

Publications of Kirk T. McDonald

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Publications in Refereed Journals

1. (with C.Y. Prescott *et al.*) *Wire Orbit Ray Tracing of Magnets Using Magnetostrictive Wire Chamber Techniques*, Nucl. Instr. and Meth. **76**, 173 (1969), kirkmc.princeton.edu/papers/prescott_nim_76_173_69.pdf
2. (with K. Eggert *et al.*) *A Streamer Chamber Detector at the CERN Intersecting Storage Rings*, Nucl. Instr. and Meth. **126**, 477 (1975), kirkmc.princeton.edu/papers/eggert_nim_126_477_75.pdf
3. (with K. Eggert *et al.*) *Angular Correlations Between the Charged Particles Produced in pp Collisions at ISR Energies*, Nucl. Phys. **B86**, 201 (1975), kirkmc.princeton.edu/papers/eggert_np_b86_201_75.pdf
4. (with P. Darriulat *et al.*) *Conversion Efficiency of Lead for 30-200 MeV Photons*, Nucl. Instr. and Meth. **129**, 105 (1975), kirkmc.princeton.edu/papers/darriulat_nim_129_105_75.pdf
5. (with K. Eggert *et al.*) *A Study of High Transverse Momentum π^0 's at ISR Energies*, Nucl. Phys. **B98**, 49 (1975), kirkmc.princeton.edu/papers/eggert_np_b98_49_75.pdf
6. (with K. Eggert *et al.*) *Angular Correlations in Proton-Proton Collisions Producing a High Transverse Momentum π^0* , Nucl. Phys. **B98**, 73 (1975), kirkmc.princeton.edu/papers/eggert_np_b98_73_75.pdf
7. (with K. Eggert *et al.*) *A Measurement of the Proton-Proton Cross Section at the CERN ISR*, Nucl. Phys. **B98**, 93 (1975), kirkmc.princeton.edu/papers/eggert_np_b98_93_75.pdf
8. (with C.A. Heusch *et al.*) *Two-Body Photodisintegration of ^3He and a New Test of Time-Reversal Invariance in the Electromagnetic Interaction*, Phys. Rev. Lett. **37**, 405 (1976), kirkmc.princeton.edu/papers/heusch_prl_37_405_76.pdf
9. (with C.A. Heusch *et al.*) *Radiative Formation of ^3He and a New Test of Time-Reversal Invariance in the Electromagnetic Interaction*, Phys. Rev. Lett. **37**, 409 (1976), kirkmc.princeton.edu/papers/heusch_prl_37_409_76.pdf
10. (with P. Darriulat *et al.*) *Structure of Final States with a High Transverse Momentum π^0 in Proton-Proton Collisions*, Nucl. Phys. **B107**, 429 (1976), kirkmc.princeton.edu/papers/darriulat_np_b107_429_76.pdf

11. (with P. Darriulat *et al.*) *Large Transverse Momentum Photons from High-Energy Proton-Proton Collisions*, Nucl. Phys. **B110**, 365 (1976),
kirkmc.d.princeton.edu/papers/darriulat_np_b110_365_76.pdf
12. (with K.J. Anderson *et al.*) *Production of Muon Pairs by 150-GeV/c π^+ and Protons*, Phys. Rev. Lett. **36**, 237 (1976),
kirkmc.d.princeton.edu/papers/anderson_prl_36_237_76.pdf
13. (with K.J. Anderson *et al.*) *Inclusive μ -Pair Production at 150 GeV by π^+ Mesons and Protons*, Phys. Rev. Lett. **37**, 799 (1976),
kirkmc.d.princeton.edu/papers/anderson_prl_37_799_76.pdf
14. (with K.J. Anderson *et al.*) *Contribution of Muon Pairs to the Yield of Single Prompt Muons*, Phys. Rev. Lett. **37**, 803 (1976),
kirkmc.d.princeton.edu/papers/anderson_prl_37_803_76.pdf
15. (with J.G. Branson *et al.*) *Observation of Prompt Single Muons and Dimuons in Hadron-Nucleus Collisions at 200 GeV/c*, Phys. Rev. Lett. **38**, 457 (1977),
kirkmc.d.princeton.edu/papers/branson_prl_38_457_77.pdf
16. (with J.G. Branson *et al.*) *Search for Muons Produced in Conjunction with the J/ψ Particle*, Phys. Rev. Lett. **38**, 580 (1977),
kirkmc.d.princeton.edu/papers/branson_prl_38_580_77.pdf
17. (with J.G. Branson *et al.*) *Production of the J/ψ and $\psi'(3.7)$ by 225-GeV/c π^\pm and Proton Beams on C and Sn Targets*, Phys. Rev. Lett. **38**, 1331 (1977),
kirkmc.d.princeton.edu/papers/branson_prl_38_1331_77.pdf
18. (with J.G. Branson *et al.*) *Hadronic Production of Massive Muon Pairs: Dependence on Incident-Particle Type and on Target Nucleus*, Phys. Rev. Lett. **38**, 1334 (1977),
kirkmc.d.princeton.edu/papers/branson_prl_38_1334_77.pdf
19. (with W. Thomé *et al.*) *Charged Particle Multiplicity Distributions in pp Collisions at ISR Energies*, Nucl. Phys. **B129**, 365 (1977),
kirkmc.d.princeton.edu/papers/thome_np_b129_365_77.pdf
20. (with J. Carroll *et al.*) *A Study of the Reaction $p + d \rightarrow {}^3\text{He} + \pi^0$ in the Resonance Region*, Nucl. Phys. **A305**, 502 (1978),
kirkmc.d.princeton.edu/papers/carroll_np_a305_502_78.pdf
21. (with G.H. Sanders *et al.*) *Drift Chamber Performance in a Strong Magnetic Field: Measurement of the Drift Angle up to 4.5 T*, Nucl. Instr. and Meth. **156**, 159 (1978),
kirkmc.d.princeton.edu/papers/sanders_nim_156_159_78.pdf
22. (with K.J. Anderson *et al.*) *Production of Muon Pairs by 225-GeV/c π^\pm , K^+ , p^\pm Beams on Nuclear Targets*, Phys. Rev. Lett. **42**, 944 (1979),
kirkmc.d.princeton.edu/papers/anderson_prl_42_944_79.pdf

