-Based Materials Modeling: Coupling Implicit and Explicit Degrees of Freedom	04-1379
T-14 T-14 CCS-3 T-3	Dienes, John Kershner, James Middleditch, John Zuo, Qiuhai	Fracture, Friction, and Initiation	04-1380
T-15 T-15	Glasser, Alan Simakov, Andrei	Computation of Singular MHD Instabilities with DCON	04-1422
T-15 T-15	Nebel, Richard Chacon, Luis	Experimental and Theoretical Studies of Electrostatic Confinement on the INS-e Device	04-1423
T-16 T-16 T-16 T-16 T-16	Lemaire, Sebastien Talou, Patrick Kawano, Toshihiko Madland, David Chadwick, Mark	Correlated Neutron Emission in Fission: Initial Results	04-1424
T-6	Fryer, Christopher	Gravitational Waves from Stellar Collapse: Correlations to explosion asymmetries	04-1425
T-12 T-12 T-12	Asthagiri, D. Pratt, Lawrence Kress, Joel	Hydration of H+(aq)	04-1457
T-DO	Bishop, Alan	Spin and Lattice Effects in the Kondo Lattice Model	04-1484
T-15 P-24	Tang, Xianzhu Hsu, Scott	Astrophysical Magnetic Helicity Injection: Jets, Lobes, and LAPD-U	04-1531
T-15 T-15 CNLS T-15	Lukin, Vyacheslav Glasser, Alan Tang, Xianzhu Simakov, Andrei	Application of the Spectral Element Code (SEL) To Edge Plasma Modeling	04-1532
T-15	Lapenta, Giovanni	Implicit Simulation of Kinetic Plasma Problems	04-1533
T-15 T-15 CNLS	Lukin, Vyacheslav Glasser, Alan Tang, Xianzhu	Development of the Sel Code and Its Application to the Magnetic Reconnection Problem	04-1535
T-4 T-4	Hakel, Peter Mancini, Roberto	Magnetic-Sublevel Atomic Kinetics Modeling for Line Polarization Spectroscopy	04-1536
T-4	Csanak, George	Plasma Polarization Spectroscopy: Past, Present, and Future-A Subjective view	04-1537
LANSCE-12 T-14 T-12 T-14 MST-6 LANSCE-12	Eckert, Juergen Sewell, Thomas Kress, Joel Kober, Edward Lily, Wang Olah, Glenn	Vibrational Analysis of the Inelastic Neutron Scattering Spectrum of Tetramethylam-monium Borohydride by Molecular Dynamics Simulations and Electronic Structure Calcs	04-1562
T-12 T-12	Redondo, Antonio Walker, Robert	Modified Chi-squared Goodness-of-fit test for Comparison of Experimental Data Sets	04-1563
T-10 T-10	Goldstein, Byron Coombs, Daniel	T-Cell Activation: Kinetic Proofreading, Serial Engagement and Cell Adhesion	04-1565

LANL Group	Author(s)	Title	LAUR No.
T-10	Torney, David	Optimal Control for Sensor Networks	04-1566
T-10	Tung, C.-T. *et al*	A Sans Contrast Variation Study to Elucidate Structural Requirements for the Initial Recognition Step Between Myosin Light Chain Kinases and its Activator Protein, Calmodulin	04-1567
T-10	Torney, David	Proliferation Detection Technologies Program Technical Information Exchange	04-1571
T-1	George, Denise	Users Manual Opensesame	04-1585
T-DO	Bishop, Alan	Bonding Constraints, Elasticity and Electronic Heterogeneity in Transition Metal Oxides	04-1586
T-13 CNLS	Ben-Naim, Eli Krapivsky, Paul	Random Geometric Series	04-1587
T-3 T-3	Zhang, Duan Ma, Xia	Constitutive Behavior of Particle-Polymer Binder Composite	04-1588
T-3	Mousseau, Vincent	A Comparison Between an Implicitly Balanced Solution and a Linearized and Operator Split Solution of the Thermal Hydraulic	04-1589
T-14	Dienes, John	Axial Splitting: A test of scram	04-1590
T-12 T-14	Holian, Brad Strachan, A.	Energy Exchange Between Mesoparticles and Their Internal Degrees of Freedom	04-1591
X-4 T-3 T-3 T-3 DX-3	Potocki, Mark Zuo, Qiuhai Maudlin, Paul Addessio, Francis Hull, Lawrence	Study of Fragmentation at LANL	04-1676
T-15 P-24	Tang, Xianzhu Wang, Zhehui	Chandresekhar Equilibria of Compact Toroids with Alfvenic Flows	04-1678
T-4 T-4	Hakel, Peter Mancini, R. *et al*	X-Ray Line Polarization Spectroscopy of Laser-Produced Plasmas	04-1679
T-4	James, Daniel	Quantum Teleportation with Atoms	04-1680
T-4	Cohen, James	Capture of Antiprotons by Some Radioactive Atoms and Ions	04-1681
T-13 CNLS	Chertkov, Michael Chernyak, V Stepanov, Mikhail Vasic, Bane	Error Correction on a Tree: An instanton approach	04-1684
T-13 T-4 T-13 T-DO	Smerzi, Augusto Collins, Lee Berman, Gennady Bishop, Alan Pezze, Luca	Double-slit Interferometry with a Bose-Einstein Condensate	04-1685
T-10	Torney, David	Maximum Algorithms for DSN Swarming	04-1686
T-8 T-8	Abazajian, Kevork Xu, Yongzhong	The Second Data Release of the Sloan Digital Sky Survey	04-1693
T-7 T-DO	Louck, James Carter, John	Magic Squares: Symmetry and Combinatorics	04-1735
T-16	Goldman, Terrance *et al*	Large Mixing from Small: Pseudo-Dirac Neutrinos and the Singular See-Saw	04-1736
T-11 T-11 T-11 T-11	Boulaevskii, Lev Hruska, Marina Shnirman, A. Smith, Darryl Makhlin, Yu	Nondemolition Measurements of a Single Quantum Spin Using Josephson Oscillations	04-1738
T-11 T-11 MST	Balatsky, A. Joglekar, Yogesh Littlewood, Peter	Dipolar Superfluidity in Electron-Hole Bilayer Systems	04-1739
CNLS	Bouchet, F Barre, Julien	Classification of Phase Transitions and Ensemble Inequivalence in System with Long Range Interactions	04-1741

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LANL Group	Author(s)	Title	LAUR No.
T-11 X-7 T-11	Kadau, Kai Germann, Timothy Lomdahl, Peter	Nanohydrodynamics Simulations: An Atomistic View of the Rayleigh-Taylor Instability	04-1742
T-11 T-11 T-11 T-11	Shnirman, A. Nussinov, Zohar Zhu, Jian-Xin Balatsky, A.	Spin and Current Variations in Josephson Junctions	04-1743
T-11 T-11	Ahn, Keun Hyuk Lookman, Turab	Self-organized Nano and Micrometer Scale Heterogeneities in Perovskite Manganites	04-1744
T-3 T-3	Knoll, Dana Mousseau, Vincent	On Time Integration Methods and Errors for ASCI Applications	04-1749
LANSCE-6 LANSCE-3 T-16 LANSCE-3 P-23 T-16	Johns, Glen Nelson, Ronald Chadwick, Mark Devlin, Matthew Wilburn, Wesley Young, Phillip *et al*	Measurements of ^{238}U(n,'n!) Partial Gamma-Ray Cross Sections with GEANIE	04-1756
T-12 CNLS	Hanson, David Browning, Richard	A Micromechanical Model for Estane to Relate Chemical Degredation to Extreme STS Requirements	04-1790
T-3 T-3 T-3 T-3	Zou, Qisu Zhang, Duan Padial-Collins, N. Vanderheyden, W.	Multiphase Flow Simulation of Ignition of Solid Explosive	04-1791
T-3 T-3 T-3	Harstad, Eric Maudlin, Paul McKirgan, John	Anisotropic Failure Modeling and Simulation with Comparison to Experimental Data	04-1792
T-3	Vanderheyden, W.	Fluid Dynamics Group (T-3) Capabilities and Highlights	04-1793
T-12 T-12 T-12	Tretiak, Sergei Kobko, Nadya Masunov, Artem	Calculations of the Third-Order Nonlinear Response in Push-Pull Chromophores with a Time-Dependent Density Functional Theory	04-1798
T-12	Goupalov, S. *et al*	Exciton Dephasing in Self-Assembled CdSe Quantum Dots	04-1799
T-12	Hanson, David	A Micromechanical Model for Filled Polymers	04-1800
T-12 T-12 T-12 T-12	Batista, Enrique Martin, Richard Hay, Philip Peralta, Juan Scuseria, Gustavo	Density Functional Investigations of the Properties and Thermochemistry of UF6 and UF5 Using Valence-Electron and All-Electron Approach	04-1801
T-12 T-12 T-12	Koslowski, Marisol Lesar, Richard Thomson, Robb	Dislocation Patterning and the Deformation of Materials	04-1802
T-15 T-15	Lapenta, Giovanni Ricci, Paolo Möller	Collisionless Magnetic Reconnection in the Presence of a Guide Field	04-1827
CNLS X-3 T-3 T-12	Burkett, Michael Clancy, Sean Maudlin, Paul Holian, Brad	Coupled Plasticity and Damage Modeling and Applications in a Three-Dimensional Hydrocode	04-1851
T-13	MacKerrow, E.	Agent-Based Simulation of the Demand for Islamist Terrorist Organizations	04-1857
T-13 T-7 T-7 CNLS	Chertkov, Michael Kolokolov, Igor Lebedev, Vladimir Turitsyn, K.	Tumbling of Polymers in Random Flow with Mean Shear	04-1871
X-5 X-5 T-16	Mashnik, Stepan Gudima, K. Prael, Richard Sierk, Arnold	Analysis of the GSI A+P and A+A Spallation, Fission, and Fragmentation Measurements with LANL CEM2K and LQGSM Codes	04-1873

LANL Group	Author(s)	Title	LAUR No.
CCS-4 T-3 T-3	Carrington, David Mousseau, Vincent Knoll, Dana	Preconditioning and Solver Optimization for Radiative Transfer	04-1889
CNLS	Frauenfelder, Hans	The Energy Landscape and Dynamics of Proteins	04-1894
CNLS	Frauenfelder, Hans	Protein Dynamics	04-1895
CNLS	Frauenfelder, Hans	Proteins are Highly Inhomogeneous Systems	04-1896
T-14	Menikoff, Ralph	Constitutive Model for PMMA at High Pressure	04-1899
T-12 ESA-WMM ESA-WMM ESA-WR	Kress, Joel Stephens, Thomas Coons, James Lewis, Matthew	LANL Lifetime Estimation of Non-Nuclear Materials	04-1911
T-12	Kress, Joel	Toward Science-based Lifetime Predictions for the Plastic-Bonded Explosive PBX 9501	04-1927
T-12 T-12 T-12 T-12	Clark, Aurora Sonnenberg, Jason Hay, Philip Martin, Richard	Analyzing the Densities and Kohn-Sham Determinants of Simple Actinide Complexes: What can fuzzy atom, atoms-in-molecules, Mulliken, Lowpin and natural population analysis tell us?	04-1928
T-12 CNLS T-11 T-12 T-DO	Tretiak, Sergei Piryatinski, Andrei Sexena, Avadh Martin, Richard Bishop, Alan	Formation and Dynamics of Photoexcited Breathers in Conjugated Polymers	04-1929
T-14 T-12	Strachan, A. Holian, Brad	Energy exchange Between Mesoparticles and Their Internal Degrees of Freedom (Supplemental)	04-1973
T-14 T-14	Bardenhagen, Scott Brydon, Andrew Guilkey, James	Insight into the Physics of Foam Densification via Numerical Simulation	04-1974
T-12	Kendrick, Brian Derrickson, Sean	Quantum hydrodynamics: application to N-dimensional reactive scattering	04-1975
T-12 T-12 T-12	Koslowski, Marisol Lesar, Richard Thomson, Robb	Avalanches and Scaling in Plastic Deformation	04-1982, 04-1803
T-12 T-12	Challacombe, W. Nemeth, Karoly	Internal Coordinate Geometry Optimization and Linear Scaling AB Initio Theory For Quantum Biochemistry	04-1983 04-0186
T-15 T-15 T-3 X-1	Lapenta, Giovanni Ricci, Paolo Brackbill, Jeremiah Daughton, William	Influence of the Lower Hybrid Drift Instability on the Onset of Magnetic Reconnection	04-1987
CNLS	Frauenfelder, Hans	Fluctuations Control Biomolecular Processes	04-1988
T-12 T-12 T-12	Clark, Aurora Hay, Philip Martin, Richard *et al*	Molecular Spectroscopy of Actinide-Ketimido Complexes	04-2071
T-10 T-10 T-10 T-10	Kuiken, Carla Yusim, Karina Boykin, Laura Richardson, R.	The Los Alamos Hepatitis C Sequence Database	04-2085
T-10 T-10 T-10 T-10 T-10	Korber, Bette Foley, Brian Yusim, Karina Leitner, Thomas Gaschen, Brian	Molecular Mechanisms of HIV Pathogenesis (X7)	04-2086
T-10	Korber, Bette *et al*	Neutralization Antibody Signature Patterns in HIV Sequences	04-2087
T-16	Gibson, Benjamin	Inelastic Electron Scattering to the First Zero-Plus Excited State of He4	04-2089

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LANL Group	Author(s)	Title	LAUR No.
T-6	Heger, Alexander *et al*	A Vibrational Instability in SN IA Progenitors	04-2092
T-6	Heger, Alexander *et al*	Nucleosynthesis and Evolution of Pop III Starts	04-2093
T-6	Heger, Alexander Woosley, Stan	Nucleosynthesis in Stars and Galactochemical Evolution	04-2094
T-12 X-7 T-11 CNLS	Holian, Brad Germann, Timothy Lomdahl, Peter Ravelo, Ramon	Shock-Induced Plasticity in Single Crystal and Nanocrystalline Metals	04-2095
T-12 X-7 CNLS	Holian, Brad Germann, Timothy Ravelo, Ramon	Plastic Deformation Mechanisms in Shocked Single Crystal Metals	04-2096
T-3	Eggert, Kenneth *et al*	A Continental Scale River Modeling Framework Designed Around Topographic Modeling Units with Body Hydrologic and Hydraulic Realism	04-2137
T-16 X-5	Pronskikh, V. *et al* Sierk, Arnold Prael, Richard	Study of Proton Induced Reactions in a Radioactive ^{129}I Target at EP=660 MeV	04-2139
T-4 T-4 X-5 T-4 T-4 T-4 X-5 T-4 T-12 T-1 T-4 X-5	Magee, Norman Abdallah, Joseph Fontes, Christopher Hakel, Peter Mazevet, Stephane Sherrill, Manolo Zhang, Honglin Collins, Lee Kress, Joel Crockett, Scott Kilcrease, David Fontes, Christopher	ATOMIC Benchmark Opacity Calculations, Theoretical Division Special Features 2004	04-2143
T-1	Niklasson, Anders	Iterative Refinement Technique for the Approximate Factorization of the Inverse	04-2159
T-3	Moses, Ronald	Book Review of "The high-latitude ionosphere and it's effects on radio propagation: Cambridge atmospheric and Space Science Series"	04-2196
T-3	Mousseau, Vincent	A Hybrid Solution Method for the Two-Phase Fluid Flow Equations	04-2197
T-12 T-12	Koslowski, Marisol Lesar, Richard *et al*	Dislocation Patterning and Avalanches in Plastic Deformation	04-2202
T-DO	Dalvit, Diego	Dynamical Casimir Effect via Time-Dependent Conductivity in the MIR Experiment	04-2204
T-16	Gibson, Benjamin	Four-Body Calculation of the First 0+ Excited State of 4He	04-2205
T-12 T-12	Masunov, Artem Tretiak, Sergei	DFT Study of the Effects of Solvent Environment on Photophysical Properties and Electronic Structure of Paracyclophane Chromophores	04-2213
T-16	Friar, James *et al*	Charge-Symmetry Breaking and Class IV Nuclear Forces	04-2214
T-4 X-7 X-7	Mazevet, Stephane Kowalski, Piotr Saumon, Didier	Refraction and Opacities in Very Cool Helium-Rich White Dwarf Atmospheres	04-2221
T-3 CNLS MST-8 MST-8 CNLS	Maudlin, Paul Bingert, John Henrie, Benjamin Cady, Carl Gray, George	Local and Polycrystalline Textures in Body-Centered Cubic Metals: Their Evolution and Effect on Mechanical Response	04-2232