23. (with G.E. Hogan *et al.*) *Comparison of Muon-Pair Production to the Quark-Antiquark Annihilation Model*, Phys. Rev. Lett. **42**, 948 (1979),
kirkmc.d.princeton.edu/papers/hogan_prl_42_948_79.pdf
24. (with C.B. Newman *et al.*) *Determination of the Pion Structure Function from Muon-Pair Production*, Phys. Rev. Lett. **42**, 951 (1979),
kirkmc.d.princeton.edu/papers/newman_prl_42_951_79.pdf
25. (with J.G. Branson *et al.*) *Limits on the Hadronic Production of D(1865) Charmed Mesons*, Phys. Rev. D **20**, 337 (1979),
kirkmc.d.princeton.edu/papers/branson_prd_20_337_79.pdf
26. (with K.J. Anderson *et al.*) *Evidence for Longitudinal Photon Polarization in Muon-Pair Production by Pions*, Phys. Rev. Lett. **43**, 1219 (1979),
kirkmc.d.princeton.edu/papers/anderson_prl_43_1219_79.pdf
27. (with K.J. Anderson *et al.*) *Search for Additional Muons in Hadronic Production of J/ψ Particles*, Phys. Rev. D **21**, 3075 (1980),
kirkmc.d.princeton.edu/papers/anderson_prd_21_3075_80.pdf
28. (with R.N. Coleman *et al.*) *Limit on Bottom-Meson Pair Production in π⁻ - Nucleus Interactions at 225 GeV/c*, Phys. Rev. Lett. **44**, 1313 (1980),
kirkmc.d.princeton.edu/papers/coleman_prl_44_1313_80.pdf
29. (with Lu Changguo *et al.*) *Performance of the Parallel Multiplate Avalanche Chamber*, Physica Energie Fortis et Physics Nuclearis **7**, 285 (1983).
30. (with I.-H. Chiang *et al.*) *Experimental Search for Narrow Resonances in the Reaction π⁻p → γγn at 13 GeV/c*, Phys. Lett. **140B**, 145 (1984),
kirkmc.d.princeton.edu/papers/chiang_pl_140b_145_84.pdf
31. (with S. Palestini *et al.*) *Pion Structure as Observed in the Reaction π⁻N → μ⁺μ⁻X at 80 GeV/c*, Phys. Rev. Lett. **55**, 2649 (1985),
kirkmc.d.princeton.edu/papers/palestini_prl_55_2649_85.pdf
32. (with C. Biino *et al.*) *An Apparatus to Measure the Structure of the Pion*, Nucl. Instr. and Meth. **A243**, 323 (1986),
kirkmc.d.princeton.edu/papers/biino_nim_a243_323_86.pdf
33. (with W.C. Louis *et al.*) *Upper Limits on the Decay D⁰ → μ⁺μ⁻ and on D⁰-D⁰ Mixing*, Phys. Rev. Lett. **56**, 1027 (1986),
kirkmc.d.princeton.edu/papers/louis_prl_56_1027_86.pdf
34. (with J.P. Alexander *et al.*) *Longitudinal Photon Polarization in Muon Pair Production at High x_F*, Phys. Rev. D **34**, 315 (1986),
kirkmc.d.princeton.edu/papers/alexander_prd_34_315_86.pdf

35. (with I.-H. Chiang *et al.*) *Search for Exclusive J/ψ Production*, Phys. Rev. D **34**, 1619 (1986), kirkmcd.princeton.edu/papers/chiang_prd_34_1619_86.pdf
36. (with K.D. Bonin *et al.*) *Observation of Interference Between Čerenkov and Synchrotron Radiation*, Phys. Rev. Lett. **57**, 2264 (1986), kirkmcd.princeton.edu/papers/bonin_prl_57_2264_86.pdf
37. (with C. Biino *et al.*) *J/ψ Longitudinal Polarization from πN Interactions*, Phys. Rev. Lett. **58**, 2523 (1987), kirkmcd.princeton.edu/papers/biino_prl_58_2523_87.pdf
38. *Design of the Laser-Driven RF Electron Gun for the BNL Accelerator Test Facility*, IEEE Trans. Electron Devices, **35**, 2052 (1988), kirkmcd.princeton.edu/papers/mcdonald_ieeeted_35_2052_88.pdf
kirkmcd.princeton.edu/examples/accel/mcdonald_lac88_th2-04.pdf
39. (with J.S. Conway *et al.*) *Experimental Study of Muon Pairs Produced by 252-GeV Pions on Tungsten*, Phys. Rev. D **39**, 92 (1989), kirkmcd.princeton.edu/papers/conway_prd_39_92_89.pdf
40. (with J.G. Heinrich *et al.*) *Measurement of the Ratio of Sea to Valence Quarks in the Nucleon*, Phys. Rev. Lett. **63**, 356 (1989), kirkmcd.princeton.edu/papers/heinrich_prl_63_356_889.pdf
41. (with J.G. Heinrich *et al.*) *Higher Twist Effects in the Reaction $\pi^- N \rightarrow \mu^+ \mu^- X$ at 253 GeV/c*, Phys. Rev. D **44**, 1909 (1991), kirkmcd.princeton.edu/papers/heinrich_prd_44_1909_91.pdf
42. (with K. Batchelor *et al.*) *Performance of the Brookhaven photocathode rf gun*, Nucl. Instr. and Meth. **A318**, 92 (1992), kirkmcd.princeton.edu/papers/batchelor_nim_a318_372_92.pdf
43. (with W.S. Anderson *et al.*) *Electron Attachment, Effective Ionization Coefficient, and Electron Drift Velocity for CF_4 Gas Mixtures*, Nucl. Instr. and Meth. A **323**, 273 (1992), kirkmcd.princeton.edu/papers/anderson_nim_a323_273_92.pdf
44. (with N.S. Lockyer *et al.*) *Observation of Čerenkov Rings Using a Low-Pressure Parallel-Plate Chamber and a Solid Cesium-Iodide Photocathode*, Nucl. Instr. and Meth. **A332**, 142 (1993), kirkmcd.princeton.edu/papers/lockyer_nim_a332_142_93.pdf
45. (with C. Lu and Y. Zhu) *Helium Gas Mixtures for Ring Imaging Čerenkov Detectors with CsI Photocathodes*, Nucl. Instr. and Meth. **A334**, 328 (1993), kirkmcd.princeton.edu/papers/lu_nim_a334_328_93.pdf
46. (with C. Lu) *Properties of Reflective and Semitransparent CsI Photocathodes*, Nucl. Instr. and Meth. **A343**, 135 (1994), kirkmcd.princeton.edu/papers/lu_nim_a343_135_94.pdf
47. (with C. Lu *et al.*) *Characterization of CsI Photocathodes for Use in a Fast RICH Detector*, Nucl. Instr. and Meth. **A366**, 60 (1995), kirkmcd.princeton.edu/papers/lu_nim_a366_60_95.pdf

48. (with C. Lu *et al.*) *Prototype Studies of a Fast RICH Detector with a CsI Photocathode*, Nucl. Instr. and Meth. **A371**, 155 (1996), kirkmc.d.princeton.edu/papers/lu_nim_a371_155_96.pdf
49. (with C. Bula *et al.*) *Observation of Nonlinear Effects in Compton Scattering*, Phys. Rev. Lett. **76**, 3116 (1996), kirkmc.d.princeton.edu/papers/bula_prl_76_3116_96.pdf
50. (with T. Kotseroglou *et al.*) *Picosecond Timing of Terawatt Laser Pulses with the SLAC 46-GeV Electron Beam*, Nucl. Instr. and Meth. **A383**, 309 (1996), kirkmc.d.princeton.edu/papers/kotseroglou_nim_a383_309_96.pdf
51. (with D.L. Burke *et al.*) *Positron Production in Multiphoton Light-by-Light Scattering*, Phys. Rev. Lett. **79**, 1626 (1997), kirkmc.d.princeton.edu/papers/burke_prl_79_1626_97.pdf
52. *Comment on “Experimental Observation of Electrons Accelerated in Vacuum to Relativistic Energies by a High-Energy Laser” by Malka *et al.**, Phys. Rev. Lett. **80**, 1350 (1998), kirkmc.d.princeton.edu/papers/mcdonald_prl_80_1350_98.pdf
53. (with A. Boucham *et al.*) *The BABAR drift chamber project*, Nucl. Instr. and Meth. **A409**, 46 (1998), kirkmc.d.princeton.edu/papers/boucham_nim_a409_46_98.pdf
54. (with G. Sciolla *et al.*) *The BABAR drift chamber*, Nucl. Instr. and Meth. **A419**, 310 (1998), kirkmc.d.princeton.edu/papers/sciolla_nim_a419_310_98.pdf
55. (with C.M. Ankenbrandt *et al.*) *Status of Muon Collider Research and Development and Future Plans*, Phys. Rev. ST Accel. Beams **2**, 081001 (1999), kirkmc.d.princeton.edu/papers/ankenbrandt_prstab_2_081001_99.pdf
56. (with C. Bamber *et al.*) *Studies of nonlinear QED in collisions of 46.6 GeV electrons with intense laser pulses*, Phys. Rev. D **60**, 092004 (1999), kirkmc.d.princeton.edu/papers/bamber_prd_60_092004_99.pdf
57. (with K. Shmakov) *Temporary Acceleration of Electrons While Inside an Intense Electromagnetic Pulse*, Phys. Rev. ST Accel. Beams **2**, 121301 (1999), kirkmc.d.princeton.edu/papers/mcdonald_prstab_2_121301_99.pdf
58. (with K.-J. Kim, G.V. Stupakov and M.S. Zolotarev) *Comment on “Coherent Acceleration by Subcycle Laser Pulses”*, Phys. Rev. Lett. **84**, 3210 (2000), kirkmc.d.princeton.edu/papers/kim_prl_84_3210_00.pdf
59. (with B. Aubert *et al.*) *Measurement of CP-Violating Asymmetries in B^0 Decays to CP Eigenstates*, Phys. Rev. Lett. **86**, 2515 (2001), kirkmc.d.princeton.edu/papers/aubert_prl_86_2515_01.pdf
60. (with B. Aubert *et al.*) *Observation of CP-Violation in the B^0 Meson System*, Phys. Rev. Lett. **87**, 091801 (2001), kirkmc.d.princeton.edu/papers/aubert_prl_87_091801_01.pdf