LANL Group	Author(s)	Title	LAUR No.
T-4 T-4	Csanak, George Kilcrease, David *et al*	Alignment Creation by Elastic Electron Scattering	04-2235
T-6 X-1	Colgate, Stirling Li, Hui	Cosmic Ray Acceleration by E Parallel Reconnection of Force-Free Fields	04-2257
T-6	Luu, Thomas *et al*	Effective Interactions for the Three-Body Problem	04-2258
T-6	Herwig, Falk *et al*	Nuclear Reaction Rules and the Carbon Star Mystery	04-2259
T-8	Abazajian, Kevork *et al*	The Viability of a Cosmological Lepton Asymmetry in Reconciling Sterinle Neutrinos with Primordial Nucleosynthesis	04-2260
T-13	Berman, Gennady *et al*	Wave Function Collapses in a Single Spin Magnetic Resonance Force Microscopy	04-2302
T-13 CNLS	Ben-Naim, Eli Krapivsky, Paul	Unicyclic Components in Random Graphs	04-2303
T-1	Clements, Brad	Polymer Behavior Under Dynamics Loading	04-2306
X-2 T-16 T-16	Becker, Stephen Möller, Peter Sierk, Arnold	Stability and Decay at the End of the r-Process	04-2324
CNLS MST-10	Zhang, Jinsuo Li, Ning Rusanov, A.E.	Corrosion Behaviors of US Steels in Flowing Lead-Bismuth Eutectic (LBE)	04-2325
T-7	Peleg, Avner	Lognormal Distribution of Pulse Amplitudes Due to Raman Ross Talk in WDM Solution Transmission	04-2326
T-7	Dendy, Joel	Alternative RAP	04-2327
T-12	Lesar, Richard	A Density-Functional Theory for Dislocation Structures	04-2336
T-12 T-12	Lesar, Richard Redondo, Antonio	An Analytical Model of Bone Remodeling	04-2337
T-12 T-12	Lesar, Richard Rickman, Jeffrey	Mesoscale Modeling of Dislocation Energetics and Dynamics	04-2338
T-12 T-12	Batista, Enrique Martin, Richard	Natural Transition Orbitals	04-2339
T-12	Voter, Arthur	Atomistic Simulation Methods	04-2340
T-12	Masunov, Artem	Density Functional Theory Studies of the Ground and Excited States	04-2341
T-12 T-12	Walker, Robert Redondo, Antonio	Goodness of Fit Tests for Comparison of Experimental Data Sets	04-2342
ESA-WR ESA-WR ESA-WR T-3	Lewis, Matthew Maciucescu, Luca Rangaswamy, P. Schraad, Mark	Evaluation of the 'PDF Constitutive Model'	04-2357
MST-8 T-3 DX-1	Mason, Thomas Maudlin, Paul Thomas, Keith	Detonation Wave Geometry and Mixed Mode Damage	04-2366
T-3 CNLS CNLS	Maudlin, Paul Bingert, John Gray, George *et al*	Tentalum EFP Test Series: Experiments and Analysis	04-2367
T-3 T-3 T-1 T-14 T-3 T-1 T-3	Maudlin, Paul Addessio, Francis Clements, Brad Dienes, John Harstad, Eric Mas, Eric Zuo, Qiuhai *et al*	Joint DoD/DOE Munitions Technology Development Program	04-2368
CNLS	Neufeld, Zoltan *et al*	Homogenization Induced by Chaotic Mixing and Diffusion in an Oscillatory Chemical Reaction	04-2370
T-7	Hyman, James	Mathematical Modeling and Analysis (T-7) Research Highlights, Spring 2004	04-2371

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LANL Group	Author(s)	Title	LAUR No.
T-7	Jiang, Yi *et al*	Role of Streams in Aggregate Formation in Myxobacteria	04-2372
T-3 T-1 T-3 DX-2	Addessio, Francis Greeff, Carl Harstad, Eric Hayes, Dennis	Modeling Zirconium Explosively Formed Projectiles	04-2373 04-2374
T-4 T-4 T-4	Mazevet, Stephane Colgan, James Collins, Lee	Simulations of Ultracold Plasmas and Cold Rydberg Gases	04-2382
T-4	Colgan, James *et al*	Multiple Photoionization of Atoms and Ions using the Time-dependent Close-coupling Method	04-2383
T-4	Cohen, James	Capture of Negative Exotic Particles by Atoms, Ions, and Molecules	04-2384
T-DO	Milonni, Peter	Coherence and Noise in the Propagation of Slow Light	04-2415
T-13	Smerzi, Augusto *et al*	Propagation of Sound in a Bose Einstein Condensate in an Optical Lattice	04-2416
T-6	Heger, Alexander *et al*	The Nucleosynthetic Yields of Core Collapse Supernovae	04-2419
T-6	Seljak, Uros Warren, Michael	Large Scale Bias and Stochasticity of Halos and Dark Matter	04-2420
T-16	Friar, James	The Nuclear Physics of Atomic Hyperfine Structure	04-2421
T-4	James, Daniel	Measurement-Induced Nonlinearities in Quantum Information	04-2422
T-3 T-3	Schraad, Mark Harlow, Francis	A Stochastic Constitutive Law for Disordered Cellular Materials	04-2434
T-3	Johnson, Norman	LANL Chemical & Biological Threat Reduction Program	04-2438
CNLS X-4 DX-3	Ramaprabhu, Praveen Dimonte, Guy Andrews, Malcolm	A Numerical Study of the Influence of Initial Perturbations on the Turbulent Rayleigh-Taylor Instability	04-2457
CNLS CNLS CNLS	Neufeld, Zoltan Karolyi, Gyorgy Scheuring, Istvan	Rock-Scissors-Paper Game in a Chaotic Flow: The effect of dispersion on the cyclic competition of microorganisms	04-2458
T-11 CNLS	Martin, Ivar Mozyrsky, Dima	Change Dynamics and Kondo Effect in Single Electron Traps in Field Effect Transistors	04-2461
T-3	Holland, Marika Bitz, Cecilia Hunke, Elizabeth	Mechanisms Forcing an Antarctic Dipole in Simulated Sea Ice and Surface Ocean Conditions	04-2472
T-3 T-3 T-3 X-4	Zuo, Qiuhai Maudlin, Paul Addessio, Francis Potocki, Mark	Embedded Element for Strain Localization	04-2473
T-16	Gibson, Benjamin *et al*	Anomalous Magnetic Moment Contribution to Nucleon-Nucleon Bremsstrahlung in the Soft-Photon Approximation	04-2483
T-12	Henkelman, G. *et al*	A Fast and Robust Algorithm for Bader Decomposition of Charge Density	04-2484
T-15	Finn, John	Control of Resistive Wall Modes in a Cylindrical Tokamak With Radial and Poloidal Magnetic Field Sensors	04-2498
T-15	Nebel, R. *et al*	Electromental and Theoretical Studies of Electrostatic Confinement	04-2499
T-15	Nebel, Ri. *et al*	Theoretical and Experimental Studies of Kinetic Equilibrium and Stability in the Virtual Cathode of the Intense Neutron Source (INS-E) Device	04-2500
T-12 X-7 X-7 CNLS	Holian, Brad Hammerberg, J. Germann, Timothy Ravelo, Ramon	Nanoscale Structure and High Velocity Slidat at Cu/Ag Interfaces	04-2507
T-DO T-DO	Blume-Kohout, R. Zurek, Wojciech	Redundancy of Information Storage in Multi-Qubit Universes	04-2519

LANL Group	Author(s)	Title	LAUR No.
T-6	Denissenkov, Pavel Herwig, Falk	Enhanced Extra Mixing in Low-Mass Red Giants: Lithium Production and Thermal Stability	04-2520
T-6 X-1 EES-IGPP T-6	Colgate, Stirling Li, Hui Kronberg, Philipp Currier, Nathaniel	The Magnetic Universe	04-2521
T-7 CNLS	Austin, Travis Manteuffel, T.	A Least-Squares Finite Element Method for the Linear Boltzmann Equation with Anisotropic Scattering	04-2523
T-11 T-11 T-11 CNLS T-11	Nussinov, Zohar Zhu, Jian-Xin Balatsky, A. Crommie, Mike Manassen, Yishay	Single Spin Detection and Noise Spectroscopy	04-2608
T-DO	Milonni, Peter	Fast Light and Signal Velocity	04-2609
T-3	Johnson, Norman	Los Alamos Homeland Security Programs and Highlights	04-2615
T-8	Nieto, Michael	Controlled Antihydrogen Propulsion for NASA's Future in Very Deep Space	04-2625
T-6	Heger, Alexander	Coming Out of the Cosmic Dark Ages-The First Stars in the Universe	04-2626
T-DO	Dalvit, Diego	Resonant Photon Creation in a Cavity with Time Dependent Conductivity	04-2661
T-11 T-11 CNLS T-DO T-12	Rasmussen, Kim Kalosakas, George Voulgarakis, Nikos Bishop, Alan Choi, Chu	Thermally Induced Coherent Vibrations in DNA	04-2662
T-DO	Bishop, Alan	The Elusive Landau Instability: A case example	04-2662
T-16	Hiyama, Emiko Gibson, Benjamin Kamimura, M.	Four-Body Calculation of the First Excited State of the ^{4}He State Using a Realistic NN Interactions: ^{4}He(e,e')^{4}He(0^+2) and the Monopole Sum Rule	04-2664
T-6 T-6 T-3	Weisheit, Jon Scannapieco, Evan Harlow, Francis	Triggering the Formation of Halo Globular Clusters with Galaxy Outflows	04-2665
T-3	Schraad, Mark	Fluid Dynamics Group (T-3)	04-2677
T-3 T-3 T-3	Vanderheyden, William Zhang, Duan Zou, Qisu	Modeling Friction Initiation of HE	04-2683
T-15 T-6	Tang, Xianzhu Colgate, Stirling *et al*	MHD Jet and Outflow Driven by an Accretion Disk	04-2704
T-15	Lapenta, Giovanni	Kinetic Simulation of Dusty Plasmas	04-2705
T-6	Warren, Michael	Economics and Sociology	04-2707
T-14	Bardenhagen, Scott	3D Simulations of the Dynamic Compaction of Granular Material and PBXs	04-2733
T-14	Strachan, A.	LANL project in: De Novo Hierarchical Design for Predicting Real Optimized Materials	04-2734
T-12 T-12 T-12	Chao, Sheng Der Kress, Joel Redondo, Antonio	A Course- Grained Model For Macromolecule Simulations	04-2764
T-6 CCS-4 CCS-4 CCS-4	Fryer, Christopher Hungerford, Aimee Urbatsch, Todd Evans, Thomas	Unified 1-D Simulations of Gamma-Ray Line Emission from Type Ia Supernovae	04-2765
T-16	Buervenich, T.	The Two-Proton Shell Gap in Sn Isotopes	04-2767
T-16	Reddy, Sanjay	Equation of State and Neutrino Opacity of Dense Stellar Matter	04-2786

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LANL Group	Author(s)	Title	LAUR No.
T-1	Kuprat, Andrew	Moving Mesh Methods and Applications	04-2788
T-13	Rose, Harvey	Langmuir Wave Self-Focusing Versus Decay Instability	04-2823
T-10	Perelson, Alan	The Population Dynamics of Cytotoxic T Lymphocytes	04-2832
CNLS T-12	Reichhardt, Charles Reichhardt, C.	Noise at the Wigner Glass Transition	04-2833
T-16	Page, Philip	R-Matrix Theory and Nuclear Applications	04-2834
T-6 LANSCE-3	Heger, Alexander Reifarth, Rene	Stellar ^{62}Ni(n,g)^{63}Ni Reaction	04-2892
T-3 T-3 T-3 T-3	Vanderheyden, W. Zhang, Duan Padial-Collins, N. Zou, Qisu	Modeling for IED Fragment Capture	04-2904
T-3 T-3	Kashiwa, Bryan Vanderheyden, W.	Toward a General Theory for Multiphase Turbulence	04-2905
T-16	Burrows, Adam Reddy, Sanjay Thompson, Todd	Neutrino Opacities in Nuclear Matter	04-2954
T-3 T-3	Vanderheyden, W. Zhang, Duan	Modeling Friction Initiation of HE	04-3001
T-7	Peleg, Avner	Emergence of Lognormal Distribution of Pulse Amplitudes Due to Raman Ross Talk in WDM Solution Transmission	04-3014
T-10	Perelson, Alan *et al*	Dynamics Intermittent Viremia During Haart In Patients Who Initiate Therapy During Chronic Versus Acute And Early HIV-1 Infection	04-3015
T-10 T-10 T-10 T-10	Blinov, Mikhail Faeder, James Goldstein, Byron Hlavacek, William	BioNetGen: Modeling Biochemical Systems, Accounting For All Possible Chemical States Implied Specific Interactions and Activities	04-3016
T-15 T-3	Lapenta, Giovanni Knoll, Dana	Effect on a Converging Flow at the Streamer Cusp on the Genesis of the Slow Solar Wind	04-3017
T-16	Goldman, Terrance	Narrow Spin-3 Isospin-0 Dibaryon	04-3045
X-5 T-16	Mokhov, N. *et al* Mashnik, Stepan Sierk, Arnold	Recent Enhancements to the MARS15 Code	04-3047
T-16	MacFarlane, R.	Recent Fast Data Testing Results from Los Alamos	04-3052 04-3053
T-3	Vanderheyden, W.	Novel Algorithms for Agent Defeat, Non-Ideal Airblast Simulation and HANE	04-3080
T-1	Schlei, Bernd	A New Computational Framework for 3D Shape-Enclosing Contours	04-3115
T-3 DX-3	Kashiwa, Bryan Hull, Lawrence	Multifield Closure Modeling for Metal-Loaded High Explosives	04-3130
T-6 X-DO	Cox, Arthur Guzik, Joyce	Theoretical Prediction of an Observed Solar G-Mode	04-3138
T-16	Carlson, Joseph *et al*	Quantum Monte Carlo Studies of Superfluid Fermi Gases	04-3139
T-16	Joydip, Kundu Reddy, Sanjay	Neutrino Scattering Off Pair-Breaking and Collective Excitations in Superfluid Neutron Matter and in Color-Flavor Locked Quark Matter	04-3171
T-6 LANSCE-3	Heger, Alexander Refarth, Rene	Accelerator Mass Spectroscopy of Ni^{59} re-visited and Cross Section of the Ni^{58}(n,g)Ni^{59} Reaction at Stellar Temperatures	04-3172
T-7	Peleg, Avner	Emergence of Lognormal Distribution for Pulse Amplitudes Due to Raman Cross Talk in Multi-Channel Solution Transmission	04-3173
T-10	Ribeiro, Ruy	Modeling a Thymectomy Experiment to Quantify Production of New T-Cells	04-3204
T-10	Ribeiro, Ruy	Measuring the Basic Reproductive Ratio (R0) from In Vivo Data	04-3205

LANL Group	Author(s)	Title	LAUR No.
T-10 T-10	Sanbonmatsu, K. Tung, C.-S.	Multimillion Atom Simulations of the Ribosome: A new state-of-the-art in computational biology	04-3206
T-DO	Milonni, Peter	Slow Light	04-3218
T-8 T-6 T-16 P-21 NIS-7	Nieto, Michael Hayes, Anna Wilson, William Teeter, Corinne Stanbro, William	Detection of Antineutrinos for Non-Proliferation	04-3224
T-8	Shirman, Yuri *et al*	Perils of Ignoring the Hidden Sector	04-3225
T-12 CNLS T-11 T-12 T-DO	Tretiak, Sergei Piryatinski, Andrei Saxena, Avadh Martin, Richard Bishop, Alan	Photoexcited Breathers in Conducting Polymers: Do they exist?	04-3253
T-4	Collins, Lee	Atom-Trap Superfluidity	04-3327
T-8	Bhattacharya, T.	Elementary Particle Theory, General Relativity and String Theory	04-3330
T-3	Knoll, Dana	Innovative Approaches for Nonlinearly Consistent, Multiple Time Scale Computational Physics	04-3333
T-12	Pratt, Lawrence	Role of Water in Self-Assembled Structural Stability	04-3337
T-6	Mihaila, Bogdan	Continuum Coupled-Cluster Expansion Approach To Nuclear Structure	04-3354
T-6 T-6 CCS-4	Fryer, Christopher Timmes, Francis Hungerford, Aimee	Changing the r-Process paradigm	04-3355
T-6	Mihaila, Bogdan	The Origin of Elements, Like as we know it, and the Future of Computational Nuclear Physics	04-3356
LANSCE-3 T-16 X-5	Kelley, K. Devlin, Matthew Pitcher, Eric Mashnik, Stepan Hertel, N.	Gadolinium-148 Production Cross Sections Measurements for 660- and 800-MeV Protons	04-3385
T-DO	Berman, Paul Milonni, Peter	Modification of the Optical Bloch Equations in Weak Fields Resulting from the Frequency Dependence of Spontaneous Emission	04-3411
T-16	Goldman, Terrance *et al*	Tensor Interaction Effect in Dibaryon	04-3412
T-15 T-15	Daligault, Jerome Murillo, Michael	Investigation of Ion Dynamics in Liquid Metals Through the Electron-Dynamics Structure Factor	04-3413
T-10 T-10 T-10	Gnanakaran, S. Garcia, Angel Goldstein, Byron	Folding Thermodynamics of a Helical Peptide in Explicit Water Using Opls Force Field	04-3414
T-10 T-10 T-10	Goldstein, Byron Faeder, James Hlavacek, William	Mathematical and Computational Models of Immune Receptor Signaling	04-3415
T-7	Garimella, Rao	MSTK- A flexible infrastructure library for developing mesh based applications	04-3422
T-11	Albers, Robert	Pu: A Condensed Matter Point of View	04-3423
T-3	Lipscomb, William	Sea Ice Progress Report	04-3432
T-8 T-8	Chamblin, Andrew Cooper, Frederick Nayak, Gouranga	Susy Production from TEV Scale Blackhole at LHC	04-3475
T-12	Kress, Joel *et al*	Aging and Free-Radical Oxidation of PBX 9501	04-3503
T-16	Kawano, Toshihiko	Subgroup 20: Covariance Matrix Evaluation and Process in the Resolved/Unresolved Resonance Regions Status Report 2004	04-3510
T-6	Heger, Alexander *et al*	Breaking Gravity Waves: A Mechanism for Nova Enrichment	04-3511