61. (with B. Aubert *et al.*) *Measurement of the Decays $B \rightarrow \phi K$ and $B \rightarrow \phi K^*$* , Phys. Rev. Lett. **87**, 151801 (2001), kirkmc.d.princeton.edu/papers/aubert_pr1_87_151801_01.pdf
62. (with B. Aubert *et al.*) *Measurement of Branching Fractions and Search for CP-Violating Charge Asymmetries in Charmless Two-Body B Decays into Pions and Kaons*, Phys. Rev. Lett. **87**, 151802 (2001), kirkmc.d.princeton.edu/papers/aubert_pr1_87_151802_01.pdf
63. (with B. Aubert *et al.*) *Measurement of J/ψ Production in Continuum e^+e^- Annihilations near $\sqrt{s} = 10.6$ GeV*, Phys. Rev. Lett. **87**, 162002 (2001), kirkmc.d.princeton.edu/papers/aubert_pr1_87_162002_01.pdf
64. (with B. Aubert *et al.*) *Measurement of the B^0 and B^+ Meson Lifetimes with Fully Reconstructed Hadronic Final States*, Phys. Rev. Lett. **87**, 201803 (2001), kirkmc.d.princeton.edu/papers/aubert_pr1_87_201803_01.pdf
65. (with B. Aubert *et al.*) *Measurements of the Branching Fractions of Exclusive Charmless BMeson Decays with η' or ω Mesons*, Phys. Rev. Lett. **87**, 221802 (2001), kirkmc.d.princeton.edu/papers/aubert_pr1_87_221802_01.pdf
66. (with B. Aubert *et al.*) *Measurement of the $B \rightarrow J/\psi K^*(892)$ Decay Amplitudes*, Phys. Rev. Lett. **87**, 241801 (2001), kirkmc.d.princeton.edu/papers/aubert_pr1_87_241801_01.pdf
67. (with B. Aubert *et al.*) *Search for the Decay $B^0 \rightarrow \gamma\gamma$* , Phys. Rev. Lett. **87**, 241803 (2001), kirkmc.d.princeton.edu/papers/aubert_pr1_87_241803_01.pdf
68. (with B. Aubert *et al.*) *Measurement of the branching fractions for $\psi(2S) \rightarrow e^+e^-$ and $\psi(2S) \rightarrow \mu^+\mu^-$* , Phys. Rev. D **65**, 031101 (2002), kirkmc.d.princeton.edu/papers/aubert_prd_65_031101_02.pdf
69. (with B. Aubert *et al.*) *Measurement of branching fractions for exclusive B decays to charmonium final states*, Phys. Rev. D **65**, 032001 (2002), kirkmc.d.princeton.edu/papers/aubert_prd_65_032001_02.pdf
70. (with B. Aubert *et al.*) *Direct CP violation searches in charmless hadronic B meson decays*, Phys. Rev. D **65**, 051101 (2002), kirkmc.d.princeton.edu/papers/aubert_prd_65_051101_02.pdf
71. (with B. Aubert *et al.*) *Study of CP-violating asymmetries in $B^0 \rightarrow \pi^+\pi^-$, $K^+\pi^-$ decays*, Phys. Rev. D **65**, 051502 (2002), kirkmc.d.princeton.edu/papers/aubert_prd_65_051502_02.pdf
72. (with B. Aubert *et al.*) *The BABAR Detector*, Nucl. Instr. and Meth. **A479** 1, (2002), kirkmc.d.princeton.edu/papers/aubert_nim_a479_1_02.pdf
73. (with B. Aubert *et al.*) *Measurement of $B \rightarrow K^*\gamma$ Branching Fractions and Charge Asymmetries*, Phys. Rev. Lett. **88**, 101805 (2002), kirkmc.d.princeton.edu/papers/aubert_pr1_88_101805_02.pdf

74. (with B. Aubert *et al.*) *Measurement of D_s^+ and D_s^{*+} production in B meson decays and from continuum e^+e^- annihilation at $\sqrt{s} = 10.6$ GeV*, Phys. Rev. D **65**, 091104 (2002), kirkmcd.princeton.edu/papers/aubert_prd_65_091104_02.pdf
75. (with A. Hassanein *et al.*) *An R&D program for targetry and capture at a neutrino factory and muon collider source*, Nucl. Instr. and Meth. **A503**, 70 (2003), kirkmcd.princeton.edu/papers/hassanein_nim_a503_70_03.pdf
76. (with D.B. Cline *et al.*) *LANNDD – a massive liquid argon detector for proton decay, supernova and solar neutrino studies and a neutrino factory*, Nucl. Instr. and Meth. A **503**, 136 (2003), kirkmcd.princeton.edu/papers/cline_nim_a503_136_03.pdf
77. (with M.V. Diwan *et al.*) *Very Long Baseline Neutrino Oscillation Experiments for Precise Measurements of Mixing Parameters and CP Violating Effects*, Phys. Rev. D **68**, 012002 (2003), kirkmcd.princeton.edu/papers/diwan_prd_68_012002_03.pdf
78. (with M.M. Alsharo'a *et al.*) *Status of Neutrino Factory and Muon Collider Research and Development and Future Plans*, Phys. Rev. ST Accel. Beams **6**, 081001 (2003), kirkmcd.princeton.edu/papers/alsharo'a_prstab_6_081001_03.pdf
79. (with N.Simos *et al.*) *Target Material Irradiation Studies for High-Intensity Accelerator Beams*, Nucl. Phys. B Proc. Suppl. **149**, 255 (2005), [kirkmcd.princeton.edu/examples/accel/simos_npb\(ps\)_149_259_05.pdf](http://kirkmcd.princeton.edu/examples/accel/simos_npb(ps)_149_259_05.pdf)
80. (with V. Graves *et al.*) *A free-jet Hg target operating in a high magnetic field intersecting a high-power proton beam*, Nucl. Instr. and Meth. A **562**, 928 (2006), kirkmcd.princeton.edu/examples/accel/graves_nim_a562_928_06.pdf
81. (with N.Simos *et al.*) *Solid Target Studies for Muon Colliders and Neutrino Beams*, Nucl. Phys. B Proc. Suppl. **155**, 288 (2006), [kirkmcd.princeton.edu/examples/accel/simos_npb\(ps\)_155_288_06.pdf](http://kirkmcd.princeton.edu/examples/accel/simos_npb(ps)_155_288_06.pdf)
82. (with M.V. Berry) *Exact and Geometrical-Optics Energy Trajectories in Twisted Beams*, J. Opt. A **10**, 035005 (2008), kirkmcd.princeton.edu/papers/berry_joa_10_035005_08.pdf
83. (with H. Park *et al.*) *Optical Diagnostics of Mercury Jet for an Intense Proton Target*, Rev. Sci. Instr. **79**, 045111 (2008), kirkmcd.princeton.edu/papers/park_rsi_79_045111_08.pdf
84. (with G. Alexander *et al.*) *Observation of Polarized Positrons from an Undulator-Based Source*, Phys. Rev. Lett. **100**, 210801 (2008), kirkmcd.princeton.edu/papers/alexander_prl_100_210801_08.pdf
85. (with N. Simos *et al.*) *Irradiation damage studies of high power accelerator materials*, J. Nucl. Mat. **377**, 41 (2008), kirkmcd.princeton.edu/papers/simos_jnm_377_41_08.pdf
86. (with M. Apollonio *et al.*) *Accelerator design concept for future neutrino facilities*, J. Inst. **4**, p07001 (2009), kirkmcd.princeton.edu/papers/apollonio_jinst_4_p07001_09.pdf