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LANL Group	Author(s)	Title	LAUR No.
T-6 LANSCE-3	Nasser, H Heger, Alexander Reifarth, Rene	The Stellar (Neutron, Gamma) Cross Section of Nickel-62	04-3512
T-6	Heger, Alexander *et al*	Pulsational Analysis of the Cores of Massive Stars and Its Relevance to Pulsar Kicks	04-3513
T-4 T-4	Hu, Suxing Collins, Lee	Phase Control of the Inverse Anti Process with Few-Cycle Pulses	04-3527
T-12 T-12	Martin, Richard Hay, Philip *et al*	Synthesis and Reactivity of the Rhenium Methylidene Complexes CP*(PME3)2ReCH2(R), R=H, CH3	04-3528
T-10	Labute, Montiago *et al*	An Anderson Impurity Model for Efficient Calculation of Adiabatic Potential Energy Surfaces for Transition Metal Complexes	04-3532
T-10 T-10 NIS-2 T-10	Korber, Bette Szinger, James Theiler, James Goulder, PJR Brander, Christian *et al*	Imprinting of CTL Escape Mutations on the Viral Population in Durban, South Africa	04-3533
T-7 T-7	Tartakovsky, D. Wohlberg, Brendt	Subsurface Imaging with Statistical Learning Theory	04-3535
T-6	Herwig, Falk	Evolution and Yields of Extremely Metal Poor Intermediate Mass Stars	04-3540
T-12 T-12	Pratt, Lawrence Asthagiri, D.	Quasi-chemical Theory and the Hydration of Ions in Aqueous Soulation	04-3563
T-11	Smith, Darryl	Different Regimes of Forster Energy Transfer Between an Epitaxial Quantum Well and a Proximal Monolayer of Semiconductor Nanocrystals	04-3564
T-3	Williams, Todd	A Stochastic Framework for the Micromechanical Analysis of Composites	04-3580
T-3	Vanderheyden, W.	T-3 Overview: Multiphase Flow	04-3581
T-16 T-16	Talou, Patrick Chadwick, Mark Dietrich, Frank Herman, M.	Subgroup A: Nuclear Model Codes Report to the Sixteenth Meeting of the WPEC	04-3595
T-16 T-16	Reddy, Sanjay Rupak, Gautam	Phase Structure of 2-Flavor Quark Matter: Heterogeneous Superconductors	04-3596
T-11 NIS-1	Sreekala, S Ahluwalia, Rajeev Carlone, Geeno	A Simple Phenomenological Model for Some Unusual Properties of Martensitic	04-3597
T-11	Smith, Darryl	Electric Properties of Inorganic and Organic Semiconductors: Application to National Security Needs	04-3598
T-3	Mousseau, Vincent	Transitioning from Interpretive to Predictive in Thermal Hydraulic Codes	04-3613
T-3 T-3 T-3 T-3	Zou, Qisu Zhang, Duan Padial-Collins, N. Vanderheyden, W.	Multiphase Flow Simulation of Ignition of Solid Explosive	04-3614
T-3	Zhang, Duan	Enduring Contacts and Dense Granular Flows	04-3615
T-12 T-14 T-12	Gan, Chee Tymczak, Christopher Challacombe, Matt	Linear Scaling Computation of the Fock Matrix, IX, Parallel Computation of the Coulomb	04-3626
T-4	Colgan, James	Symmetrized Complex Amplitudes for HE Double Photoinization from the Time-Dependent Close Coupling and Exterior Complex Scaling Methods	04-3646
T-4	Ponomarenko, S. Wolf, Emil Roychowdhury, H.	Physical Significance of Complete Spatial Coherence of Optical Fields	04-3647
T-15	Lapenta, Giovanni *et al*	Charging of Meteoroids: Effect of thermionic emission	04-3653

LANL Group	Author(s)	Title	LAUR No.
T-12	Hanson, David	Development of a Strength Model for Silica Filled Polydimethylsiloxane: A Combined Theory and Experimental Approach	04-3667
T-12	Redondo, Antonio	Multiscale Material Interfaces	04-3691
T-7 T-7 T-7	Vachal, Pavel Shashkov, Mikhail Garimella, Rao	Rezoning of Triangular Ale Meshes by Node Reconnection	04-3728
T-12	Babikov, Dmitri Zhang, Peng Morokuma, K	Cyclic-N3: I. An Accurate Potential Energy Surface for the Ground Doublet Electronic State up to the Energy of the 2A2/2B1	04-3731
T-12	Babikov, Dmitri	Accuracy of Gates in a Quantum Computer Based on Vibrational Eigenstates	04-3732
T-DO	Zurek, Wojciech	Probabilities from Envariance	04-3733
T-16	Möller, Peter *et al*	Global Calculations of Ground-State Axial Shape-Asymmetry of Nuclei	04-3770
T-12	Pack, Russell	Theory of Isotope Effects in Recombination Reactions	04-3843
T-14	Strachan, A. *et al*	Multiscale Modeling of Nano-Structured Complexity in Ferroelectric Polymers	04-3847
T-14 T-14	Strachan, A. Kober, Edward *et al*	Thermal Decomposition of RDX from Reactive Molecular Dynamics	04-3848
T-16	Möller, Peter	Global Nuclear Structure Calculations for Astrophysics, Recent Developments	04-3849
T-13 T-13 CNLS	Ben-Naim, Eli Toroczkai, Zoltan Frauenfelder, Hans	Preface	04-3860
T-13	Beletskii, N Berman, Gennady Borysenko, S	Controlling the Spin Polarization of the Electron Current in a Semimagnetic Resonant-Tunneling Diode	04-3862
T-13 T-DO CNLS CNLS	Berman, Gennady Bishop, Alan Kamenev, Dmitry Trombettoni, A.	Quantum Logic Operations and Creation of Entanglement in a Scalable Superconducting Quantum Computer with Long-Range Interactions between qubits	04-3863
T-13	Hastings, Matthew	Locality in quantum and markov dynamics on lattices and networks	04-3865
T-3 CNLS	Torres, David O'Rourke, Peter	KIVA-4 Development	04-3866
T-3 T-11 X-7 T-11 T-11 T-10 D-4	Johnson, Norman Blagoev, Krastan Germann, Timothy Kadau, Kai Lomdahl, Peter Macken, Catherine McPherson, T.	FACT SHEET: Large-Scale Epidemiological Simulation- Building New Opportunities on Renowned Science Foundations	04-3867
T-1	Nebel, Richard *et al*	Theoretical and Experimental Studies of Kinetic Equilibrium and Stability in the Virtual Cathode of the Intense Neutron Source (INS-E) Device	04-3868
T-7 T-7	Loubere, Raphael Shashkov, Mikhail	2D Arbitrary-Langrangian-Eulerian (ALE) Code on Polygonal Grids for Shock Wave Simulation	04-3891
T-14	Kober, Edward	Time Series Functional Data Analysis	04-3911
MST-8 T-3 CNLS MST-8	Zubelewicz, A. Maudlin, Paul Gray, George Zurek, Anna	Dynamic Defect Structure	04-3921
T-14	Menikoff, Ralph	Analysis of Wave Profiles for Single Crystal HMX	04-3928
T-1 T-1	Lorenzi-Venneri, G. Wallace, Duane	A New Theory of the Dynamic Response of Monatomic Liquids	04-3937
T-1 T-1 T-1	Chisolm, Eric Wallace, Duane Crockett, Scott	Extending the CCW EOS II: Extending the Nuclear Contribution to High Temperatures	04-3948

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LANL Group	Author(s)	Title	LAUR No.
T-10 CNLS T-10	McMahon, Benjamin Fenimore, Paul Bruno, William	Structural Variability of Protein Kinases	04-3974
CNLS T-3 MST-8 MST-8	Gray, George Maudlin, Paul Cerreta, Ellen Chen, Shuh-Rong	Influence of Deformation Mechanisms on the Mechanical Behavior of Hexagonal Metals: Experiments, Constitutive Behavior, and Validation	04-3978
T-16	Gibson, Benjamin	Highlights of the KEK Strangeness Program Since 2000	04-4002
T-10 T-10 T-10 T-10	Blinov, Mikhail Faeder, James Goldstein, Byron Hlavacek, William	A Network Model of Early Events in EGFR Signaling that Predicts the Dynamics of Hundreds of Protein Complexes and Phosphforms	04-4012
T-10 T-10 T-10 T-10	Blinov, Mikhail Faeder, James Goldstein, Byron Hlavacek, William	Bionetgen: A Model Tool That Handles Combinatorial Complexity	04-4013
T-14	Bardenhagen, Scott	Simulation of Large Granular Shear	04-4053
T-3 T-3	Hunke, Elizabeth Maltrud, Mathew Holland, Marika	AOMIP (Arctic Ocean Intercomparison Project): 2 Runs, A lesson, and 2 questions	04-4054
T-3	Hunke, Elizabeth *et al*	On the Maintenance of the Sea-ice Edge	04-4055
T-7	Austin, Travis	Calculating the Net Flux in Truchas using Support Operations	04-4060
T-16 LANSCE-12 LANSCE-12	Pitcher, Eric Muhrer, Guenter Russell, Gary	Lujan Center Cold Source Upgrade Studies	04-4066
T-4 T-4	Hakel, Peter Kilcrease, David	CHEMEOS: A New Chemical-Picture-Based Model for Plasma Equation-of-State Calculations	04-4072
T-10 T-12 T-12 T-10	Labute, Montiago Martin, Richard Hay, Philip McMahon, B.	Broken Symmetry Singlet and Triplet Electronic States of an Oxyheme Model and their Relation to Distinct Conformational Substates of Mb02	04-4097
T-7 CNLS	Wohlberg, Brendt Brislawn, Chris	Lifted Linear Phase Filter Banks and the Polyphase-with-advance Representation	04-4098
T-16	Herczeg, Peter	Beta Decay Beyond the Standard Model	04-4110
T-14	Bardenhagen, Scott	Progress Toward Understanding Bicrystal Stress Wave Inhomogeneity	04-4113
CCS-3 CCS-3 CCS-3 T-3	Kerbyson, Darren Hoisie, Adolfy Lang, Michael Jones, Philip	A Performance Model of POP	04-4119
T-10	Paschek, Dietmar Garcia, Angel	Reversible Temperature and Pressure Denaturation of a Protein Fragment: A replica exchange molecular dynamics simulation study	04-4120
T-7 T-7 T-7	Berndt, Markus Austin, Travis Moulton, John	A Memory Efficient Parallel Tridiagonal Solver	04-4129
T-12	Babikov, Dmitri *et al*	Temperature-Dependent Terahertz Spectroscopy of Single Crystals of Energetic Materials	04-4143
T-3 T-3 T-3	Zhang, Duan Zou, Qisu Vanderheyden, W.	Particle-in-Cell Method in Multiphase Flow Simulations	04-4177
T-10 T-10	Ribeiro, Ruy Perelson, Alan *et al*	Early Hepatitis C Virus (HCV) Dynamics in African American and Caucasian Patients Treated with Peginterferon-Alfa 2A and Ribavirin	04-4213

LANL Group	Author(s)	Title	LAUR No.
T-10 T-10 T-10	Ribeiro, Ruy Perelson, Alan Powers, K. *et al*	Randomized, Double-Blind Study Comparing Adeforir Diivoxil (ADV) Plus Emtricitabine (ETC) Combination Therapy Versus ADV Alone in HBeAg (+) Chronic Hepatitis B: Efficacy and mechanisms of treatment response	04-4214
T-10 T-10	Ribeiro, Ruy Perelson, Alan *et al*	Hepatitis B Viral Kinetics Under Different Antiviral Treatment Regimens in HBeAg-Negative Patients with Chronic Hepatitis B. Paramount Role of Baseline HBV DNA Levels	04-4215
X-4 T-3 X-7	Potocki, Mark Canfield, Thomas Zocher, Marvin	Results from the TEPLA Material Model in the Shavano Project	04-4219
T-10 T-10	Nymeyer, Hugh Garcia, Angel	Using Replica Exchange Dynamics with the Nose-Hoover Thermostat	04-4220
T-12 T-12	Voter, Arthur Uberuaga, Blas *et al*	Exploring Long-Time Response to Radiation Damage in MgO	04-4226
T-13	Hastings, Matthew	An Expansion for Small-world Networks	04-4240
T-7	Peleg, Avner *et al*	Far-From-Equilibrium Ostwald Ripening in Electrostatiscally Driven Granular Powders	04-4242
T-14	Kadau, Kai	Simulation of Structural Transformations in Nanoparticles	04-4284
T-16 T-16 T-16 T-16 X-5	Talou, Patrick Chadwick, Mark Kawano, Toshihiko Young, Phillip Mashnik, Stepan	LANL Contribution to the IAEA RIPL-3 Coordinated Research Program	04-4285
T-16	Schiavilla, Rocco Paris, Mark Carlson, Joseph	Parity Violation in Few-(Mostly Two) Nucleon Systems	04-4311
T-6	Heger, Alexander *et al*	Germanium in Damped Lyman-alpha Systems and Copper Connection	04-4313
T-6	Heger, Alexander *et al*	The Weak SR(P)- Process in Massive Stars	04-4314
T-12 T-12	Peery, Travis Pratt, Lawrence	AB Initio Molecular Dynamics Study of Salt Clathrate Hydrates	04-4318
T-12	Davidson, Ernest Clark, Aurora	Spin Polarization and Annihilation For Radicals and Diradicals	04-4319
T-12 T-6	Koslowski, Marisol Cuitino, A. *et al*	Micromechanical Modeling for Thermo-Mechanical Reliability in Interconnects	04-4320
T-4 X-5 X-5	Abdallah, Joseph Fontes, Christopher Zhang, Honglin	An Overview of Relativistic Distorted-Wave Cross Sections	04-4327
T-16	Herczeg, Peter	The T-Odd R and D Correlations in Beta Decay	04-4339
T-3	Zhang, Duan	Evolution of Enduring Contact and Stress Relaxation in a Dense Granular Medium	04-4364
T-13	Jarzynski, C. *et al*	Experimental Demonstration of Laws Governing Transitions Between Nonequilbrium	04-4385
T-12	Lesar, Richard	First Principles Study of Ferroelectric Behavior in the Perovskite Structure Oxide Bialo3	04-4406
CNLS T-11	Batista, Cristian Trugman, Stuart	Exact Ground States of a Frustrated 2D Magnet	04-4419
T-11 T-11 T-DO	Kaneshita, Eiji Martin, Ivar Bishop, Alan	Local Edge Modes in Doped Cuprates with Checkerboard Polaronic Heterogeneity	04-4421
T-12 X-7 X-7 CNLS	Holian, Brad Hammerberg, J. Germann, Timothy Ravelo, Ramon	Nanoscale Structure and High Velocity Sliding at Cu/Ag Interface	04-4443

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LANL Group	Author(s)	Title	LAUR No.
T-15	Simakov, Andrei Simakov, Nikolai	Anomaly of Gas Drag Force from on Liquid Droplets in a Turbulent Two-Phase Flow Produced by a Mechanical Jet Sprayer at Intermediate Reynolds Numbers	04-4466
CNLS	Barre, Julien *et al*	Long-Range Interactions, Large Deviation Techniques, Mean-Field Limit	04-4467
T-7 T-7	Tartakovsky, D. Illman, Walter	Asymptopic Analysis of Three-Dimensional Pressure Interference Test: A point-source solution	04-4468
T-8 T-6 T-16 P-21 NIS-7	Nieto, Michael Hayes, Anna Wilson, William Teeter, Corinne Stanbro, William	Antineutrino Detection for Non-proliferation	04-4469
T-11	Lookman, Turab	Pseudospin Description of Intrinsic Inhomogeneities in Models of Structural	04-4491
T-11	Lookman, Turab	Strain Induced Microstructure in Perovskite Managanites	04-4492
T-11	Lookman, Turab	Nanoscale Phase Separation in Complex Functional Materials	04-4493
T-11	Lookman, Turab	Domain Wall Dynamics in Complex Functional Materials	04-4494
T-12	Koslowski, Marisol	Material Length Scales in Plastic Flow	04-4510
T-3	Bronkhorst, Curt	PBX 9501 Molding Prill	04-4511
T-3	Eggert, Kenneth *et al*	A Continental Scale River Modeling Framework Designed Around Topographic Modeling Units with Body Hydrologic and Hydraulic Realism	04-4516
T-3 T-3	Mousseau, Vincent Knoll, Dana	Nonlinear Implicitly Balanced Methods for Nonequilibrium Radiation Diffusion	04-4517
T-DO	Strottman, Daniel	Possible Production of Exotic Baryonia in Relavistic Heavy-Ion Collisions	04-4529
LANSCE-3 T-16 T-16	Haight, Robert Chadwick, Mark Möller, Peter	International Conference on Nuclear Data for Science and Technology, A Summary	04-4531
T-6	Kwiatkowski, A.	Form Factors for *C in the AB Initio No-core Shell Model	04-4541
CNLS T-3 DX-3 T-3 MST-8	Gray, George Maudlin, Paul Hull, Lawrence Zuo, Qiuhai Chen, Shuh-Rong	Predictive Capability in Material Strength, Damage and Fracture -- The Synergy Between Experiment and Modeling	04-4579
T-16 T-16 T-16 T-16 T-16	Lemaire, Sebastien Talou, Patrick Kawano, Toshihiko Madland, David Chadwick, Mark	Correlated Neutron Emission in Fission with Monte-Carlo Methods	04-4592
T-16	Möller, Peter	The Macroscopic-Microscopic Method 101: Achievements, Capabilities and Limitations	04-4594
T-11 T-11	Saxena, Avadh Benoit, Jerome Lookman, Turab	Elasticity of Membranes and Vesicles: Role of topology	04-4595
T-8 T-6	Cooper, Frederick Mihaila, Bogdan	Renormalizing the Schwinger-Dyson Equations in the Auxiliary Field Formulation of Field Theory	04-4605
T-16	Bonneau, Ludovic Quentin, P. Semsoen, D.	Microscopic Calculations of Fission Barriers and Spin of Fission Fragments	04-4606
T-4 T-4	Kilcrease, David Csanak, G. *et al*	Alignment Creation by Elastic Scattering by Ions in a Plasma	04-4626
T-3	Lipscomb, William	Sea Ice Model Development: Toward CICE 4 and CSIM 6	04-4630
T-16	Möller, Peter Sagawa, H.	Global Studies of Shape Isomerism	04-4660