87. (with G. Alexander *et al.*) *Undulator-based production of polarized positrons*, Nucl. Instr. and Meth. **A610**, 451 (2009), kirkmcd.princeton.edu/papers/alexander_nim_a610_451_09.pdf
88. (with R. Samulyak *et al.*) *Computational Algorithms for Multiphase Magnetohydrodynamics and Applications to Accelerator Targets*, Cond. Matt. Phys. **13**, no. 4, 43402 (2010), kirkmcd.princeton.edu/papers/samulyak_cmp_13_4_43402_10.pdf
89. (with L. Ma *et al.*) *The mass production and quality control of RPCs for the Daya Bay experiment*, Nucl. Instr. and Meth. A **659**, 154 (2011), kirkmcd.princeton.edu/examples/detectors/ma_nim_a659_154_11.pdf
90. (with J.-L. Xu *et al.*) *Design and preliminary test results of Daya Bay RPC modules*, Chinese Phys. C **35**, 844 (2011), kirkmcd.princeton.edu/examples/detectors/ji-lei_cp_c35_844_11.pdf
91. (with C. Lu *et al.*) *Aging study for the BESIII-type RPC*, Nucl. Instr. and Meth. A **661**, S226 (2012), kirkmcd.princeton.edu/examples/detectors/lu_nim_a661_S226_12.pdf
92. (with F.P. An *et al.*) *Observation of electron-antineutrino disappearance at Daya Bay*, Phys. Rev. Lett. **108**, 171803 (2012), kirkmcd.princeton.edu/examples/neutrinos/an_pr1_108_171803_12.pdf
93. (with F.P. An *et al.*) *A side-by-side comparison of Daya Bay antineutrino detectors*, Nucl. Instr. and Meth. A **685**, 78 (2012), kirkmcd.princeton.edu/examples/detectors/an_nim_a685_778_12.pdf
94. (with F.P. An *et al.*) *Improved Measurement of Electron Antineutrino Disappearance at Daya Bay*, Chinese Phys. C **37**, 011001 (2013), kirkmcd.princeton.edu/examples/neutrinos/an_cp_c37_011001_13.pdf
95. (with F.P. An *et al.*) *Spectral Measurement of Electron Antineutrino Oscillation Amplitude and Frequency at Daya Bay*, Phys. Rev. Lett. **112**, 061801 (2014), kirkmcd.princeton.edu/examples/neutrinos/an_pr1_112_061801_14.pdf
96. (with D. Adey *et al.*) *Light sterile neutrino sensitivity at the nuSTORM facility*, Phys. Rev. D **89**, 071301 (2014), kirkmcd.princeton.edu/examples/neutrinos/adey_prd_89_071301_14.pdf
97. (with F.P. An *et al.*) *Search for a Light Sterile Neutrino at Daya Bay*, Phys. Rev. Lett. **113**, 141802 (2014), kirkmcd.princeton.edu/examples/neutrinos/an_pr1_113_141802_14.pdf
98. (with F.P. An *et al.*) *Independent measurement of the neutrino mixing angle θ_{13} via neutron capture on hydrogen at Daya Bay*, Phys. Rev. D **90**, 071101 (2014), kirkmcd.princeton.edu/examples/neutrinos/an_prd_90_071101_14.pdf
99. (with Y. Zhan *et al.*) *The Effects of Pipe Geometry on Fluid Flow in a Muon Collider Particle Production System*, J. Fluid Eng. **136**, 101203 (2014), kirkmcd.princeton.edu/examples/fluids/zhan_jfe_136_101203_14.pdf

100. (with M. Bogomilov *et al.*) *Neutrino factory*, Phys. Rev. STAB **17**, 121002 (2014),
kirkmcd.princeton.edu/examples/accel/bogomilov_prstab_17_121002_14.pdf
101. (with F.P. An *et al.*) *The muon system of the Daya Bay Reactor antineutrino experiment*, Nucl. Instr. and Meth. A **713**, 8 (2015),
kirkmcd.princeton.edu/examples/detectors/an_nim_a713_8_15.pdf
102. (with F.P. An *et al.*) *New Measurement of Antineutrino Oscillation with the Full Detector Configuration at Daya Bay*, Phys. Rev. Lett. **115**, 111802 (2015),
kirkmcd.princeton.edu/examples/neutrinos/an_pr1_115_111802_15.pdf
103. (with F.P. An *et al.*) *The Detector System of the Daya Bay Reactor Neutrino Experiment*, Nucl. Instr. and Meth. A **811**, 133 (2016),
kirkmcd.princeton.edu/examples/detectors/an_nim_a811_133_16.pdf
104. (with F.P. An *et al.*) *Measurement of the Reactor Antineutrino Flux and Spectrum at Daya Bay*, Phys. Rev. Lett. **116**, 061801 (2016),
kirkmcd.princeton.edu/examples/neutrinos/an_pr1_116_061801_16.pdf
105. (with F.P. An *et al.*) *New measurement of θ_{13} via neutron capture on hydrogen at Daya Bay*, Phys. Rev. D **93**, 072011 (2016),
kirkmcd.princeton.edu/examples/neutrinos/an_prd_93_072011_16.pdf
106. (with P. Adamson *et al.*) *Limits on Active to Sterile Neutrino Oscillations from Disappearance Searches in the MINOS, Daya Bay, and Bugey-3 Experiments*, Phys. Rev. Lett. **117**, 151801 (2016), kirkmcd.princeton.edu/examples/neutrinos/an_pr1_117_151801_16.pdf
107. (with F.P. An *et al.*) *Improved Search for a Light Sterile Neutrino with the Full Configuration of the Daya Bay Experiment*, Phys. Rev. Lett. **117**, 151802 (2016),
kirkmcd.princeton.edu/examples/neutrinos/an_pr1_117_151802_16.pdf
108. (with N. Simos *et al.*) *Radiation damage and thermal shock response of carbon-fiber-reinforced materials to intense high-energy proton beams*, Phys. Rev. Accel. Beams **19**, 111002 (2016),
kirkmcd.princeton.edu/examples/accel/simos_prab_19_111002_16.pdf
109. (with M. Elbakhshwan *et al.*) *X-ray diffraction studies of 145 MeV proton-irradiated AlBeMet 162*, Nucl. Mat. Eng. **8**, 8 (2016),
http://kirkmcd.princeton.edu/examples/accel/elbakhshwan_nme_8_8_16.pdf
110. (with F.P. An *et al.*) *Improved measurement of the reactor antineutrino flux and spectrum at Daya Bay*, Chinese Phys. C **41**, 013002 (2017),
kirkmcd.princeton.edu/examples/neutrinos/an_cp_c41_013002_17.pdf
111. (with R. Acciarri *et al.*) *Design and construction of the MicroBooNE detector*, Jinst **12**, P02017 (2017), kirkmcd.princeton.edu/examples/detectors/acciarri_jinst_12_p02017_17.pdf