LANL Group	Author(s)	Title	LAUR No.
T-6	Hayes-Sterbenz, A.	Nuclear Theory Applied to Astrophysics, Stockpile Stewardship, and Homeland Security	04-4665
T-16 T-16	Möller, Peter Sierk, Arnold Sagawa, H.	Calculation of Fission Barriers for Nuclei with A>190 for Astrophysical Applications	04-4683
T-16 T-DO	Hale, Gerald Strottman, Daniel	Level Structure and Scattering in Light Nuclei	04-4684
T-11	Martin, Ivar *et al*	Electrical Detection of Electron Spin Resonance of a Single Spin	04-4686
T-8 T-8 T-8 T-8	Bhattacharya, Tanmoy Habib, Salman Steck, Daniel *et al*	Feedback Cooling of Atomic Motion in Cavity QED (Quantum Electrodynamics)	04-4687
T-13	Jarzynski, C.	Response to Cohen and Mauxerall	04-4712
T-16 T-16	Buervenich, T. Madland, David Reinhard, P.	Adjustment Studies in Self-Consistent Relativistic Mean-Field Models	04-4713
T-12	Hay, Philip *et al*	Investigation of Hydrogen Evolving Organics	04-4733
T-DO	Milonni, Peter	Atom-field Interactions with a Frequency Dependent Reservoir	04-4739
T-7 T-7 T-7 CNLS	Berndt, Markus Lipnikov, K. Shashkov, Mikhail Wheeler, Mary Yotov, Ivan	A Mortar Mimetic Finite Difference Method On Non-Matching Grids	04-4740
T-7 CNLS	Jiang, Yi Kiskowski, Maria Alber, Mary	Role of Streams in Myxobateria Aggregate Formation	04-4741
T-12 T-12 CNLS	Pratt, Lawrence Ashbaugh, Henry Paulaitis, Michael *et al*	Deblurred Observation of the Molecular Structure of a Water-Oil Interface	04-4750
T-3	Beyerlein, Irene *et al*	Heterogeneity of Deformation Texture in Equal Channel Angular Extrusion of Copper	04-4767
T-3	Beyerlein, Irene	Finite Element Analysis of the Plastic Deformation Zone and Working Load in Equal Channel Angular Extrusion (Journal Article)	04-4768
T-6	Hayes-Sterbenz, A.	AB-Initio No-Core Shell Model-Recent Results and Future Prospects	04-4774
T-6 T-6 T-DO X-2 C-INC	Hayes-Sterbenz, A. Jungman, Gerard Solem, Johndale Bradley, Paul Rundberg, Robert	Prompt beta spectroscopy as a diagnostic for MIX in ignited NIF capsules	04-4776
T-4 T-12 T-4 P-22	Collins, Lee Kress, Joel Mazevet, Stephane Desjarlais, Michael	Quantum Molecular Dynamics Simulations of Dense Plasmas	04-4780
T-6	Fryer, Christopher	A Million Second Chndra View of Cassiopeia A	04-4787
T-8 T-8	Bhattacharya, T. Gupta, Rajan	B_K from Quenched QCD with Improved Staggered Fermions	04-4788
T-6 T-16 T-16 T-16	Mihaila, Bogdan Chadwick, Mark MacFarlane, R. Kawano, Toshihiko	Analysis of Np-237 ENDF for the Theoretical Interpretation of Critical Assembly Experiments	04-4789
T-6	Luu, Thomas	Application of Bloch-Horowitz Equation to the Alpha Particle and P-Shell Nuclei	04-4790
T-12	Martin, Richard *et al*	Interplay Between M-M and M-Allyl Bonding in Reactivity of M2(PI-ALLYL)4(M = MO, RE)	04-4795

Appendix B–Los Alamos Unlimited Releases (LA-URs)

LANL Group	Author(s)	Title	LAUR No.
T-16	Griesshammer, H.	A Nucleon in a Tiny Box: Masses	04-4810
T-12	Tretiak, Sergei *et al*	Two-photon Absorption and Fluorescence with Triphenylamine Derivatives: Effect of branching and charge-symmetry	04-4845
CNLS	Frauenfelder, Hans	The Energy Landscape in Proteins a Paradigm of Stochastic Complexity	04-4847
T-10 T-10	Perelson, Alan Wu, Hulin *et al*	Modeling Long-term HIV Dynamic and Antiretroviral Response: Effects of drug potency, pharmacokinetics, adherence, and drug resistance	04-4849
T-16 T-16	Chadwick, Mark Talou, Patrick	Uncertainty Quantification in Nuclear Data Evaluations	04-4857
T-10 T-10 T-10 T-10 T-10	Zhang, Ming Gaschen, Brian Foley, Brian Kuiken, Carla Korber, Bette	Evolutionary and immunological implications of N-Linked glycosylation site in HIV	04-4861
T-10	Garcia, Angel	Atomic simulations of protein folding, binding, and aggregation	04-4862
T-7	Austin, Travis	A least squares method for the linear boltzmann equation in the fokker-planack limit	04-4864
T-11	Smith, Darryl	Imaging Spin Flows in semiconductors in the Presence of Electric, Magnetic, and Strain Fields	04-4869
T-1	Wallace, Duane	Theoretical physics enables greatly improved equations of state	04-4878
T-3 T-3	Williams, Todd Bronkhorst, Curt	High Explosive Constitutive Modeling	04-4879
T-11 T-11 T-DO T-11	Zhu, Jian-Xin Rasmussen, Kim Bishop, Alan Balatsky, A.	Observation of breather excitations using inelastic tunneling spectroscopy	04-4903
T-DO	Milonni, Peter	Left-handed light: basic theory	04-4904
T-16	Friar, James *et al*	Charge-Symmetry-Breaking Three-Nucleon Forces	04-4905
T-1 T-12	Niklasson, Anders Weber, Valery Challacombe, W.	Quantum perturbation theory in O(N): AB initio response theory for nanomaterials	04-4908
T-14	Dienes, John	An Approach to the Formation of Crack Networks	04-4915
T-6	Hayes-Sterbenz, A.	Calculation of beta and antineutrino spectra following fission	04-4926
T-8	Nieto, Michael	The pioneer anomaly: the data, its meaning, and future test	04-4928
CNLS X-4	Ramaprabhu, P. Dimonte, Guy	Dependence of the rayleigh-taylor froude number on the density ratio	04-4930
T-DO	Strottman, Daniel	Bi-dimensional quantum tunneling INA time dependent formalism	04-4968
T-12 T-12 CNLS	Lesar, Richard Rickman, Jeffrey Vinals, Jorge	Unified framework for dislocation-based defect energetics	04-4969
T-12	Voter, Arthur	Temperature accelerated dynamics study of radiation damage annealing in MgO	04-4970
T-12	Koslowski, Marisol	Dislocation Patterning and Avalanches in Plastic Deformation	04-4971 04-6189
T-12 T-12	Nemeth, Karoly Challacombe, W.	The quasi-independent curvilinear coordinate approximation for geometry optimization	04-4972
T-16	Gibson, Benjamin	Strangeness Physics, from KEK to J-PRAC	04-5048
T-10	Perelson, Alan	Modeling viral infections	04-5049
T-16	Ginocchio, Joseph	Pseudospin Symmetry and the Nucleon-Nucleon Interactions	04-5056
T-7/CNLS CNLS CNLS	Jiang, Yi Kiskowski, Maria Alber, Mark Newman, Stuart	Chapter 1 biological lattice gas models	04-5062

LANL Group	Author(s)	Title	LAUR No.
T-16	Friar, James Payne, G.	Nuclear Corrections to Hyperfine Structure in Light Hydrogenic Atoms	04-5063
T-10	Garcia, Angel Paschek, Dietmar	Reversible temperature and pressure denaturation of a protein fragment: A replica exchange molecular dynamics simulation study	04-5072
T-15	Murillo, Michael Jones, Chris	Inclusion of atomic/molecular physics in the molecular dynamics simulation of warm dense matter	04-5073
T-15	Tang, Xianzhu Boozer, Allen	Force-Free Magnetic Relaxation in Driven Plasmas	04-5074
T-15	Daligault, Jerome	Impact of Impurity Sedimentation on Cooling of White Dwarfs	04-5075
T-15	Simakov, Andrei Catto, Peter	An ion drift kinetic equation to the second order in the gyroradius expansion	04-5076
T-10 T-10 T-10 T-10 T-10	Zhang, Ming Gaschen, Brian Foley, Brian Kuiken, Carla Korber, Bette	Tracking global patterns of N-Linked glycoslylation site variation in highly variable viral glycoproteins: HIV, SIV, and HCV envelopes and influenza hemagglutinin	04-5078
T-15 T-15	Lukin, Vyacheslav Glasser, Alan	Spectral Element Modeling of Extended MHD Plasma Phenomena	04-5079
T-3	Kashiwa, Bryan Kashiwa, Corey	The Solar Cycolne: Real Hope or Total Madness	04-5080
T-3 DX-3	Kashiwa, Bryan Hull, Lawrence	Multifield closure modeling for metal-loaded high explosives	04-5081
T-10 T-10	Goldstein, Byron Coombs, Daniel	Effects of the geometry of the immunological synapse on the delivery of effector molecules	04-5082
T-3 NIS-5	Kashiwa, Bryan Butler, Gilbert	A Numerical Performance Model for Piezoelectrical Actuators for Jet Noise Reduction	04-5088
T-DO	Zurek, Wojciech	Environment as a witness: selective proliferation of information and emergence	04-5089
T-DO T-13	Milonni, Peter Berman, Gennady	Improving the sensitivity of FM spectroscope using nano-mechanical cantilevers	04-5090
T-DO	Bishop, Alan	Nonlinear friction of a damped dimer sliding on a periodic substrate	04-5091
T-13 T-13	Berman, Gennady Doolen, Gary	Quantum computation using self-assembled molecular spin arrays (theoretical part)	04-5092
T-13 T-13	Berman, Gennady Gurvitz, Shmuel	Charge qubit measurement and decoherence in mesoscopic detectors	04-5094
T-13 T-13 CNLS T-13	Berman, Gennady Borgonovi, Fausto Gorshkov, V. Gurvitz, Shmuel	Perturbation theory for scalable quantum computation, and measurement of spin qubits	04-5095
T-11 CCS-3 T-11 T-16	Ortiz, Gerardo Somma, Rolando Dukelsky, Jorge Rombouts, Stefan	Exactly-solvable models derived from a generalized gaudin algebra	04-5096
T-6	Timmes, Francis	On variations in the peak luminosity of type IA supernovae	04-5097
T-6	Heger, Alexander Woosley, Stan	Nucleosynthesis and evolution of Pop III stars	04-5098
T-6 X-4	Timmes, Francis Dimonte, Guy	Simulating astrophysical simulation codes	04-5099
T-1	Niklasson, Anders	Density matrix purification theory for non-orthogonal representations	04-5100
T-15 T-4 T-15	Daligault, Jerome Csanak, G. Murillo, Michael	Variational Equation of State Model for Dense, High Energy-Density Matter	04-5106
T-12 T-12	Pauler, Denise Kress, Joel	Oxidation of nitroplasticizer in plastic bonded explosive PBX 9501	04-5110

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T-12 X-7 T-14 T-14	Holian, Brad Germann, Timothy Strachan, A. Maillet, J.-B.	Non-equilibrium molecular dynamics studies of shock and detonation presses in energetic materials	04-5111
T-12	Pratt, Lawrence	Back to the Future of Hydrophobic Effects and Molecular Bioscience	04-5115
T-12	Tretiak, Sergei	Non-Linear and Non-adiabatic Dynamics of Excited States in Electronic Materials	04-5116
T-12 T-12	Babikov, Dmitri Kendrick, Brian	Cyclic-N3: Significant Geometric Phase Effects in the Vibrational Spectra.	04-5119
T-12 T-14 T-12	Gan, Chee Tymczak, C. Challacombe, W.	Linear scaling computation of the fock matrix. IX. Parallel computation of the coulomb matrix	04-5120
T-12	Paliwal, Amit Asthagiri, D. *et al*	Pressure denaturation of Staphyloccal Nuclease studied by neutron small-angle scattering and molecular scattering and molecular simulation	04-5121
T-12 T-12 T-12	Batista, Enrique Martin, Richard Hay, Philip	Density functional investigations of the properties and thermochemistry of UFn(n=1...6) and UCIn(n=1...6)	04-5122
T-6	Heger, Alexander Woosley, Stan	Evolution of massive population III stars	04-5139
T-8	Nieto, M. *et al*	ESA to consider a designated test of the pioneer anomaly	04-5141
T-13 T-13	Chertkov, Michael Jarzynski, C. Chernyak, V	Dynamical generalization of work equality	04-5164
T-13 T-13	Chertkov, Michael Jarzynski, C. Chernyak, V	Hierarchy of work relations and fluctuation theorem for stochastic dynamics	04-5165
T-13 CNLS T-13	Berman, Gennady Kamenev, Dmitry Tsifrinovich, V.	Collective decoherence of the superpositional entangled states in quantum shor	04-5166
CNLS T-12	Reichhardt, Charles Reichhardt, C.	Statics and dynamics of colloidal particles in perodic traps	04-5167
T-6	Heger, Alexander	Nuclear astrophysics theory	04-5168
T-6	Heger, Alexander Woosley, Stan	Evolution of massive population III stars	04-5169
CNLS	Chung, Yeo-Jin *et al*	Ultra-short pulses in linear and nonlinear media	04-5170
T-15 EES-IGPP	Lapenta, Giovanni Kronberg, Philipp	A comparison of observations and simulations in the jets of the radio galaxies 3C303 and 3C274	04-5172
T-15 EES-IGPP	Lapenta, Giovanni Delzanno, Gian	Theory and Simulation of the Sheilding of Emitting Dust Particles	04-5173
T-15 T-15	Lapenta, Giovanni Ricci, Paolo *et al*	3D magnetic reconnection: evolution of x-lines and x-points	04-5174
T-15 T-15	Lapenta, Giovanni Markidis, Stefano	Parallel implicit kinetic simulation with parsek	04-5176
T-15 T-15 X-1 T-3	Lapenta, Giovanni Ricci, Paolo Daughton, William Brackbill, Jeremiah	Simulation study of rapid onset of magnetic reconnection	04-5177
T-10	Perelson, Alan	An overview of computational and theoretical immunology	04-5181
T-1	Niklasson, Anders	Magnetism of Fe clusters embedded in Co matrix from first principles theory	04-5217
T-1	George, Denise	Effect of Anisotropic Interfacial Energy on Grain Boundary Distributions during Grain Growth	04-5218
T-1	Niklasson, Anders	The linear scaling self-consistent perturbed projection method for high order response	04-5219

LANL Group	Author(s)	Title	LAUR No.
T-DO	Milonni, Peter	Fast light, slow light, and left-handed light	04-5220
T-15	Tang, Xianzhu	A Laboratory Helicity Injection Perspective of Plasma Jet Formation by a conducting Keplerian accretion disk	04-5222
T-15 T-3	Chacon, Luis Knoll, Dana	Pixied3D: A Parallel, Implicit, Extended MHD 3D Code	04-5223
T-15 T-15	Nebel, Richard Finn, John Bathke, C.	Magnetic and electric helical drive for RFPS	04-5225
T-15	Richardson, A *et al*	Noise stabilization: markov analysis, circuits, and broken symmetries	04-5226
T-15 T-15	Finn, John Jones, Chris	Issues related to MHD equilibrium reconstruction	04-5227
T-15 T-15	Finn, John Chacon, Luis	Ideal and resistive plasma resistive wall modes and control: linear and non-linear	04-5228
T-13	Chertkov, M. *et al*	Effects of surface tension on immiscible rayleigh- taylor turbulence	04-5233
T-10 T-10	Leitner, Thomas Tung, C.-S.	Recombination, 3D network structure, multiple transmission and subpopulation frequency shifts in a mother-to-child transmission case	04-5234
T-10 T-10	Dixit, Narendra Perelson, Alan *et al*	Unraveling a mystery: how ribavirin improves interferon response rates in hepatitis c virus infection	04-5235
T-8 T-8	Bhattacharya, T. Gupta, Rajan	Calculating epsilon prime over epsilon using HYP staggered fermions	04-5236
CNLS	Sakhanenko, Nikita *et al*	Graphs applied in theory of white-box software testing	04-5237
T-13 CNLS D-1 CNLS	Toroczkai, Zoltan Kozma, Balazs Bassler, Kevin Hengartner, N. Korniss, Gyorgy	Gradient networks	04-5238
T-12 T-12 T-12 T-12	Voter, Arthur Cogoni, Marco Uberuaga, Blas Colombo, Luciano	On the Diffusion of Small Self-Interstitial Clusters in Silicon	04-5290
T-16	Möller, Peter	Global Nuclear Structure Calculations for Astrophysics, Recent Developments	04-5293
T-6	Herwig, Falk *et al*	Nitrogen in the early universe	04-5294
T-6 LANSCE-3 T-6	Herwig, Falk Reifarth, Rene Timmes, Francis	Nuclear astrophysics with neutron facilities at LANL and RIA	04-5296
T-7	Louck, James	Permutation matrices and the representations of matrices with fixed-line sum	04-5299
DX-3 CCS-3 DX-3 P-25 X-4 P-25	Prestridge, K. Cannon, T Hull, Lawrence Merrill, Frank Potocki, Mark Schwartz, Cynthia Zuo, Qiuhai	Uranium Fracture Experiments and Simulations)	04-5302
T-7	Hagberg, Aric *et al*	Bloch-front turbulence in a periodically forced belousov-zhabotinsky reaction	04-5331
CNLS	Ecke, Robert	An experimental perspective	04-5335
T-4	James, Daniel	Quantum Teleportation	04-5364
T-4	James, Daniel	Photonic Quantum Information Systems	04-5365
T-DO T-DO T-DO	Paz, Juan Roncaglia, Augusto Saraceno, Marcos	Qubits in phase space: wigner function approach to quantum error correction and the mean king problem	04-5383
T-DO	Milonni, Peter	Einstein and objective reality: a love story	04-5384