112. (with F.P. An *et al.*) *Measurement of electron antineutrino oscillation based on 1230 days of operation of the Daya Bay experiment*, Phys. Rev. D **95**, 072006 (2017),
kirkmc.d.princeton.edu/examples/neutrinos/an_prd_95_072006_17.pdf
113. (with F.P. An *et al.*) *Evolution of the Reactor Antineutrino Flux and Spectrum at Daya Bay*, Phys. Rev. Lett. **118**, 251801 (2017),
kirkmc.d.princeton.edu/examples/neutrinos/an_prl_118_251801_17.pdf
114. (with F.P. An *et al.*) *Seasonal variation of the underground cosmic muon flux observed at Daya Bay*, J. Cos. Astro. Phys. **1**, 1 (2018),
kirkmc.d.princeton.edu/examples/neutrinos/an_jcap01_001_18.pdf
115. (with F.P. An *et al.*) *Cosmogenic neutron production at Daya Bay*, Phys. Rev. D **97**, 052009 (2018), kirkmc.d.princeton.edu/examples/neutrinos/an_prd_97_052009_18.pdf
116. (with N. Simos *et al.*) *Multi-MW accelerator target material properties under proton irradiation at Brookhaven National Laboratory linear isotope producer*, Phys. Rev. Accel. Beams **21**, 053001 (2018),
kirkmc.d.princeton.edu/examples/accel/simos_prstab_21_053001_18.pdf
117. (with D. Adey *et al.*) *Search for a time-varying electron antineutrino signal at Daya Bay*, Phys. Rev. D **98**, 0923013 (2018),
kirkmc.d.princeton.edu/examples/neutrinos/adey_prd_98_092013_18.pdf
118. (with D. Adey *et al.*) *Measurement of the Electron Antineutrino Oscillation with 1958 Days of Operation at Daya Bay*, Phys. Rev. Lett. **121**, 241805 (2018),
kirkmc.d.princeton.edu/examples/neutrinos/adey_prl_121_241805_18.pdf
119. (with D. Adey *et al.*) *Improved measurement of the reactor antineutrino flux at Daya Bay*, Phys. Rev. D **100**, 052004 (2019),
kirkmc.d.princeton.edu/examples/neutrinos/adey_prd_100_052004_19.pdf
120. (with D. Adey *et al.*) *A high precision calibration of the nonlinear energy response at Daya Bay*, Nucl. Instr. Meth. A **940**, 230 (2019),
http://kirkmc.d.princeton.edu/examples/detectors/adey_nim_a940_230_19.pdf
121. (with D. Adey *et al.*) *Extraction of the ^{235}U and ^{239}Pu Antineutrino Spectra at Daya Bay*, Phys. Rev. Lett. **123**, 111801 (2019),
kirkmc.d.princeton.edu/examples/neutrinos/adey_prl_121_241805_18.pdf
122. (with M.C. Vignali *et al.*) *Deep diffused Avalanche photodiodes for charged particles timing*, Nucl. Instrum. Meth. A **958**, 162405 (2020),
kirkmc.d.princeton.edu/examples/detectors/vignali_nim_a958_162405_20.pdf
123. (with P. Adamson *et al.*) *Improved Constraints on Sterile Neutrino Mixing from Disappearance Searches in the MINOS, MINOS+, Daya Bay, and Bugey-3 Experiments*, Phys. Rev. Lett. **125**, 071801 (2020),
http://kirkmc.d.princeton.edu/examples/neutrinos/adamson_prl_125_071801_20.pdf

124. (with A. Abusleme *et al.*) *Optimization of the JUNO liquid scintillator composition using a Daya Bay antineutrino detector*, Nucl. Instrum. Meth. A **988**, 164823 (2021), http://kirkmcd.princeton.edu/examples/detectors/abulseme_nim_a988_164823_21.pdf
125. (with F.P. An *et al.*) *Search for electron-antineutrinos associated with gravitational-wave events GW150914, GW151012, GW151226, GW170104, GW170608, GW170814, and GW170817 at Daya Bay*, Chinese Phys. C **45**, 055001 (2021), http://kirkmcd.princeton.edu/examples/neutrinos/an_cpc_45_055001_21.pdf
126. (with F.P. An *et al.*) *Antineutrino energy spectrum unfolding based on the Daya Bay measurement and its applications*, Chinese Phys. C **45**, 073001 (2021), http://kirkmcd.princeton.edu/examples/neutrinos/an_cpc_45_073001_21.pdf
127. (with F.P. An *et al.*) *Joint Determination of Reactor Antineutrino Spectra from ^{235}U and ^{239}Pu Fission by Daya Bay and PROSPECT*, Phys. Rev. Lett. **128**, 081801 (2022), http://kirkmcd.princeton.edu/examples/neutrinos/an_prl_128_081801_22.pdf

Pedagogic Papers in Refereed Journals

128. (with C. Farina and A. Tort) *Right and Wrong Use of the Lenz Vector for Non-Newtonian Potentials*, Am. J. Phys. **58**, 540 (1990),
kirkmcd.princeton.edu/papers/mcdonald_ajp_58_540_90.pdf
translated into Chinese: College Physics **11**, No. 6, 21 (1992).
129. *Motion of a Leaky Tank Car*, Am. J. Phys. **59**, 813 (1990),
kirkmcd.princeton.edu/papers/mcdonald_ajp_59_813_91.pdf
130. *The relation between expressions for time-dependent electromagnetic fields given by Jefimenko and by Panofsky and Phillips*, Am. J. Phys. **65**, 1074 (1997),
kirkmcd.princeton.edu/papers/mcdonald_ajp_65_1074_97.pdf
131. *Radiation from a superluminal source*, Am. J. Phys. **65**, 1076 (1997),
kirkmcd.princeton.edu/papers/mcdonald_ajp_65_1076_97.pdf
132. *The fields outside a long solenoid with a time-dependent current*, Am. J. Phys. **65**, 1176 (1997), kirkmcd.princeton.edu/papers/mcdonald_ajp_65_1176_97.pdf
133. *Physics in the laundromat*, Am. J. Phys. **66**, 209 (1998),
kirkmcd.princeton.edu/papers/mcdonald_ajp_66_209_98.pdf
134. *Circular orbits inside the sphere of death*, Am. J. Phys. **66**, 419 (1998),
kirkmcd.princeton.edu/papers/mcdonald_ajp_66_419_98.pdf
135. *Slow light*, Am. J. Phys. **68**, 293 (2000),
kirkmcd.princeton.edu/papers/mcdonald_ajp_68_293_00.pdf
136. *Levitating beachballs*, Am. J. Phys. **68**, 388 (2000),
kirkmcd.princeton.edu/papers/mcdonald_ajp_68_388_00.pdf
137. *Laser tweezers*, Am. J. Phys. **68**, 486 (2000),
kirkmcd.princeton.edu/papers/mcdonald_ajp_68_486_00.pdf
138. (with Max Zolotorev) *Diffraction as a Consequence of Faraday's Law*, Am. J. Phys. **68**, 674 (2000), kirkmcd.princeton.edu/papers/zolotorev_ajp_68_674_00.pdf
139. *Magnetars*, Am. J. Phys. **68**, 775 (2000),
kirkmcd.princeton.edu/papers/mcdonald_ajp_68_775_00.pdf
140. *Negative Group Velocity*, Am. J. Phys. **69**, 607 (2001),
kirkmcd.princeton.edu/papers/mcdonald_ajp_69_607_01.pdf
141. *A Mechanical Model that Exhibits a Gravitational Critical Radius*, Am. J. Phys. **69**, 617 (2001), kirkmcd.princeton.edu/papers/mcdonald_ajp_69_617_01.pdf
142. *Hexagonal Pencil Rolling on an Inclined Plane*, Regular and Chaotic Dynamics **13**, 332 (2008), kirkmcd.princeton.edu/papers/mcdonald_rcd_13_332_08.pdf

Letters to Journals

143. *Accelerating Fluid*, Science, **268**, 1261 (2 June 1995),
kirkmcd.princeton.edu/examples/fluids/mcdonald_science_268_1291_95.pdf
144. *Answer to Question #26* [“*Electromagnetic Field Momentum*”], Am. J. Phys. **64**, 15 (1996), kirkmcd.princeton.edu/papers/mcdonald_ajp_64_15_96.pdf
145. *Answer to Question #24* [“*Can an Electron Be at Rest?*”], Am. J. Phys. **64**, 1098 (1996), kirkmcd.princeton.edu/papers/mcdonald_ajp_64_1098_96.pdf
146. *Answer to Question #49* [“*Why c for Gravitational Waves?*”], Am. J. Phys. **65**, 591 (1997), kirkmcd.princeton.edu/papers/mcdonald_ajp_65_591_97.pdf
147. *Answer to Question #51* [“*Applications of third-order and fifth-order differential equations*”], Am. J. Phys. **66**, 277 (1998),
kirkmcd.princeton.edu/papers/mcdonald_ajp_66_277_98.pdf
148. *Answer to Question #52* [“*Group velocity and energy propagation*”], Am. J. Phys. **66**, 656 (1998), kirkmcd.princeton.edu/papers/mcdonald_ajp_66_656_98.pdf
149. *Exploding Bubbles*, Popular Science, (Feb. 1999), p. 8,
kirkmcd.princeton.edu/examples/fluids/mcdonald_ps_feb_8_99.pdf
150. *Synchrotron-Čerenkov Radiation*, Science **303**, 310 (2004),
kirkmcd.princeton.edu/examples/science_303_310_04.pdf
151. *Singing cymbals and radiometers*, Phys. Teach. **54**, 259 (2016),
kirkmcd.princeton.edu/examples/QM/mcdonald_pt_54_259_16.pdf
152. (with C. Bamber *et al.*) *The Light Fantastic*, e-Letter to Science (Feb. 9, 2018),
<http://science.sciencemag.org/content/359/6374/382/tab-e-letters>
kirkmcd.princeton.edu/examples/letter_180130.pdf
153. *Recombining rainbows*, Phys. Teach. **56**, 195 (2018),
kirkmcd.princeton.edu/examples/optics/mcdonald_pt_56_195_18.pdf
154. *Comment on “A variable-mass snowball rolling down a snowy slope”*, Phys. Teach. **57**, 436 (2019), http://kirkmcd.princeton.edu/examples/mechanics/mcdonald_pt_57_436_19.pdf
155. *Radiated energy and momentum for time-dependent dipoles*, Am. J. Phys. **90**, 247 (2022), http://kirkmcd.princeton.edu/examples/EM/mcdonald_ajp_90_247_22.pdf

Conference Contributions

156. (with C.A. Heusch *et al.*) *Photodisintegration Studies of He^3* , Intl. Lepton-Photon Symp. (Cornell, Aug. 1971), kirkmcd.princeton.edu/papers/mcdonald_cornell_71.pdf
157. (with C.A. Heusch *et al.*) *He^3 Photodisintegration in the First Nucleon Resonance Region*, B.A.P.S. **17**, 471 (1972), kirkmcd.princeton.edu/papers/mcdonald_baps_17_471_72.pdf
158. (with C.A. Heusch *et al.*) *Photodisintegration of He^3 in the Isobar Region*, 16th Conf. on High Energy Phys. UCSC-72/014 (Fermilab. Sep. 1972).
159. (with C.A. Heusch *et al.*) *A Measurement of the Reaction $\gamma He^3 \rightarrow pd$ in the Resonance Region*, Bonn Conference (August 1973).
160. (with C.A. Heusch *et al.*) *A Measurement of the Process $pd \rightarrow He^3 \pi^0$ in the Resonance Region*, Aix-en-Provence Conference (Sept. 1973).
161. (with C.A. Heusch *et al.*) *On a New Test of T -Invariance in the Electromagnetic Interaction*, Aix-en-Provence Conference (Sept. 1973).
162. (with C.A. Heusch *et al.*) *Suppression of Nucleon Isobar Excitation in Light Nuclei*, Proc. Intl. Conf. on Few Body Problems in Nucl. and Part. Phys. (Quebec, 1974), R.J. Slobodrian, B. Cujec and K. Ramavataram, Eds.
163. (with H. Albrecht *et al.*) *Observation of the Inelastic Proton-Proton Collisions at the ISR with a Streamer Chamber*, 17th Intl. Conf. on High Energy Phys. (London, July, 1974).
164. (with B. Betev *et al.*) *Observation of the Proton-Proton Interactions with π^0 of Large Transverse Momentum at the ISR*, 17th Intl. Conf. on High Energy Phys. (London, July 1974).
165. (with P. Darriulat *et al.*) *An Inclusive Measurement of Charged Particles Accompanying in High Transverse Momentum π^0 at the ISR Split Field Magnet Facility*, Palermo Intl. Conf. on High Energy Phys. (June, 1975).
166. (with K.J. Anderson *et al.*) *Dimuon Production by Pions and Protons with a Large-Acceptance Spectrometer*, Conf. on Lepton and Photon Int. at High Energies (SLAC, August 1975), kirkmcd.princeton.edu/papers/mcdonald_071475.pdf
167. (with K.J. Anderson *et al.*) *Muon Production in Hadron-Hadron Collisions*, Proc. Intl. Conf. on the Production of Particles with New Quantum Numbers, D. Cline and J. Kolonko, eds. (Madison, 1976), p. 175, kirkmcd.princeton.edu/papers/mcdonald_madison_76a.pdf

168. (with P. Darriulat *et al.*) *Large Transverse Momentum Photons from High-Energy Proton-Proton Collisions*, Proc. Intl. Conf. on Production of Particles with New Quantum Numbers, D. Cline and J. Kolonko, eds. (Madison, 1976), p. 196, kirkmcd.princeton.edu/papers/mcdonald_madison_76b.pdf
169. *Mu Pair Production in Pion and Proton Collisions*, Invited talk, Annual Meeting of the APS, (New York, 1976).
170. (with K.J. Anderson *et al.*) *Production of Muon Pairs by 150-GeV/c π^+ and Protons*, Proc. APS Div. Part. and Fields Meeting, H.J. Lubatti and P. M. Mockett, eds. (Seattle, 1975), p. 169.
171. (with K.J. Anderson *et al.*) *Inclusive Dimuon Production at FNAL*, B.A.P.S. **21**, 567 (1976), kirkmcd.princeton.edu/papers/baps_21_567_76a.pdf
172. (with K.J. Anderson *et al.*) *Inclusive Vector Meson Production in Dimuon Final States at FNAL*, B.A.P.S. **21**, 567 (1976), kirkmcd.princeton.edu/papers/baps_21_567_76b.pdf
173. (with K.J. Anderson *et al.*) *Direct Muon Production in a Large Acceptance Spectrometer at FNAL*, B.A.P.S. **21**, 567 (1976), kirkmcd.princeton.edu/papers/baps_21_567_76c.pdf
174. (with J.G. Branson *et al.*) *Dependence of Dimuon Production on Incident Energy, Incident Particle Type and on Nuclear Target*, B.A.P.S. **21**, 567 (1976), kirkmcd.princeton.edu/papers/baps_21_567_76d.pdf
175. (with K.J. Anderson *et al.*) *Production of the $J(3.1)$ and $\psi'(3.7)$ by 225 GeV π^+ , π^- and Protons*, XVIII Intl. Conf. on High Energy Phys. (Tbilisi, 1976), kirkmcd.princeton.edu/papers/anderson-fermilab-conf-76-166-e.pdf
176. (with K.J. Anderson *et al.*) *High Sensitivity Search for Multi-Muon Events Produced by 225 GeV Hadrons*, XVIII Intl. Conf. on High Energy Phys. (Tbilisi 1976), kirkmcd.princeton.edu/papers/anderson-fermilab-conf-76-167-e.pdf
177. (with K.J. Anderson *et al.*) *Production of Continuum Muon Pairs at 225 GeV by Pions and Protons*, XVIII Intl. Conf. on High Energy Phys. (Tbilisi, 1976), kirkmcd.princeton.edu/papers/anderson-fermilab-conf-76-170-e.pdf
178. (with J.J. Thaler) *A Lepton Detector Facility for ISABELLE*, Proc. 1977 ISABELLE Summer Workshop, BNL-50721, p. 160, kirkmcd.princeton.edu/papers/mcdonald_isabelle_77.pdf
179. (with G.H. Sanders *et al.*) *Drift Chamber Performance in the Field of a Superconducting Magnet: Measurement of the Drift Angle*, IEEE Trans. Nuc. Sci. **NS-25**, 56 (1978), kirkmcd.princeton.edu/papers/sanders_ieeetns_25_56_78.pdf