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T-14	Strachan, A. *et al*	Large electrostrictive strain at gigahertz frequencies in PVDF nanoactuator: computational device design	04-5386
T-14 T-11 T-12 T-11 T-14	Welch, Paul Rasmussen, Kim Chitanvis, Shirish Lookman, Turab Sewell, Thomas	Direct determination of the free energy functional for phase separating systems	04-5387
T-4 X-5	Colgan, James Fontes, Christopher	The Validity of Classical and Perturbative Quantal Methods for Electron-Impact Ionization from Excited States of H-Like Ions	04-5423
T-3	Lipscomb, William	An Incremental Remapping Transport Scheme on a Spherical Geodesic Grid	04-5431
T-3 T-3	Hunke, Elizabeth Maltrud, Mathew Karcher, Michael	Diagnostics for Atlantic Water Circulation and Properties	04-5432
T-14 T-14	Strachan, A. Sewell, Thomas	Towards a molecular-level characterization of the sensitivity of energetic materials: plasticity under a dynamic and static loading	04-5433
T-10 T-10	Leitner, Thomas Maljkovic, I. *et al*	Prevalence of Drug-Resistant HIV-1 Variants in Untreated Individuals in Europe: Implications for Clinic Management	04-5434
T-10	Leitner, Thomas *et al*	Improved HIV-1 Viral Load Determination Based On Reversed Transcriptase Activity Recovered From Human Plasma	04-5435
T-15	Simakov, Andrei Catto, Peter	Evaluation of the neoclassical radial electric field in a collisional tokamak	04-5436
T-16	Page, Philip	Hybrid and Conventional Baryons in the Flux Tube and Quark Models	04-5438
T-6 X-DO	Cox, Arthur Guzik, Joyce	Predictions of periods and growth rates of solar radial, F-, and G-Modes	04-5439
T-13 T-13	Adib, Artur Jarzynski, C.	Unbiased estimators for the simulation of classical fluids	04-5440
T-10 T-10	Leitner, Thomas Maljkovic, Irina *et al*	The Calculated Genetic Barrier for Drug Resistance Mutations in Six Different Non-B Subtypes and Two CRF's in a Large European Dataset is Largely Similar to Subtype B	04-5441
T-10	Kuiken, Carla *et al*	Full Length Sequencing of HCV Identifies Novel Regions of the Viral Genome Associated With Response To Antiviral Therapy	04-5442
T-10 T-10 T-10 T-10	Kuiken, Carla Yusim, Karina Boykin, Laura Richardson, R.	A New Hepatitis C Sequence Database in Los Alamos	04-5443
T-10 T-10 T-10	Kuiken, Carla Ribeiro, Ruy Perelson, Alan *et al*	HCV NS5A 1a Pre-treatment sequence variation and viral kinetics in African Americans and Caucasians	04-5444
T-10 T-10 T-10 T-10	Blinov, Mikhail Faeder, James Goldstein, Byron Hlavacek, William	Modeling of Multi-Component Species: Object-Oriented Data Structure and XML Description of Rule-Based Modeling Based on Molecular Domains	04-5445
T-10 T-10 T-10 T-10 T-10	Kuiken, Carla Agrawal, Ashish Tao, Ning Richardson, R. Bruno, William	New Tools At The Los Alamos Hepatitis C Database Website	04-5446
T-10	Torney, David *et al*	A Symbolic Operator Approach To Several Summation Formulas For Power Series	04-5447
CNLS T-DO T-11 T-11	Barre, Julien Bishop, Alan Lookman, Turab Saxena, Avadh	On adaptability and "intermediate phase" in randomly connected networks	04-5449
T-DO	Milonni, Peter	Negative refractive index	04-5450

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T-1	George, Denise	Grain Boundary Properties, Populations and Texture Development	04-5451
T-10 T-10 T-10	Zhang, Ming Gaschen, Brian Foley, Brian Blay, Wendy Haigwood, Nancy	Tracking global patterns of N-Linked glycoslylation site variation in highly variable viral glycoproteins: HIV, SIV, and HCV envelopes and influenza hemagglutinin	04-5452
T-10	Kuiken, Carla	A Proposal to Sequence a Number of Complete Genomes of Uncommon Strains of the Hepatitis C Virus	04-5453
T-10	Kuiken, Carla *et al*	Ancient CO-Speciation of Simulation Foamy Viruses and Primates	04-5454
T-10 T-10	Mokili, John Foley, Brian	Identification of a Novel Clade of Human Immunodeficiency Virus Type 1 in Democratic Republic of Congo	04-5455
T-10 T-10 T-8	Kuiken, Carla Kommander, K. Kunstman, Kevin Bhattacharya, T. Kunstman, Jennifer	Evolution of Human Immunodeficiency Virus Type 1 Sequences in Patients Receiving Combination Antiretroviral Therapy	04-5456
T-7 T-7	Xiu, Dongbin Tartakovsky, D.	Differential equations in random domains	04-5497
T-7 B-3 T-7	Jiang, Yi Jelena, P.-G. Freyer, James Cantrell, Charles	A multiscale model for avascular tumor growth	04-5498
T-13 T-12	Berman, Gennady Tretiak, Sergei	Characteristic Parameters and Dynamics of Two-Qubit System in Self-Assembled	04-5499
T-11	Thompson, Russell	Report on conformationally asymmetric block copolymer parameters	04-5502
T-16	Reddy, Sanjay	Matter at Extreme Density and Its Role in Neutron Stars and Supernova	04-5532
T-8	Gupta, Rajan	The future of the poor, illiterate, and marginalized populations	04-5534
T-14	Chitanvis, Shirish	Activity on Ultrabeam Program at Los Alamos	04-5537
T-3	Lipscomb, William	An Incremental Remapping Transport Scheme on a Spherical Geodesic Grid	04-5542
T-3	Beyerlein, Irene *et al*	Texture Formation During Equal Channel Angular Extrusion of Fee and Bee Materials: Comparison with Simple Shear	04-5568
T-3	Beyerlein, Irene *et al*	A Crystal Plasticity Finite Element Analysis of Texture Evolution in Equal Channel Angular Extrusion	04-5569
T-12 T-12 T-12	Sonnenberg, Jason Hay, Philip Martin, Richard Bursten, Bruce	Density functional studies of uranyl cyanide, isocyanide, carbonyl, and hydroxide complexes: four versus five equatorial ligands	04-5580
T-12	Martin, R. *et al*	Hybrid Density Functional Theory Study of Plutonium Oxides	04-5581
T-12	Reichhardt, C.	Dislocation formation in atomistic friction simulations	04-5582
CCS-2 CNLS NIS-2 T-3 CNLS T-3 CCS-2 EES-2	Fisher, Karen Kamm, James Davis, Anthony Maltrud, Mathew Dean, Sumner Jones, Philip Hecht, Matthew Bleck, Rainer	Matching Patches in Ocean Simulations and Observation	04-5583
T-3 T-3 T-3	Zou, Qisu Zhang, Duan Vanderheyden, W. *et al*	Application of a Flip MPM-MFM Method for Simulating Weapon-Target Interaction	04-5605
T-12	Voter, Arthur	Accelerated molecular dynamics methods	04-5609
T-12	Voter, Arthur	Kinetic monte carlo	04-5610

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T-12 T-12 T-12	Koslowski, Marisol Lesar, Richard Thomson, Robb	Energetics and noise in dislocation patterning	04-5611
T-12 T-12	Pratt, Lawrence Asthagiri, D.	Quasi-Chemical and Hydrophylic Hydration	04-5612
T-6	Miller, Warner	X-Ray line profile signatures of a hardeen- petterson disk, around a rotating black hole	04-5624
T-10	Goldstein, Byron *et al*	Experimental analysis and modeling of cell-cell linkages formed by immunoadhesin alefacept and FC receptors	04-5626
CNLS T-11 T-11 T-11	Bulaevskii, Lev Hruska, Marina Shnirman, A. Smith, Darryl	Nondemolition measurements of a single quantum SPI by use of josephson oscillations	04-5638
T-DO T-DO	Zurek, Wojciech Paz, Juan	Resilient quantum computing	04-5639
T-8	Friedland, A. *et al*	Atmospheric neutrinos as probes of neutrino-matter interactions	04-5646
T-12 CNLS	Hanson, David Hawley, M. *et al*	Mechanical Properties of Polymeric Materials	04-5660
T-12 T-12	Voter, Arthur Uberuaga, B. *et al*	Dynamical Simulations of Radiation Damage and Defect Mobility in MgO	04-5662
T-4 T-4	Hakel, Peter Abdallah, Joseph	X-ray Spectroscopy of Dense Plasmas Produced by Isochoric Heating with Ultrashort Laser Pulses	04-5690
T-4 T-4	Hu, Suxing Collins, Lee	Imaging molecular structures by few-cycle-okyse driven electron diffraction	04-5691
T-12 T-12 T-12 T-12	Voter, Arthur Cogoni, Marco Colombo, Luciano Uberuaga, Blas Mattoni, A.	Atomistic Study of Small Boron Interstitial Clusters Dissolution in C-SI	04-5706
T-11	Rasmussen, Kim	Tunable NANO patterning by diblock copolymers in small confinements	04-5711
T-16	Pieper, Steven Wiringa, Robert Carlson, Joseph	Quantum Monte Carlo Calculations of Excited States in A=6-8	04-5712
T-16	Rupak, Gautam	Pairing in Asymmetric Fermi System:	04-5713
T-3	Williams, Todd	A General, Stochastic Transformation Field Theory	04-5727
T-3	Williams, Todd	Stochastic Transformation Field Analysis (STFA)	04-5728
T-10 T-10	Mokili, John Korber, Bette	The spread of HIV in Africa	04-5753
T-10	Perelson, Alan *et al*	Analysis of HIV cytopathicity using a new method for quantitating viral dynamics in cell culture	04-5754
T-1 T-1	Burkert, Till Eriksson, Olof Simak, Sergei Ruban, Andrei	Magnetic anisotropy of L10 iron-platinum and iron-magnanse-platinum	04-5755
T-7 T-7	Shashkov, Mikhail Lipnikov, K. Brezzi, Franco	Convergence of mimetic finite difference method for diffusion problems on polyedral meshes	04-5756
T-15 T-15	Murillo, Michael Daligualt, Jerome	A Semiclassical Model for Ionic Self-Diffusion in White Dwarfs	04-5757
T-15 T-15 T-3	Lapenta, Giovanni Markidis, Stefano Vanderheyden, W.	Design and development of high performances parallel particle in cell (PIC)	04-5771
T-15 EES-IGPP	Lapenta, Giovanni Delzanno, Gian	Collective behaviour of a system of emitting dust particles	04-5772

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T-15 T-15	Lapenta, Giovanni Finn, John	3D MHD simulation and the role of null points in coronal reconnection	04-5773
T-15 T-15	Lapenta, Giovanni Ricci, Paolo *et al*	3D Magnetic Reconnection: Evolution of X-Lines	04-5774
T-15 T-3 T-15 X-1	Lapenta, Giovanni Brackbill, Jeremiah Ricci, Paolo Daughton, William	Kinetic simulations of magnetic reconnection in plasma with different beta values	04-5776
T-10	Perelson, Alan *et al*	Hepatitis C Viral Kinetics	04-5778
T-10	Perelson, Alan *et al*	Determination of virus burst size in VIVO using a single-cycle SIV in rhesus macaques	04-5779
T-10 T-10 T-10	Blinov, Mikhail Faeder, James Hlavacek, William	Modeling Signal Transduction Systems Without Ignoring Their Combinatorial Complexity	04-5780
T-11 T-DO	Rasmussen, Kim Kalosakas, George Bishop, Alan Choi, Chu Usheva, Anny	DNA dynamically directs its own transcription initiation	04-5782
CNLS T-DO T-11 T-11	Barre, Julien Bishop, Alan Lookman, Turab Saxena, Avadh	The cavity method and the ridity transition	04-5783
T-10 T-10	Germanidis, G. Ribeiro, Ruy *et al*	Hepatitis B Kinetics under six treatment regimens	04-5786
T-12	Sonnenberg, Jason *et al*	Understanding the electronic structure and magnetic properties of tungsten-methylidyne	04-5797
T-12 C-SIC	Sonnenberg, Jason Neu, Mary Bursten, Bruce	Plutonium (IV) siderophore docking possibilities: a DFT investigation	04-5798
T-3	Mousseau, Vincent	Modern Time Integration Methods Applied to the Thermal Hydraulic Equations	04-5800
T-6 T-6	Fryer, Christopher Heger, Alexander	Binary merger scenario for the collapsar engine of gamma-ray bursts and hypernovae	04-5802
T-6 T-6 T-16	Luu, Thomas Hayes-Sterbenz, A. Friar, James	Estimates for electromagnetically exciting nuclear isomers	04-5803
T-6	Colgate, Stirling	Our Magnetic Universe	04-5804
T-10 T-10 T-10	Perelson, Alan Ribeiro, Ruy Davenport, M. *et al*	Impact of Virus-Specific CD8+ T Lymphocytes on the Outcome of Experimental SHIV Infection	04-5805
T-10 T-10 T-10	Garcia, Angel Nymeyer, Hugh Gnanakaran, S.	Exploring the Energy Landscape of Proteins	04-5806
T-15 EES-IGPP	Lapenta, Giovanni Kronberg, Philipp	Simulation of astrophysics jets: collimation and expansion in radio lobes	04-5807
T-8	Teodoro, Luis *et al*	Large scale structure and cosmic rays revisited	04-5809
T-DO	Bishop, Alan	Statics, dynamics and manipulations of bright matter-wave solitons in optical lattices	04-5811
T-3 T-3	Eggert, Kenneth Jones, Philip	A High Resolution Coupled Model of the North Atlantic, Arctic Oceans, Their Sea Ice, and Continental Fluvial and Glacial Processes for the Purpose of Understanding the Sensitivity of Thermohaline Circulation to Fresh Water Inflows	04-5829
EES-IGPP T-3	Peacock, Synte Maltrud, Mathew	Transit-Time Distribution in a Global Ocean	04-5830

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T-10	Korber, Bette Taylor, Jay	Intrasubtype Superinfection and Recombination	04-5831
T-15 EES-IGPP	Lapenta, Giovanni Kronberg, Philipp	Observations and simulations of kiloparsec-scale jets	04-5833
T-12 DX-2 MST-10 T-4	Babikov, Dmitri McGrane, Shawn Efimov, Anatoly James, Daniel	Ultrafast Optical Quantum Control for Molecular Vibrational Quantum Computation	04-5837
T-12 T-12 T-12	Lesar, Richard Thomson, Robb Koslowski, Marisol	Noise and Energetics in Dislocation Patterning	04-5864
MST-8 CNLS MST-8 CNLS T-3	Cady, Carl Gray, George Chen, Shuh-Rong Bingert, John Maudlin, Paul	Influence of Temperature, Strain Rate, and Crystallographic Texture on the Mechanical Behavior of Tantalum and Lead (abstract for JOWOG Meeting, Aldermaston UK NOV 2004)	04-5883
T-15 T-15	Lapenta, Giovanni Markidis, Stefano Fairfield, Frederick	High Performances on Simulation of Developmental Biology on a Hybrid Grid	04-5909
T-15	Tang, Xianzhu	Force-Free Magnetic Relaxation In A Driven Toroid	04-5910
T-15	Tang, Xianzhu	Implicit Fusion Plasma Simulation	04-5911
T-10 T-10 T-10	Korber, Bette Szinger, James Yusim, Karina *et al*	Consistent CTL Targeting of Immunodominant Regions in HIV Across Multiple Ethnicities	04-5919
T-10 T-10	Korber, Bette Szinger, J. *et al*	Coevolutionary influences of HIV and HLA: The Dominant Role of HLA-B	04-5920
T-10	Yusim, Karina *et al*	CD8+ Cell Responses to Variable Proteins Predominant in Early HIV-1 Infection	04-5922
T-4 T-4 T-12	Mazevet, Stephane Collins, Lee Kress, Joel	Simulation of matter under extreme density - temperature conditions	04-5935
T-16	Friar, James	The Nuclear Physics of Precise Atomic Spectroscopy	04-5942
T-6 T-8 T-6	Warren, Michael Habib, Salman Heitmann, Katrin	Robustness of Cosmological Simulations I: Large Scale Structure	04-5954
MST-6 MST-6 T-3	Necker, Carl Alexander, David Beyerlein, Irene	The Use of Recrystallization to Elucidate the Inhomogeneous and Anistropic Conditions in Multiple Pass Equal Channel Extruded Copper	04-5965
T-7 T-7	Arriola, Leon Beyer, William	Stability of f(=y) = f(x) + f(y) over p-adic fields	04-5998
T-7 T-7	Arriola, Leon Hyman, James	Non-adjoining sensitivity analysis of initial value problems	04-5999
CNLS X-4	Ramaprabhu, P Dimonte, Guy	Single-mode dynamics of the rayleigh-taylor instability at any density ratio	04-6000
T-12 T-12	Voter, Arthur Uberuaga, B. *et al*	Atomistic Models of Plutonium-Gallium Alloys	04-6010
MST-8 T-3 MST-6 LANSCE-12 MST-8	Li, Saiyi Beyerlein, Irene Alexander, David Vogel, Sven Bourke, Mark	Texture Development During Multi-Pass Equal Channel Angular Extrusion of Copper: Neutron Diffraction Characterization and Polycrystal Modeling	04-6018
T-11	Saxena, Avadh	Disorder in magnetic and structural transitions: pretransitional phenomena and kinetics	04-6029
T-11	Nussinov, Zohar *et al*	A continuous zero temperature transition within the two dimensional quantum orbital compass model	04-6030