180. (with K.J. Anderson *et al.*) *Hadronic Production of High-Mass Muon Pairs and the Measurement of the Pion Structure Function*, XIX Intl. Conf. on High Energy Phys. (Tokyo 1978), kirkmcd.princeton.edu/papers/tokyo_78.pdf
181. (with I.-H. Chiang *et al.*) *Search for the η_c : A Study of the Reaction $\pi^- p \rightarrow \gamma\gamma\eta$ at 13 GeV/c*, B.A.P.S. **25**, 579 (1980).
182. (with I.-H. Chiang *et al.*) *A Search for Narrow States Produced in the Reaction $\pi^- p \rightarrow n + \gamma$'s at 13 GeV/c*, A.I.P. Conf. Proc. **67**, 415, (1981), kirkmcd.princeton.edu/papers/chiang_aipcp_67_415_81.pdf
183. (with C.E. Adolphsen *et al.*) *Production of Muon Pairs in the Forward Direction*, 21st Intl. Conf. on High Energy Phys. (Paris, 1982), p. 7.
184. (with I.-H. Chiang *et al.*) *Search for New Particles on the Reaction $\pi^- p \rightarrow \eta + \gamma$'s at 13 GeV/c*, 21st Intl. Conf. on High Energy Phys. (Paris, 1982), p. 17.
185. (with C.E. Adolphsen *et al.*) *Status of E-615 at Fermilab: Production of Muon Pairs in the Forward Direction*, Proc. Drell-Yan Workshop (Fermilab, 1982), p. 271, kirkmcd.princeton.edu/papers/mcdonald_fnal_82.pdf
186. (with K.J. Anderson *et al.*) *Measurement of Muon Pair Production Near $x_F = 1$* , Proc. Intl. High Energy Phys. Conf. (Leipzig, 1984), p. 279.
187. *Fundamental Physics During Violent Acceleration*, A.I.P. Conf. Proc. **130**, 23 (1985), kirkmcd.princeton.edu/examples/QED/mcdonald_aipcp_130_23_85.pdf
188. *Probing the Structure of the Pion in Fermilab Experiment 615*, Fermilab Report (July-August, 1985), p. 7, http://kirkmcd.princeton.edu/examples/EP/mcdonald_fnal_85.pdf
189. *Pion Structure as Observed in Fermilab Experiment E 615*, in *Strong Interactions and Gauge Theories*, J. Tran Thanh Van, ed., (Editions Frontières, Gif sur Yvette, France, 1986), p. 179, kirkmcd.princeton.edu/papers/mcdonald_moriond_86.pdf
190. *Pion Structure as Observed in Fermilab E-615*, Invited talk, B.A.P.S. **31**, 793 (1986).
191. (with K.D. Bonin *et al.*) *The Synchrotron-Čerenkov Effect*, Bates Laboratory Annual Report (1986), kirkmcd.princeton.edu/accel/bates86.pdf
192. (with C.E. Adolphsen *et al.*) *J/ψ Longitudinal Polarization in 252-GeV πN Interactions*, Proc. 1987 Salt Lake City DPF Meeting, C. DeTar and J. Ball, eds. (World Scientific, 1987), p. 659.
193. (with K.D. Bonin *et al.*) *The Synchrotron-Čerenkov Effect*, Proc. 1987 Salt Lake City DPF Meeting, C. DeTar and J. Ball, eds., (World Scientific, 1987), p. 659.
194. *Experiments on the Nonlinear QED of Intense Laser Fields*, Proc. 1987 Salt Lake City DPF Meeting, C. DeTar and J. Ball. eds., (World Scientific, 1987), p. 659.

195. *The Hawking-Unruh Temperature and Quantum Fluctuations in Particle Accelerators*, Proc. PAC87, p. 1196;
kirkmc.d.princeton.edu/accel/unruh.pdf
196. *QCD in the Limit $x_F \rightarrow 1$ as Studied in the Reaction $\pi^- N \rightarrow \mu^+ \mu^- X$* , DOE/ER/3072-43 (Dec. 7, 1987), in *QCD Hard Hadronic Processes*, B. Cox, ed., (Plenum Press, New York, 1988), p. 57,
kirkmc.d.princeton.edu/papers/mcdonald_doe-er-3072-43.pdf
197. (With N.W. Reay *et al.*) *Collider Architecture Working Group Summary*, Proc. Workshop on High Sensitivity Beauty Physics at Fermilab, A.J. Slaughter, N. Lockyer and M. Schmidt, eds., (Nov. 1987), p. 253.
198. *Beam Dynamics of the RF Electron Gun of the BNL Accelerator Test Facility*, AIP Conf. Proc. **177**, 204 (1988),
kirkmc.d.princeton.edu/examples/accel/mcdonald_aipcp_177_204_88.pdf
199. (with K. Batchelor *et al.*) *Design and Modelling of a 5-MeV Radio-Frequency Electron Gun*, B.A.P.S. **33**, 1026 (1988),
kirkmc.d.princeton.edu/atf/baltimore.pdf
200. *Beam Dynamics of the BNL Radio-Frequency Electron Gun*, B.A.P.S. **33**, 1026 (1988), kirkmc.d.princeton.edu/atf/beam_dynamics_baps_33_1026_88.pdf
201. (with R.C. Fernow *et al.*) *Plan for Electron Acceleration Using Grating-Like Structures*, B.A.P.S. **33**, 1081 (1988)
202. (with K. Batchelor *et al.*) *Development of a High Brightness Electron Gun for the Accelerator Test Facility at Brookhaven National Laboratory*, BNL-41767, Proc. EPAC88, p. 954 (Rome, June 7-11, 1988),
kirkmc.d.princeton.edu/papers/batchelor_bnl-41767_88.pdf
203. *Beam Dynamics of a Laser-Driven RF Electron Gun*, Proc. Linac88 (Williamsburg, Oct. 1988), TH2-04, kirkmc.d.princeton.edu/papers/mcdonald_linac88_th2-04.pdf
204. (with K. Batchelor *et al.*) *The Brookhaven Accelerator Test Facility*, Proc. 1988 IEEE Linear Accel. Conf. (Newport News, Oct. 1988),
kirkmc.d.princeton.edu/examples/accel/batchelor_linac88_th3-07.pdf
205. *Prospects for Beauty Physics at Hadron Colliders*, A.I.P. Conf. Proc. **185**, 526 (1989), kirkmc.d.princeton.edu/examples/detectors/mcdonald_aipcp_185_526_89.pdf
206. *Prospects for Beauty Physics at Hadron Colliders*, Ann. N.Y. Acad. Sci. **578**, 215 (1989), kirkmc.d.princeton.edu/papers/mcdonald_apny_578_215_89.pdf
207. *Pion and Nucleon Structure as Probed in the Reaction $\pi^\pm N \rightarrow \mu^+ \mu^- X$ at 253 GeV*, Nucl. Phys. B (Proc. Suppl.) **7B**, 104 (1989),
[kirkmc.d.princeton.edu/papers/mcdonald_npb\(ps\)_7b_104_89.pdf](http://kirkmc.d.princeton.edu/papers/mcdonald_npb(ps)_7b_104_89.pdf)