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T-11 T-11 T-11	Nussinov, Zohar Vekhter, Ilya Balatsky, A.	Low temperature "incommensurate glassy" critical points in electronic orders	04-6031
T-11 T-11 T-11	Shenoy, S Lookman, Turab Saxena, Avadh	Spin, charge and lattice coupling in multiferroic materials	04-6032
T-7 T-7	Li, Jia Hyman, James	Differential susceptibility epidemic models	04-6033
T-7 T-7	Hyman, James Li, Jia	The Reproductive Number for an HIV Model with Differential Infectivity and Staged Progression	04-6034
T-7	Tartakovsky, D.	Asymptotic analysis of three-dimensional pressure interference tests: a line-injection line-monitoring solution	04-6035
T-10 T-10 T-10	Hlavacek, William Blinov, Mikhail Faeder, James	Graphical Readable and Precise Representation of Signal-Transduction Networks	04-6050
T-10 T-11	Garcia, Angel Beleva, Violeta Rasmussen, Kim	Molding DNA Bubble Formation at the Atomic Scale	04-6051
CNLS	Ecke, Robert	The Physical Mechanisms of Two-Dimensional Turbulence: Inverse and Direct Cascade Process.	04-6068
T-10 T-10 T-10 T-10 T-10	Kuiken, Carla Richardson, Russell Tao, Ning Agrawal, Ashish Yusim, Karina	New Research Tools: The Hepatitis C Database in Los Alamos	04-6072
T-6	Hayes-Sterbenz, A.	Summary of 178 HF 30-YR Isomer Experiments	04-6119
T-6	Herwig, Falk	The Second Stars	04-6121
T-6 CCS-4 T-6	Fryer, Christopher Hungerford, Aimee Timmes, Francis	Radiation hydrodynamics in astrophysics	04-6122
T-13	Ben-Naim, Eli Redner, S	Winning quick and dirty: the greedy random walk	04-6125
T-3	Mousseau, Vincent	Modern Time Integration Methods Applied to the Thermal Hydraulic Equations	04-6130
T-3	Hunke, Elizabeth	On the Controls of Atlantic Water Circulation in the Arctic Ocean Looking for Mechanisms in the UW, LANL and AWI Models	04-6131
T-8	*et al* Mottola, Emil	Short-distance and initial state effects in inflation: stress tensor and decoherence	04-6142
T-6	Heger, Alexander Woosley, Stan Sriot, Henk	Presupernova evolution of differentially rotating massive stars including magnetic	04-6161
T-10 T-10 T-10	Hlavacek, William Faeder, James Blinov, Mikhail	Graphical Rule-Based Representation of Signal-Transduction Networks	04-6182
T-15	Lapenta, Giovanni Camporeale, E.	Model of Bifurcated Current Sheets in the Earth's Magnetotail: Equilibrium and Stability	04-6183
T-10	Hlavacek, William Yang, Jin	Signaling on Scaffold	04-6184
T-12 T-12	Peery, Travis Pratt, Lawrence	AB initio molecular dynamics study of ionic clathrate hydrates	04-6187
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T-16	Hale, Gerald	Status of the International Neutron Cross Section Standards File	04-6211
T-16	Friar, James Payne, G.	The Nuclear Physics of Hyperfine Structure in Hydrogenic Atoms	04-6212
T-16 T-16 T-16	Talou, Patrick Chadwick, Mark Young, Phillip	The MCGNASH Nuclear Reaction Code: Progress Status	04-6213
T-16	Carlson, Joseph	Microscopic Approaches to Light Nucleus Reactions	04-6214
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T-4	Collins, Lee	Los Alamos Summer School (LASS) 2004 Research Reports	04-6222
T-11 T-11 T-1	Zhu, Jian-Xin Albers, Robert Wills, John	Equation of motion approach to dynamical mean field theory	04-6265
CNLS	Ernst, Matthieu Ripoll, M	A model system for classical fluids out of equilibrium	04-6268
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T-13 T-13	Jarzynski, Christopher Adib, Artur	Unbiased estimators for spatial distribution functions of classical fluids	04-6270
T-13 T-7 T-7 CNLS	Chertkov, Michael Kolokolov, Igor Lebedev, Vladimir Turitsyn, C.	Statistics of polymer extension in random flow with mean shear	04-6271
T-12	Walker, Robert	Spectral Library Clustering	04-6272
T-6	Mihaila, Bogdan	On two approaches to the coupled-cluster expansion	04-6301
T-7 CNLS T-7	Hagberg, Aric Bold, Katherine Swart, Pieter	Differential equations on network: From dynamics to structure	04-6302
T-DO	Dalvit, Diego	Hertz potentials approach to the dynamical casimir effect: cylindrical cavities with	04-6303
T-6	Parish, Meera *et al*	Fermion-mediated BCS-BEC crossover in ultracold K-40 gases	04-6304
T-7	Chartrand, Rick	The Monge-Kantorovich Problem and a Nice Solution	04-6305
T-7	Peleg, Avner	Strongly non-gausian statistics of optical soliton parameters due to collisions in the presence of delayed raman response	04-6306
T-7 3	Kurien, Susan *et al*	Anomalous scaling of low-order structure functions of turbulent velocity	04-6307
T-7	Peleg, Avner	Ostwald ripening and coalescence in globally conserved interface-controlled coarsening	04-6308
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T-7	Svyatskiy, Daniil	Mimetic finite difference discretization of diffusion- type problems on unstructured polyhedral meshes	04-6310
T-7 T-7	Hagberg, Aric Swart, Pieter Schult, Dan	Network: growing a python-based toolbox for complex networks	04-6311

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T-3	Dukowicz, John	Structure of the Barotropic Mode in Layered Ocean Models	04-6368
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T-7	Arriola, Leon	Hyperbolic Fixed Pointes & First Integrals/ Invariants of OE's	04-6412
T-1	Crockett, Scott	Analysis of SESAME 3720, a new Aluminum Equation of State	04-6442
T-14	Kober, Edward	Effects of Molecular Weight on the Phase Separation of a Polyester Polyurethane	04-6447
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T-6 T-6 T-6	Rockefeller, G. Fryer, Christopher Warren, Michael	Diffuse x-rays from the arches and quintuplet clusters	04-6468
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T-16	Möller, Peter	Mass Formulas: Theory of Parameterization of Data?	04-6470
T-16	Pitcher, Eric	Progress on Transmutation Physics within the Advanced Fuel Cycle Initiative	04-6471
T-11 T-11	Bouchet, Johann Albers, Robert *et al*	Reply to the comment on "new pseudophase structure for alpha-pu"	04-6472
X-7 T-13	Plohr, Jee-Yeon Plohr, Bradley	Linearized analysis of richtmyer-meshkov flow for elastic materials	04-6473
T-4 T-4 T-4 T-4 T-4 T-4 T-4 X-5 X-5	Kilcrease, David Magee, Norman Abdallah, Joseph Colgan, James Hakel, Peter Mazevet, Stephane Sherrill, Manolo Fontes, Christopher Zhang, Honglin	Transition from LEDCOP to ATOMIC	04-6483
T-4	Colgan, James *et al*	Time-Dependent Close-Coupling Calculations for the Double Photoionization of HE and H2	04-6484

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T-11 T-11 T-11	Nussinov, Zohar Avoras, D Balatsky, A. Shnirman, A	Spin berry phases on keldysh contours and applications: new dynamics in magnets and single spins systems	04-6501
T-12	Holian, Brad	Large Scale Simulations of (1) Crack Propagation and Friction of Metals; (2) Superconducting Vortex Lattices; and (3) Colloidal Systems	04-6502
T-10 T-10	Perelson, Alan Dixit, Narendra	Multiple Infections of Cells By HIV: Dynamics and Scaling	04-6503
T-11 T-1	Baker, George Johnson, James	Comparison of the exact series expansion with the spherical cellular model of an electron-ion system	04-6504
T-11 T-1	Baker, George Johnson, James	Perturbation theory calculations for an electron-ion system	04-6505
T-11 T-11 T-11	Boulaevskii, Lev Hruska, Marina Maley Smith, D.	Tunneling spectroscopy of magnetic excitations in layered magnetic superconductors	04-6507
T-15	Chacon, Luis	A Comprehensive Spatio-Temporal Numerical Scheme for Fully Implicit 3D Extended MHD	04-6508
T-4	James, Daniel	Quantum Teleportation	04-6551
T-6	Herwig, Falk *et al*	The Domains of Instability for the Pulsating PG 1159 Stars	04-6571
T-3 T-3 T-3	Zou, Qisu Zhang, Duan Vanderheyden, W. *et al*	Application of a Flip-MGM-MFM Method for Simulating Weapon-Target Interaction	04-6592
T-14	Strachan, A.	Highlights: Multiscale Modeling of Ferroelectric Ceramics for Microwave Applications	04-6601
T-14	Strachan, A. *et al*	Thermal Decomposition of Nitromethane From Molecular Dynamics	04-6602
T-15	Simakov, Andrei	A Drift Kinetic Equation Exact Through Second Order in Gyro-Radius Expansion	04-6618
T-15 T-15	Lapenta, Giovanni Zuccaro, Gianluca Maizza, G.	Particle in Cell Simulation of Combustion Synthesis of TIC Nanoparticles	04-6619
T-10 T-10 T-10 T-10	Perelson, Alan Ribeiro, Ruy Powers, Kimberly Talal, Andrew	Modeling the Viral Dynamics of HCv in Patients Treated with Pegylated Interferon Alpha 2B	04-6620
T-10	Foley, Brian *et al*	Human Immunodeficiency Virus Type 1 Genome RNA Sequences in the Female Genital Tract and Blood: Compartmentalization and Intrapatient Recombination	04-6621
T-3	Johnson, Norman	Capability Assessment for DHS' Biological Warning and Incident Characterization (BWIC) Project	04-6636
T-3 ESA-WR	Williams, Todd Tippetts, Trevor	Physics-Based Modeling of Composite Materials	04-6637
CNLS CNLS MST-8 T-3 MST-8	Gray, George Bingert, John Chen, Shuh-Rong Maudlin, Paul Cady, Carl	Influence of Temperature, Strain Rate, and Crystalographic Texture on the Mechanical Behavior of Tantalum and Lead	04-6648
T-6	Herwig, Falk	Period-abundance relations in s-process enhanced EMP binaries	04-6660
T-6 CCS-4	Fryer, Christopher Hungerford, Aimee	Neutron star formation	04-6661

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T-6 T-4 T-11 MST	Mihaila, Bogdan Parish, Meera Timmermans, Eddy Blagoev, Krastan Littlewood, Peter	BCS-BEC crossover with a finite-range interaction	04-6662
T-16 T-16	Buervenich, T. Madland, David	Relativistic Point-Coupling Models for Finite Nuclei	04-6663
T-11 T-16	Nussinov, Zohar Nussinov, Shmuel	Non-relativistic bose-einstein condensates, kaon droplets, and q-balls	04-6687
T-11 T-11	Saxena, Avadh Lookman, Turab Shenoy, S	Universal description of domain walls in ferroic transitions	04-6688
T-11 CNLS T-11 CNLS	Saxena, Avadh Khare, Avinash Rasmussen, Kim Samuelsen, M.	Exact solutions of the saturable discrete nonlinear schrodinger equation	04-6689
T-DO CNLS	Abanov, Artem Chubukov, Andrey	Anomalous scaling at the quantum critical point	04-6690
T-16 T-16	Buervenich, T. Madland, David	Fission-Fragment Scattering Within Actinide Crystal Structures	04-6691
T-7 T-7	Loubere, Raphael Shashkov, Mikhail	A subcell remapping on staggered polygonal grids for arbitrary-langrangian-eulerian methods	04-6692
T-7	Peleg, Avner	Emergence of dissipative disorder due to collisions of optical in the presence of delayed raman response	04-6693
T-7 T-7	Loubere, Raphael Shashkov, Mikhail Despres, Bruno	A mixing model for multimaterial computations in fluid dynamics	04-6694
T-DO P-21	Milonni, Peter Hughes, Richard	Initial contact with ARDA on "effects of propagation in air on phonton fluctuations, entanglement and polarization"	04-6700
T-DO T-DO T-DO	Strottman, Daniel Rizea, Constantin Carjan, Nicolae	New perspectives for the time-dependent approach to proton emitting nuclei	04-6701
CNLS T-3 CNLS T-3	Kamm, James Maltrud, Mathew Dean, Sumner Jones, Philip *et al*	Matching Patches in Ocean Simulations and Observations	04-6727
T-14	Strachan, A.	Highlights: Atomistic Modeling of Energetic Materials	04-6737
T-14	Strachan, A.	Ab Initio equation of state of PETN: pressure induced phase transition	04-6738
T-13	Toroczkai, Zoltan *et al*	Scalability, random surfaces and synchronized computing networks	04-6740
T-16	Steiner, Andrew *et al*	Isospin Asymmetry in Nuclei and Neutron Stars	04-6745
T-3 CNLS CNLS	Maudlin, Paul Bingert, John Gray, George	Deviations form Taylor-Based Texture Evolutions as Observed in Taylor Cylinder Testing	04-6746
T-3 X-4 ESA-WR X-7	Canfield, Thomas Potocki, Mark Prime, Michael Zocher, Marvin	Results from the TEPLA Material Model in the Shavano Project	04-6752
T-6	Heger, Alexander	Evolution and nucleosynthesis of massive stars	04-6771
T-6	Heger, Alexander	Models for Type I X-rays bursts	04-6772
T-16	Gibson, Benjamin *et al*	Anomalous Magnetic Moment Contributions to Nucleon -Nucleon Bremsstrahlung in the Soft-Photon Approximation	04-6773
CNLS	Ernst, Matthieu Ripoll, M	Power law tails of time correlates in a mesoscopic fluid model	04-6774

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T-4 T-11	Timmermans, Eddy Santamore, D Gaudio, Sergio	Zero sund in a single component fermion- bose-einstein condensate mixture	04-6790
T-12	Goupalov, Serguei	Continuum model for long-wavelength phonons in 2D graphite and carbon manotubes	04-6791
T-8 T-8	Abazajian, Kevork Xu, Yongzhong	The Third Data Release of the Sloan Digital Sky Survey	04-6801
T-8	Shirman, Yuri *et al*	Twisted fermions and a tiny strong CP (change parity) phase	04-6802
 T-8	Terning, John *et al*	Curing the ills of higgsless models: s-parameter and unitarity	04-6806
T-8	Abazajian, Kevork	Cosmology from all-scale galaxy clustering	04-6807
T-8	Abazajian, Kevork	The viability of a cosmological lepton asymmetry in reconciling sterile neutrinos with primordial nucleosyntheis	04-6808
T-4 X-2 X-2	Kilcrease, David Gunderson, Mark Haynes, Donald	Using Line Shifts as a Spectral Diagnostic	04-6824
T-3 CNLS MST-8 MST-8 CNLS	Maudlin, Paul Bingert, John Henrie, Benjamin Cady, Carl Gray, George	Local and Polycrystalline Textures in Body-Centered Cubic Metals: Their Evolution and Effect on Mechanical Response	04-6825
T-15	Lapenta, Giovanni	Mathematical and numerical models for the coupling of neutronics and thermal-hydrodynamics in circulating fuel nuclear reactors	04-6859
T-7	Austin, Travis	Flux calculations in the heat transfer component of telluride	04-6860
T-7	Hyman, James *et al*	Brouwer's Law: optimal multistep intergators for celestial mechanics	04-6861
T-6 T-6	Heger, Alexander Woosley, Stan Fryer, Chris Baraffe, Isabelle	Evolution and fate of the first stars	04-6862
T-6	Warren, Michael	N-body simulation data - standard cosmology model, series F, 1 billion particles each	04-6863
T-16 T-16 T-16 T-16 T-16	Kawano, Toshihiko Talou, Patrick Chadwick, Mark Macfarlane, Robert Young, Phillip	Nuclear Data Evaluations for Americium Isotopes	04-6864
T-16 T-16 T-16 T-16 T-16	Lemaire, Sebastien Talou, Patrick Madland, David Kawano, Toshihiko Chadwick, Mark	Correlated Neutron Emission in Fission	04-6865
T-13 T-13 CNLS T-13	Berman, Gennady Borgonovi, Fausto Gorshkov, V. Tsifrinovich, V.	Modeling and simulations of a single-spin measurement using MRFM	04-6866
T-12 T-12 B-4 B-4 B-4	Magyar, Rudolph Tretiak, Sergei Shreve, Andrew Wang, Hsing-Lin Gao, Yuan	A joint theoretical and experimental study of polyphenlene-acetylene molecular wires	04-6867
T-13	Hastings, Matthew	Statistical mechanics of interfering links	04-6877
CNLS CNLS T-3	Gore, Robert Kamm, James Rauenzahn, Rick *et al*	Prediction of Richtmer-Meshkov Instability: Coupling Experiments, Physical Models, and Simulations	04-6905

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CNLS	El Shawish, S Bonca, J Batista, Cristian	Electron spin resonance of SRCU 9B00 at high magnetic field	04-6918
CNLS	Kenzelmann, M Batista, Cristian Chen, Y Broholm, C	The S=1/2 chain in a staggered field: novel bound-spinon state and the effect of a discrete lattice	04-6919
CNLS	*et al* Batista, Cristian	Phase diagram of the one-dimensional two-channel kondo lattice model	04-6920
T-11 CNLS T-11	Boulaevskii, Lev Koshelev, A Maley, Martin Tachiki, Masashi	Radiation from josephson vortex flow in layered superconductors	04-6921
T-11	Peschel, O Czycholl, G Schnell, Ilan	Combined AB-initio-and many-body treatment of the electronic structure of metals	04-6922
T-11 T-DO	Ares, Saul Voulgarakis, Nikos Rasmussen, Kim Bishop, Alan	Theory of bubble nucleation and cooperativity in DNA melting	04-6923
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T-6	Rauch, T Herwig, Falk	On the evolutionary status of extremely hot helium stars-are O(He) stars successors or RCrBr stars?	04-7012

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CNLS	Redner, Sidney	Citation statistics from more than a century of physical review	04-7017
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T-12 CNLS	Tretiak, Sergei Piryatinski, Andrei	Light Amplification using Inverted Core/Shell Nanocrystals: Towards Lasing in the Single-Exciton Regime	04-7033
T-3	Jones, Philip	Climate, Ocean, and Sea Ice Modeling	04-7034
T-8	Nieto, Michael Holzscheiter, M. Turyshev, Slava	Controlled anthihydrogen propulsion for NASA'S future in very deep space	04-7072
T-8	Turyshev, Slava Nieto, Michael Anderson, John	The pioneer 10 and 11 lessons for a mission to test the pioneer anomaly	04-7073
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T-10	Tung, C.-S.	A Knowledge Based Approach for Modeling RNA Loop Structures	04-7075
T-3	Mousseau, Vincent	A fully implicit hybrid solution method for a two-phase thermal-hydraulic model	04-7078
T-8 T-8	Abazajian, Kevork Habib, Salman	The nonlinear cosmological matter power spectrum with massive neutrinos	04-7094
T-7 T-7 T-7	Loubere, Raphael Staley, Martin Wendroff, Burton	The repair paradigm: new algorithms and applications to compressible flow	04-7095
T-7 T-7	Loubere, Raphael Lipnikov, K.	The arbitrary-langrangian-eulerian code for 1D compressible flows	04-7096
T-14	Strachan, Al.	Vibrational Density of States and Lindeman Melting Law	04-7099
T-12 CNLS	Hanson, David Hawley, Marilyn	A physical mechanism for the Mullins Effect in silica-filled polydimthysiloxane	04-7102
T-16	Gibson, Benjamin *et al*	Four-Body Calculation of the First 0-Plus Excited State of Helium-4	04-7103
T-14 T-14 CNLS	Smith, Grant Bardenhagen, Scott Bedrov, Dmitry	Multiscale Modeling of Viscoelastic Properties of Polymer Nanocomposites	04-7104
T-4 X-7 X-7	Mazevet, Stephane Kowalski, Piotr Saumon, Didier	Non-Ideal Equation of State, Refraction and Opacities in Very Cool, Helium-Rich White Dwarf Atmospheres	04-7105
T-15	Tang, Xianzhu Boozer, A	Force-free magnetic relaxation in driven plasmas	04-7107
T-16	Goldman, Terrance	Understanding Penta Quark with Various Quark Models	04-7116
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T-DO	Younger, Stephen	Reciprocity, tolerated theft, and reproduction strategies in foraging societies	04-7119
T-DO	Younger, Stephen	Behavioral norms and the evolution of societies	04-7120

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T-3	Jones, Philip	Computational Requirements for Future Climate Simulations	04-7128
CNLS X-5	Redner, Sidney Sood, Avneet Ben-Avraham, D	First passage properties of the erdos-renyi random graph	04-7141
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T-10 T-10 T-10	Ribeiro, Ruy Perelson, Alan Davenport, Miles Zhang, Lei	Effects of antibody on viral kinetics in simian/human immunodeficiency virus infection	04-7144
T-4 T-4 T-4 T-4 T-4	Kilcrease, David Abdallah, Joseph Colgan, James Hakel, Peter Magee, Norman	Equation of state, occupation probabilities, and opacity results from the new Los Alamos opacity code atomic	04-7165
T-3	Jones, Philip	Status and Progress of the Climate, Ocean, and Sea Ice Modeling (COSIM) Project	04-7166
T-16	Page, Philip	Hybrid and Conventional Bayrons in the Flux-Tube and Quark Models	04-7171
T-16	Page, Philip	8Be Nuclear Data Evaluation	04-7172
T-16	Greiner, Walter Buervenich, T.	Fulleren-Structure in Superheaies, Nuclei Containing Antimatter and Cold Compression	04-7173
T-14 T-14	Kober, Edward Menikoff, Ralph	A Novel Method for Static Equation of State Development: Equation of State of Sylgard 184 to 10GPA	04-7178
T-4 T-12 T-4	Mazevet, Stephane Kress, Joel Collins, Lee	Simulations of shocked nitrogen oxide	04-7201
T-4 T-4 T-4 X-1	Sherrill, Manolo Abdallah, Joseph Csanak, George Dodd, Evan	Coupled electron and atomic kinetics through the solution of the Boltzmann equation for generating time-dependent x-ray spectra	04-7209
T-13 CNLS	Berman, Gennady Izrailev, Felix	The fermi-past-ulam problem: 50 years of progress	04-7220
CNLS	Chung, Yeo-Jin	Fluctuations of bit-error-rate with randomly varying birefringence in optical fibers	04-7221
CNLS	Redner, Sidney Krapvisky, Paul	Log-network	04-7223
T-16 T-16	Buervenich, T. Madland, David	Nuclear Ground-State Observables from Relativistic Mean-Field Models: Masses, Densities, Radii, Single-Particle Levels	04-7259
T-8	Xu, Yongzhong	Application of voronoi tessellation on finding large-scale structures	04-7272
T-16	Lynn, John	Theory in Evaluation of Actinide Fission and Capture Cross Sections	04-7295
T-6	Rauch, Tomas Herwig, Falk	Searching for the progeny of RCrBr stars- investigations on the evolutionary status of O(He) stars	04-7296
T-6	Warren, Michael	Using fast parallel n-body methods to determine the mass function of dark matter halos	04-7297
T-6	Heger, Alexander	The fate of the first stars	04-7298
T-6	Herwig, Falk Lucatello, Sara	Radial Velocity Monitoring of Carbon-Enhanced Metal-Poor Stars	04-7299
T-6	Herwig, Falk Pollaco, Don	The Sakurai Object: temperature evolution and restarting the fast wind	04-7300

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LANL Group	Author(s)	Title	LAUR No.
T-10 T-10 T-10	Faeder, James Blinov, Mikhail Hlavacek, William	Rule-based modeling of biochemical networks	04-7315
T-3 T-3 T-3	Hunke, Elizabeth Maltrud, Mathew Lipscomb, William Holland, Marika	POP and CICE in the Arctic Ocean Model Intercomparison Project	04-7316
T-4 X-7 X-7	Mazevet, Stephane Saumon, Didier Kowalski, Piotr	New Opacities for Dense Helium and the Composition of Helium Rich, Very Cool White Dwarf Atmospheres	04-7320
T-4 T-4 T-4	Hu, Suxing Colgan, James Collins, Lee	Triple-Differential Cross-Sections for Two-Photon Double Ionization of He Near Threshold	04-7333
T-14 T-12	Strachan, A. Holian, Brad	Energy Exchange Between Mesoparticles and their Internal Degrees of Freedom	04-7346
T-14 T-12	Strachan, A. Holian, Brad	Mesodynamical Simulations with Quantum Mechanical Description of the Thermal	04-7347
T-14 P-24	Strachan, A. Luo, Shengnian	Anisotropic Plasticity of NiA1 Under Dynamical Loading	04-7348
T-14	Han, Si-ping Strachan, A.	Thermal Decomposition of Nitromethane Using Reactive Molecular Dynamics	04-7350
T-14	Menikoff, Ralph	Empirical Equations of State for Solids	04-7353
X-5 X-5 T-16	Pronskikh, V. Mashnik, Stepan Prael, Richard Sierk, Arnold	Study of 660-MeV Proton-Induced Reactions on 129-I	04-7360
T-13 T-DO	Berman, Gennady Bishop, Alan Chernobrod, Boris Gorshkov, V.	Novel approach for optical readout of solid-state magnetic memory based on spin-polarized light-emitting diode	04-7361
T-16	Kawano, Toshihiko	Methodology of Covariance Evaluation for TH and U Nuclear Data	04-7367
T-8	Nieto, Michael Turyshev, Slava Anderson, John	The Pioneer Anomaly: The data its Meaning and a Future test	04-7368
T-7	Tartakovsky, D. Illman, Waters	Spatial, scale, and directional dependence of equivalent pneumatic properties of unsaturated fractured tuff	04-7372
T-12 T-12	Masunov, Artem Tretiak, Sergei Basan, Guillermo	Theoretical study of the effects of solvent environment on photophysical properties and electronic structure of paracyclophane	04-7373
X-5 T-16	Mokhov, N. *et al* Mashnik, Stepan Sierk, Arnold	Physics Models in the MARS15 Code for Accelerator and Space Applications	04-7374
T-16	Hale, Gerald Hofmann, Hartmut	Neutron Standard Cross Sections for 1H and 6Li from R-Matrix Analyses and Microscopic Calculations for the N-N and 7Li Systems	04-7375
T-3 T-3	Zhang, Duan Ma, Xia	Local Grain-Grain Interactions in Granular Explosive	04-7382
CNLS T-3 DX-3 T-3 MST-8	Gray, George Maudlin, Paul Hull, Lawrence Zuo, Qiuhai Chen, Shuh-Rong	Predicting Material Strength, Damage, and Fracture -- The Synergy Between Experiment and Modeling	04-7402
T-DO	Bishop, Alan	An exact solution of the slow-light problem	04-7412
T-3	Torres, David	KIVA-4 Development	04-7422
T-3	Mousseau, Vincent	Transitioning from Interpretive to Predictive in Thermal Hydraulic Codes	04-7423

LANL Group	Author(s)	Title	LAUR No.
T-10	Faeder, James Ladanyi, Branka	Solvation Dynamics in Reverse MIcelles: The Role of HeadGroup-Solute Interactions	04-7434
CNLS	Ecke, Robert	Using soap films and shallow layers to study fluid turbulence in flatland	04-7464
T-1 T-1 T-1	Gruber, Jason George, Denise Kuprat, A. *et al*	Effect of anisotropic grain boundary properties on gain boundary place distribution - During grain growth	04-7468
CNLS MST-8 T-3 MST-8 MST-8	Gray, George Cerreta, Ellen Maudlin, Paul Mason, Thomas Chen, Shuh-Rong	Processing, Mechanical Response, and Modeling of Defense Materials	04-7481
T-14 T-11 T-11 T-14	Bedrov, Dmitry Sewell, Thomas Rasmussen, Kim Thompson, Russell Sewell, Thomas	Bi-directional mapping between self-consistent field theory and molecular dynamics: application to immiscible	04-7496
T-14 T-12 T-12	Tymczak, C. Challacombe, W. Gan, Chee	Linear scaling Ab initio molecular dynamics	04-7497
T-14 T-11	Kober, Edward Rasmussen, Kim	Models for Estane and Other Polymers	04-7498
T-12	Kress, Joel	Toward science-based lifetime predictions for the plastic bonded explosive PBX 9501	04-7507
T-3 T-3 T-3 T-3	Harstad, Eric Addessio, Francis Zuo, Qiuhai Maudlin, Paul	Phase Model Development, Implementation and Validation	04-7512
T-1	Clements, Brad	Phase transitions in dynamically loaded composites	04-7517
T-1	Mas, Eric	Macro- to Meso- length scale studies of PBX 9501 for the thermal and loading dynamics of energetic materials	04-7519
T-12 NMT-DO C-SIC NMT-DO	Hay, Philip Clark, David Gordon, John Poli, Rinaldo	On the Existence and Stability of Lanthanide-Main Group Element Multiple Bonds, New Paradigms in the Bonding of the 4F-Elements. A DFT Study of CP2CeX(X=F+,O,NHCH-,CH2) and the Ligand Adduct CP2Ce(CH2)(NH3)	04-7533
T-10	Garcia, Angel *et al*	Molecular Dynamics Study of Hydration of the Protein Interior	04-7536
T-15	Tang, Xianzhu Boozer, A.	Resonant Away From Resonances	04-7537
T-1	Clements, Brad	Polymer Behavior under Dynamics Loading	04-7542
T-16	Carlson, J. *et al*	Parity Violation in Few-Nucleon Systems	04-7551
T-6	Timmes, Francis	Astrophysical theory and simulation for nuclear astrophysics experiments at the rare isotope accelerator	04-7552
T-1 T-1	Rudin, Sven Wills, John	First principles calculations of the thermodynamics of ZRN and U	04-7591
T-1 T-1	Rudin, Sven Johnson, James	Density functional theory calculations on EOS and phase stability of BE	04-7592
CNLS MST-8 T-3 MST-8 MST-8	Gray, George Cerreta, Ellen Maudlin, Paul Mason, Thomas Chen, Shuh-Rong	Influence of Temperature, Strain Rate, and Crystallographic Texture on the Mechanical Behavior of TA and PB (AV presentation for the JOWOG 32 Meeting, Aldermaston UK, NOV 2004)	04-7596
T-16	Carlson, Joseph	Dilute Fermi Gases	04-7606
T-16	Reddy, Sanjay	Matter at Extreme Density and Its Role in Supernova and Neutron Stars	04-7607

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LANL Group	Author(s)	Title	LAUR No.
T-16 X-2 CNLS T-16	Macfarlane, Robert Macinnes, Michael Little, Robert Chadwick, Mark	Critical Assembly Data Testing for Nuclear Cross Sections	04-7608
T-12	Hanson, David	Micro-mechanical modeling of PBX 9501 binder	04-7611
T-3	Johnson, Norman	Diversity: A Weapon of Mass Construction (AV presentation for UCSF Student Enrichment Seminar Series, OCT 2004 San Francisco CA)	04-7628
T-4 T-4 T-4 X-7 X-7	Mazevet, Stephane Hakel, Peter Kilcrease, David Saumon, Didier Kowalski, Piotr	CHEMEOS: An Equation-of-State Model for New Los Alamos Opacity Calculations	04-7634
T-4 X-2 X-2	Kilcrease, David Gunderson, Mark Haynes, Donald	Using Line Shifts as a Spectral Diagnostic	04-7635
T-13	Jarzynski, C. *et al*	Experimental test of the crooks fluctuation theorem by irreversible measurements of mechanical work in RNA molecules	04-7636
T-11 T-11 T-11	Ahluwalia, Rajeev Lookman, Turab Saxena, Avadh Cao, Wenwu	Domain size dependence of pieoelectric properties of ferroelectrics	04-7637
T-11 T-11 T-11	Balatsky, A. Vekhter, Ilya Zhu, Jian-Xin	Impurity-induced states in conventional and unconventional superconductors	04-7638
T-7 CNLS	Wohlberg, Brendt Brislawn, Chris	Reversibility of even-length integer to integer filter banks with symmetric extension	04-7659
T-7 T-7	Shashkov, Mikhail Lipnikov, K.	The error-minimization-based rezone strategy for arbitrary lagrangian-eulerian methods	04-7660
T-3 T-3	Zhang, Duan Ma, Xia	Local Grain-Grain Interactions in Granular Explosive	04-7674
T-8	Abazajian, Kevork	Primordial helium-4	04-7696
T-8	Abazajian, Kevork	Neutrino clustering in dark matter halos	04-7697
T-16	Gibson, Benjamin	Highlights of the KEK Strangeness Program Since 2000	04-7698
T-16	*et al* Madland, David	The Practitioner's Optical Model	04-7733
T-16	Möller, Peter	Structure Models Relevant for R-Process	04-7734
T-16	Möller, Peter	Mass Models and Nuclear Structure Applications for Astrophysics	04-7735
T-3 X-DO CCS-4 T-7	Knoll, Dana Margolin, Len Morel, Jim Shashkov, Mikhail	Physically Motivated Discretization Schemes -- A Strategy for Increased Predictiveness (Journal report for Los Alamos Science)	04-7736
T-10	Bruno, William Halpern, Aaron	Quantitative Measurement of Covariation on Evolutionary Tree with Application to Contact Prediction	04-7739
T-3 T-3 T-3 T-3	Zou, Qisu Zhang, Duan Padial-Collins, Nely Vanderheyden, W.	Multiphase Flow Simulation of Non-Shock Initiation	04-7748
T-3	Hunke, Elizabeth	Advances in Sea Ice Modeling Techniques	04-7749
T-12 T-14 T-14	Holian, Brad Strachan, A. Kober, E. *et al*	Atomistic and Mesoscale Modeling of Mechanical and Chemical Processes in Energetic Materials	04-7755

LANL Group	Author(s)	Title	LAUR No.
T-15 T-1	Glasser, Alan Lukin, Vyacheslav Liseikin, V Kitaeva, I	Adaptive grid generation for magnetically confined plasmas	04-7763
  T-16 T-16	Ichikawa, T. Iwamoto, Akira Möller, Peter Sierk, Arnold	The Barrier for Cold-Fusion Production of Super heavy Elements	04-7793
T-16	Page, Philip	A=8 Reactions, Charged Particle Reactions (Mainly)	04-7804
T-16	Page, Philip	P + 13C Rightarrow Source Reaction for Interrogation & Photonuclear Work	04-7805
T-15	Lapenta, Giovanni	ASCI Hydrocomponents Miniproject Error Estimator	04-7817
T-15	Daligault, Jerome	Quantum Theory of Constrained Dynamics A New Approach to Time Dependent Density Functional Theory	04-7818
T-16	Chadwick, Mark	Nuclear Cross Sections for Simulation	04-7826
T-16	Chadwick, Mark	Progress in Nuclear Physics for NNSA-CEA Collaboration	04-7827
CNLS	Ecke, Robert	Kelvin helmholtz mixing in experiments on oceanic overflows	04-7828
T-10	Perelson, Alan *et al*	Study of Pharnocodynamics of Antiretroviral Agents in HIV-1 Infected Patients Using Viral Dynamic Models With Consideration of Drug Susceptibility and Adherence	04-7829
T-10 T-10	Perelson, Alan Ribeiro, Ruy *et al*	Viral Kinetics in Acute SIV/SHIV Infection: Estimation of the Basic Reproductive Ratio (R0)	04-7830
T-10 T-10	Perelson, Alan Dixit, Narendra *et al*	HIV Decay Rates Do Not Increase With The Addition of Enfuvirtide To A Combination of Boosted Saquinavir and Efavirenze: A Randomized, Controlled Trial (HIV-NAT 012)	04-7831
 CNLS T-12	Beck, Thomas Paulaitis, Michael Pratt, Lawrence	The potential distribution theorem and the statistical thermodynamics of molecular solutions	04-7891
MST-8 CNLS T-3	Mason, Thomas Gray, George Maudlin, Paul	A Review of the Materials Modeling Report at Los Alamos	04-7905
T-1 T-1	Bock, Nicholas Coffey, Dermot Wallace, Duane	Adiabatic and non-adiabatic contributions to the free energy from the electron-phonon interaction	04-7939
CNLS	Greeff, Carl	Modeling of dynamic phase transitions with applications to titanium and zirconium	04-7940
T-1 T-3 T-1 T-3	Greeff, Carl Addessio, Francis Rudine, Sven Harstad, Eric *et al*	Modeling Dynamic Phase Transitions in Zirconium 2004)	04-7941
T-1	Clements, Brad	Polymer Behavior under Dynamics Loading	04-7951
T-6	Mihaila, Bogdan	Critical analysis of NP-237 ENDF for the theoretical interpretation of critical assembly experiments	04-7959
T-7	Loubere, Raphael Despres, Bruno	Convergence of repair algorithms in 1D	04-7960
CNLS	Chowell-Puente, G. *et al*	A simple epidemic model with under-reporting for some benign diseases: acute hemorrhagic conjunctivitis as an example	04-7961
T-15 T-15	Lapenta, Giovanni Chacon, Luis	A Nonlinear, fully coupled adaptive grid strategy	04-7962
T-10	Foley, Brian *et al*	Sensitivity and specificity of the viroseq HIV-1 genotyping systems for detection on HIV-1 drug resistance mutation using an ABI prism 3100 genetic analyzer	04-7966

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LANL Group	Author(s)	Title	LAUR No.
T-13 T-12	Berman, Gennady Rinkevicius, Z. Allara, David Tretiak, Sergei	Characteristic parameters and dynamics of two-qubit system in self-assembled monolayers	04-7991
T-10	Torney, David *et al*	Radioactive-source detection by sensor networks	04-7992
T-15 T-6	Murillo, Michael Weisheit, Jon	Atoms in Dense Plasmas	04-7993
  T-6	Hajduk, Marcin Zijlstra, Albert Herwig, Falk	The reincarnation and second death of a star	04-7996
T-15 T-5	Murillo, Michael Jones, Chris	Inclusion of atomic/molecular physics in the molecular dynamics simulation of warm dense matter	04-8005
T-3 DX-3	Kashiwa, Bryan Hull, Lawrence	Status of Closure Modeling for Metal-Loaded HE Using DNS	04-8033
T-3 T-3	Ma, Xia Zhang, Duan	Enduring Contacts in Dense Granular Material	04-8034
T-12 T-12 T-12	Kress, Joel Asthagiri, D. Pratt, Lawrence	An Ab Initio Molecular Dynamics and Quasi-Chemical Study of H+(AQ)	04-8044
T-15	Tang, Xianzhu	Finite amplitude instability in takens-bogdonov-type dynamical systems	04-8048
T-15	Tang, Xianzhu	Flux Amplification in Helicity Injected Spherical Tori	04-8049
CNLS T-13 T-11	Mozyrsky, Dima Hastings, Matthew Martin, Ivar	Intermittent polaron dynamics: born-oppenheimer out of equilibrium	04-8050
T-6	Heger, A. *et al*	Neutrino nucleosynthesis	04-8051
T-15 T-6 T-15 T-15	Murillo, Michael Weisheit, Jon Daligault, Jerome Turner, Leaf	Free-Free Radiation in Strongly Coupled Plasmas	04-8077
T-13	Ben-Naim, Eli	Opinion dynamics: rise and fall of political parties	04-8087
 T-16	*et al* Reddy, Sanjay	Hybrid Stars that Masquerade as Neutron Stars	04-8091
CCS-4 T-3	Carrington, David Mousseau, Vincent	Preconditioning and Solver Optimization Ideas for Radiative Transfer	04-8110
CNLS X-4	Ramaprabhu, P. Dimonte, Guy	Dependence of the rayleight-taylor froude number on the density ratio	04-8131
CNLS MST-10	Ecke, Robert Rivera, Michael	2D Turbulence: experiments, cascades, and mechanisms	04-8133
T-1 T-1	Brahme, A George, D. *et al*	Validation of 3D simulation of gain growth and recrystallization based in 3D x-ray microscopy	04-8134
T-7	Staley, Martin	Core: Conservative remapper	04-8141
CNLS	Ecke, Robert	Consideration of an experiment to measure mixing in oceanic-like fluid overflows	04-8189
T-12	Goupalov, Serguei	Chriality dependence of or raman cross section in carbon nanotubes	04-8192
T-1	George, Denise	Validation of 3D Simulation of Grain Growth and Recrystallization Based on 3D X-ray Microscopy	04-8193
T-3 T-3 T-3	Zou, Qisu Vanderheyden, W. Zhang, Duan	Modeling Friction Initiation of Solid Explosives	04-8203
T-3 T-3 T-3	Zhang, Duan Zou, Qisu Vanderheyden, W.	Particle-in-Cell Method in Multiphase Flow Simulations	04-8204
T-6 T-6	Mihaila, Bogdan Hayes-Sterbenz, A.	Probability of initiating a divergent fission chain: Commentary	04-8230

LANL Group	Author(s)	Title	LAUR No.
T-16	Carlson, Joseph	Superfluid Fermions from Atomic Gases to Neutron Stars	04-8231
T-3	Beyerlein, Irene	Substructure hardening model for strain path change S in copper	04-8255
T-3 T-3	Schraad, Mark Harlow, Francis	A Stochastic Constitutive Model for Disordered Cellular Materials / Part I: Finite-Strain Uni-Axial Compression/Journal of the Mechanics and Physics of Solids	04-8256
T-16	Carlson, Joseph	Simulations of Dilute Superfluid Fermi Gases	04-8272
T-16	Friar, James Payne, G.	Deuteron Dipole Polarizabilities and Sum Rules	04-8273
T-12	Magyar, R. *et al*	Exact exchange density- functional calculation for large gap materials	04-8279
T-12 T-12	Batista, Enrique Martin, Richard	On the Excited States Involved in the Luminescent Probe [Ru(bpy)2dppz]2+	04-8280
T-12	Hanson, David	Micromechanical modeling progress	04-8281
T-16	Möller, Peter	Nuclear Ground-State Masses and Nuclear Shape Isomerism	04-8303
T-16	Sierk, Arnold	Effect of Wigner Energy on Fission Barriers	04-8304
T-3 T-1 T-3	Addessio, Francis Clements, Brad Williams, Todd	A Model For Heterogeneous Materials Including Phase Transformations / Journal of Applied Physics	04-8313
T-6 T-6 CCS-4 T-6	Socrates, Aristotle Blaes, Omer Hungerford, Aimee Fryer, Christopher	The Neutrino Bubble Instability: A Mechanism for Generating Pulsar Kicks	04-8335
T-15 T-15	Markidis, Stefano Lapenta, Giovanni	Plasma Simulations on a Hybrid Computational Grid	04-8341
T-12 T-14	Chitanvis, Shirish Welch, Paul	Influence of supercoiling on base-pair disruption	04-8345
T-3 T-3 MST-8 MST-8 CNLS	Bronkhorst, Curt Maudlin, Paul Cerreta, Ellen Mason, Thomas Gray, George	A Polycrystal Plasticity Examination of Localization in Tantalum Tophat Geometry Samples	04-8361
T-10 T-10	Garcia, Angel Gnanakaran, S.	Simulations of the Pressure and Temperature Unfolding of an Alpha Helical Peptide	04-8362
T-10 T-10 T-10 T-10	Ribeiro, Ruy Perelson, Alan Talal, Andrew Powers, Kimberly	Hepatitis C Virus Kinetics and Pegylated Interferon-a Pharmacokinetics in HCV/Human Immunodeficiency Virus (HIV-1) Infected Patients	04-8400
T-16	Steiner, Andrew	Isospin Asymmetry in Nuclei, Neutron Stars, and Heavy-Ion Collisions	04-8403
T-16	Litvinov, Yu. *et al* Madland, David	Isospin Dependence in Odd-Even Staggering of Nuclear Binding Energies	04-8404
T-14	Kober, E. *et al*	Thermal decomposition of polydimethylsiloxane polymer	04-8444
T-10	Perelson, Alan *et al*	A Theory of T Cell Receptor Specificity	04-8445
X-4 T-3 ESA-WR X-7	Potocki, Mark Canfield, Thomas Prime, Michael Zocher, Marvin	Results From The TEPLA Material Model in The Shavano Project	04-8474
T-6 T-6	Williems, Bart Timmes, Francis Fryer, Chris	Understanding compact object formation and natal kicks I. calculation methods and the case of GRO J1655-40	04-8478
T-6 T-6	Heger, Alexander Woosley, Stan Fryer, Christopher Baraffe, Isabelle	Evolution and Fate of the First Stars	04-8479
T-16	Goldman, Terrance	Non-Nuclear Multiquark States Diabaryons and Pentaquarks from a Successful Nuclear Quark Model	04-8513

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LANL Group	Author(s)	Title	LAUR No.
T-8	Shirman, Yuri	Chiral gauge theories and deconstruction of ADS	04-8519
T-10 T-10	Perelson, Alan Jones, Laura	Opportunistic Infection as a cause of Transient Viremia in Chronically Infected HIV Patients Under Treatment With HAART	04-8520
T-1 T-1 T-1 T-1 T-1	Holmstrom, Erik Niklasson, Anders Bock, Nicolas Rudin, Sven Wills, John	Finite size effects on multilayer relaxations	04-8527
T-1 T-1	Lizarraga, Raquel Wills, John *et al*	On the noncollinear magnetic structure of UO2	04-8528
T-1	Plohr, Jee-Yeon	A model for heterogeneous materials undergoing phase transitions	04-8529
T-1 T-1	Bock, Nicolas Wallace, Duane Coffey, Derot	A study of the cross-over temperature between the adjabatic and non-adiabatic contributions to the electron - ryon on free energy on NA, K, AL, PB	04-8530
X-7 T-13	Plohr, Jee-Yeon Plohr, Bradley	Linearized richtmyer-meshkov flow for elastic materials	04-8536
T-14	Sewell, Thomas	White Paper Pertaining to Plasticity in Organic Crystals	04-8585
T-3	Dukowicz, John	Hypop (Hybrid Vertical Coordinate Version of Pop) Summary Current C-Grid Version	04-8586
T-10 T-10	Ribeiro, Ruy Perelson, Alan *et al*	Viral Kinetics in Acute SIV/SHIV Infection: Estimation of the Basic Reproductive Ratio (R0)	04-8589
T-6	Holz, Daniel Hughes, Scott	Using gravitational-wave standard sirens	04-8603
T-6	Holz, Daniel Linder, Eric	Safety in Numbers: Gravitational lensing degradation of the luminosity distance-redshift relation	04-8604
T-10	Leitner, T. *et al*	HIV-1 Requires V3-Loop Glycoslation for CCR5 Binding	04-8605
T-10	Bruno, William	Manifest Interconductance Rank Form: A Canonical Topology with Minimal Reactions for ION Channel Model Identification	04-8607
T-3 T-3 T-3	Hunke, Elizabeth Holland, Marika Maltrud, Mathew Lipscomb, William	The Ocean's Influence on Arctic Sea Ice Thickness, 1978-2002/Journal of Climate	04-8634
T-1 X-7	Burakovsky, L. Preston, Dean	Generalized Guinan-Steinberg formula for the shear modulus at all pressures	04-8643
T-7 CNLS	Hagberg, Aric Marts, Bradley Meron, Ehud Lin, Anna	Bloch-front turbulence in a periodically forced belousov-zhabothinsky reaction	04-8653
T-7	Chowell-Puente, G. *et al*	Epidemiological and clinical characteristics of scorpionism by centruroides limpidus in an endemic area	04-8654
T-7 T-7	Maclachlan, Scott Moulton, John	Multilevel upscaling of heterogeneous media	04-8655
T-7 T-7	Maclachlan, Scott Moulton, John	Multilevel upscaling through variational coarsening	04-8656
T-16 X-5 X-5	Sierk, Arnold Mashnik, Stepan Prael, Richard *et al*	Evaporation and Fission Model for Medical Isotope Production and Other Applications	04-8658
T-11 T-6	Blagoev, Krastan Mihaila, B. *et al*	MRI of neural currents: numerical study	04-8681
T-13 T-13	Smith, Derek Lapedes, Alan *et al*	Antigeic cartography, and the influenza archipelago	04-8682
T-11	Gubernatis, James	Marshall rosenbluth and the metropolis algorithm	04-8683
T-10 T-10	Goldstein, Byron Coombs, D. *et al*	Effects of pMHC Density and TCR Dwell Time on T Cell Activation	04-8684

LANL Group	Author(s)	Title	LAUR No.
T-3	Baxter, Sarah Williams, Todd	A stochastic micromechanical basis for the charac-terization of random heterogeneous materials	04-8690
T-8	Okuniewicz, I. McKellar, Bruce Friedland, A.	Construction and analysis of a many-body neutrino model	04-8707
T-12 T-12 T-12	Thomson, Robb Koslowski, Marisol Lesar, Richard	The complementary roles of noise and energy in metallic deformation	04-8708
T-1 T-1	Bock, Nicolas Wallace, Duane Coffey, Dermot	Non-adiabatic contributions to the free energy from the electron-phonon interaction for Na, K, Al, and Pb	04-8709
T-12	Prodan, Ionut Martin, Richard Scueria, Gustavo	Hybrid density functional studies of bulk actinide oxides	04-8710
T-1	Niklasson, Anders	On the relation between the electronic structure between thin films and bulk alloys	04-8761
T-11 T-1 T-11	Schnell, Ilan Rudin, Sven Albers, Robert	Mechanical and thermodynamic properties of solid zirconium using a tight-binding	04-8762
T-11	Vorontsov, A.*et al*	The FFLO state in two-dimensional D-wave superconductors	04-8764
T-11 T-11 T-1 T-1 CNLS	Graf, Matthias Lookman, Turab Wills, John Wallace, Duane Lashley, Jason	Strong electron-phonon coupling in delta-phase stabilized Pu	04-8765
T-3	Williams, Todd	Deterministic to Stochastic Modeling of the History-Dependent Behavior of Composite	04-8766
T-3	Johnson, Norman	Moderating Strategic Surprise- Through the Eyes of Protecting National Public Health	04-8767
T-6	Mihaila, Bogdan	Density and spin response functions in ultracold fermionic gases	04-8823
T-6	Mihaila, Bogdan	Real-time dynamics of phase transitions	04-8824
CNLS T-12	Reichhardt, Charles Reichhardt, Cynthia	Ordering and melthing in colloidal molecule crystal mixtures	04-8826
CNLS CNLS	Redner, Sidney Antal, Tibor	Excited Random Walk In One Dimension	04-8827
T-6	Heger, Alexander Woosley, Stan Baraffe, Isabelle	Final Stages of the most massive stars	04-8839
T-7	Loubere, Raphael	First Steps Into Ale Inc(Ubator).A 2d Arbitrary-Lagrangian-Eulerian Code On General Polygonal Mesh For Compressible Flows Version 1.0.0	04-8840
T-1 T-1	Wallace, Duane Lorenzi Venneri, G.	Vibration-transit theory of the intermediate scattering function of monatomic glass	04-8859
T-1 T-1 T-1	Wallace, Duane Lorenzi Venneri, G. Chisolm, Eric	Time correlation functions in vibration-transit theory of liquid dynamics	04-8860
CNLS CNLS	Sood, Vishal Redner, Sidney	First passage properties of the erdos-renyi random graph	04-8884
CNLS CNLS	Redner, Sidney Chen, Pu	Majority Rule Dynamics In Finite Dimensions	04-8885
CNLS	Redner, Sidney	Citation Statistics From More Than a Century of Physical Review	04-8886
CNLS CNLS	Redner, Sidney Vazquez, Federico	Absorbing multicultural states in the axelrod model	04-8888

Appendix B–Los Alamos Unlimited Releases (LA-URs)

LANL Group	Author(s)	Title	LAUR No.
T-11 T-11 T-11 T-DO	Zhu, Jian-Xin Rasmussen, Kim Balatsky, A. Bishop, Alan	Electronic structure in the Peyrard-Bishop-Holstein model for DNA	04-8889
X-5 T-16	Mashnik, Stepan Sierk, Arnold	A Review of Models and Codes for Spallation Sources, Accelerator Driven systems, and Other Applications	04-8891
T-16	Bar, Oliver Claude, Bernard Rupak, Gautam Shoresh, Noam	Staggered Chiral Perturbation Theory with Ginsparg-Wilson Valence Quarks	04-8892
T-15 T-15	Lapenta, Giovanni Markidis, Stefano	Plug and Play approach to validation and verification of particle-based algorithms	04-8905
T-7 CNLS	Loubere, Raphael Caramana, Edward	The Force/Work Differencing of Exceptional Points in the Discrete, Compatible Formulation of Lagrangian Hydrodynamics	04-8906
CNLS CNLS	Sood, Vishal Redner, Sidney	Voter model on a heterogeneous graph	04-8914
T-11 T-11 T-11	Saxena, Avadh Lookman, Turab Albers, Robert	Landau free energy for structural phase transitions in Pu	04-8925
T-3 T-3	Zhang, Duan Ma, Xia	Evolution of Contact Statistics in Dense Granular Material	04-8932
T-3 T-3	Lipscomb, William Hunke, E. *et al*	Comparison of model- and satellite-derived arctic sea ice thickness	04-8934
T-16	Möller, Peter	Global, Microscopic Nuclear-Structure Calculations in a Unified Model	04-8941
T-12	Holian, Brad	Molecular dynamics comes of age for shockwave research	04-8949
T-3 MST-8 MST-6 MST-6 MST-8	Beyerlein, Irene Li, Saiyi Necker, Carl Alexander, David Tome, Carlos	Non-Uniform Microstructure and Texture Evolution During Equal Channel Angular Extrusion/Philosophical Magazine	04-8950
T-14 T-14	Brydon, Andrew Bardenhagen, Scott Miller, Erin Seidler, Gerald	Simulation of the Denification of Real Open-celled Foam Microstructure	04-8962
T-15	Finn, John *et al*	Noise Stabilized Random Attractor	04-8989
T-3	Schraad, Mark	A Stochastic Constitutive Law and Two-Field Approach for Modeling the Mechanical Response of Cellular Materials	04-8990
T-15 T-15	Lapenta, Giovanni Ju, Jianwei	Predictor-corrector Preconditioned newton-Krylov Method for Cavity Flow	04-8993
T-10	Iberia, Ruy	Impact of Thymectomy on the Peripheral T-cell Pool in Rhesus Macaque Before and After Infection with Simian Immunodeficiency Virus	04-8994
T-16	Möller, Peter	Nuclear-Structure Calculations for Basic Research and Society	04-9000
T-3 T-3 T-14 ESA-WR	Zuo, Qiuhai Addessio, Francis Dienes, John Lewis, Matthew	A Continuum Damage Model for Brittle Materials Based on the Dominant Crack/International Journal of Solids and Structures	04-9030
T-10 T-10	Sanbonmatsu, K. Joseph, Simpson Tung, C.-S.	Simulating Movement of Cognate TRNA in the Ribosome	04-9040
T-15 T-15	Lapenta, Giovanni Ricci, Paolo *et al*	Kinetic Simulations of x-line Propagation in 3D Reconnection	04-9041
T-10 T-10 T-10 T-10	Faeder, James Blinov, Mikhail Hlavacek, William Goldstein, Byron	Investigating the Role of Complex Formation in Immunoreceptor Signaling Using Mathematical Modeling	04-9042

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T-15	Glasser, Alan	The SEL Fluid Simulation Code	04-9043
T-12	Sergei, Tretiak	Theoretical study of solvent effects on electronic structure and spectra of paracyclophane chromophores	04-9049
T-10 T-10	Korber, Bette Szinger, J. *et al*	Dominant Influence of HLA-B Mediating the Potential Co-evolution of HIV and HLA	04-9051
T-6	Luu, Thomas	Bloch-Horowitz Schemes	04-9078
T-15 T-15	Finn, John Chacon, Luis	Volume Preserving Integrators for Solenoidal Fields on a Grid	04-9082
T-10	Torney, David *et al*	Subwords in Reverse Complement Order	04-9083