208. (with X.J. Wang *et al.*) *The Brookhaven Accelerator Test Facility Injection System*, B.A.P.S. **34**, 194 (1989).
209. (with M. Ardebili and D.P. Russell) *Emittance Diagnostics for the BNL Accelerator Test Facility*, B.A.P.S. **34**, 256 (1989).
210. (with D.P. Russell) *Methods of Emittance Measurement*, in *Frontiers of Particle Beams: Observation, Diagnosis and Correction*, M. Month and S. Turner, eds., (Springer-Verlag, 1989) p. 122, kirkmcd.princeton.edu/atf/emit_meas.pdf
211. (with K. Batchelor *et al.*) *Operational Status of the Brookhaven National Laboratory Accelerator Test Facility*, PAC89, p. 273 (Chicago, Mar. 20, 1989), kirkmcd.princeton.edu/examples/accel/batchelor_pac89_273.pdf
212. (with X.J. Wang *et al.*) *The Brookhaven Accelerator Test Facility Injection System*, PAC89, p. 307 (Chicago, Mar. 20, 1989), kirkmcd.princeton.edu/examples/accel/wang_pac89_307.pdf
213. (with D.P. Russell) *A Beam-Profile Monitor for the BNL Accelerator Test Facility (ATF)*, PAC89, p. 1510 (Chicago, Mar. 20, 1989), kirkmcd.princeton.edu/examples/accel/russell_pac89_1510.pdf
214. (with C. Lu) *A Straw-Tube tracking System for the SSC*, to appear in the Proceedings of the IISSC (March 1989).
215. *Detectors for B Physics at Hadron Colliders*, Invited Talk, B.A.P.S. **34**, 1149 (1989).
216. *Tracking System for the BCD*, Proc. Workshop on B Physics in p - p Collisions at the SSC (DeSoto, Texas, June 1989), p. 199, kirkmcd.princeton.edu/papers/mcdonald_060789.pdf
217. *Prospects for Beauty Physics at the SSC*, Proc. Workshop on Tracking Systems for the SSC (TRIUMF, July, 1989), p. B211, kirkmcd.princeton.edu/papers/mcdonald_triumf_89.pdf
218. (with H. Castro *et al.*) *The Bottom Collider Detector*, in *Physics at Fermilab in the 1990's*, D. Green and H. Lubatti, eds., (Breckenridge, Aug. 1989), p. 287, kirkmcd.princeton.edu/bphys/breck_0889.pdf
219. (with N.A. Kurnit *et al.*) *Proposed Experiments and Status of BNL Accelerator Test Facility*, B.A.P.S. **34**, 1684 (1989).
220. (with D.P. Russell) *Laser-e Beam Studies of Nonlinear QED*, B.A.P.S. **34**, 1684 (1989).
221. (with K. Batchelor *et al.*) *The Brookhaven Accelerator Test Facility*, DPF Meeting (Houston, Jan. 3-6, 1990), kirkmcd.princeton.edu/papers/batchelor_bnl-46385_90.pdf

222. (with D.P. Russell *et al.*) *Preliminary Emittance Measurements of the Photocathode RF Gun for the BNL Accelerator Test Facility*, B.A.P.S. **35**, 957 (1990), kirkmcd.princeton.edu/atf/russell_baps_35_957_90.pdf
223. *The Bottom Collider Detector*, Workshop on Major SSC Detectors (Tucson, Feb. 23, 1990), p. 667, kirkmcd.princeton.edu/papers/mcdonald_ssc_022390.pdf
224. (with K. Batchelor *et al.*) *Operational Status of the Brookhaven National Laboratory Accelerator Test Facility*, EPAC90 (Nice, June 1990), p. 541, kirkmcd.princeton.edu/examples/accel/batchelor_epac90_541.pdf
225. *Prospects for B Physics at RHIC*, in *BNL Summer Study on CP Violation* (June 1990), S. Dawson and A. Soni, eds., (World Scientific, 1991), p. 305, kirkmcd.princeton.edu/papers/mcdonald_bnl_90.pdf
226. (with W. Chen *et al.*) *Silicon Drift Devices for Track and Vertex Detection at the SSC*, BNL-45296, Proc. Symp. on Detector R&D for the SSC (Ft. Worth, Oct. 1990), p. 119, kirkmcd.princeton.edu/papers/chen_bnl_45296_90.pdf
227. (with W.S. Anderson *et al.*) *Investigations of Single-Electron Avalanches in a Proportional Drift Tube*, Proc. Symp. on Detector R&D for the SSC (Ft. Worth, Oct. 1990), p. 222, kirkmcd.princeton.edu/papers/anderson_ssc_ftworth_222_90.pdf
228. (with W.S. Anderson *et al.*) *Mechanical Concerns for Long Straw-Tube Arrays*, Proc. Symp. on Detector R&D for the SSC (Ft. Worth, Oct. 1990), p. 253, kirkmcd.princeton.edu/papers/anderson_ssc_ftworth_253_90.pdf
229. (with J.C. Armitage *et al.*) *A Straw-Tube Tracking System*, Symp. on Detector R&D for the SSC (Ft. Worth, Oct. 15, 1990), kirkmcd.princeton.edu/papers/ftworthabs_62190_straw.pdf
230. (with C. Lu and P. Rehak) *Silicon Drift Chambers*, Symp. on Detector R&D for the SSC (Ft. Worth, Oct. 15, 1990), kirkmcd.princeton.edu/papers/ftworthabs_62190_silicon.pdf
231. *CP Violation at the SSC*, 1st US/Latin Am. Symp. on Phys., Tech. and Expts. at the SSC (Guanajuato, Dec. 17, 1990), kirkmcd.princeton.edu/bphys/guano.pdf
232. *Can a Top-Quark Experiment Do Bottom-Quark Physics?*, CDF Luncheon Seminar (FNAL, Mar. 19, 1991), kirkmcd.princeton.edu/bphys/cdf_lunch_031991.pdf
233. *An Experimental Program on Strong-Field QED Effects in $e\gamma$, $\gamma\gamma$ and e^+e^- Collisions*, Workshop on Beam-Beam & Beam-Radiation Interactions (UCLA, May 19, 1991), kirkmcd.princeton.edu/papers/mcdonald_ucla_051491.pdf
234. (with K. Batchelor *et al.*) *Performance of the Brookhaven Photocathode RF Gun*, 13th Intl. Conf. on FELs (Santa Fe, Aug. 25-30, 1991), kirkmcd.princeton.edu/papers/batchelor_bnl-46679-91.pdf

235. (with P. Chen *et al.*) *Study of QED at Critical Field Strength*, in *Workshop on Beam-Beam and Beam-Radiation Interactions: High Intensity and Nonlinear Effects*, C. Pelligrini, T. Katsouleas and J. Rosenzweig, eds., (World Scientific, Singapore, 1992), p. 127, kirkmc.d.princeton.edu/papers/mcdonald_ucla_051491b.pdf
236. (with W.S. Anderson *et al.*) *Electron Attachment, Effective Ionization Coefficient, and Electron Drift Velocity for CF₄ Gas Mixtures*, 6th Intl. Wirechamber Conf. (Vienna, Feb. 10, 1992), kirkmc.d.princeton.edu/bphys/vienna_021092.pdf
237. *Prospects for B-Physics at Hadron Colliders*, seminar at U. Rochester (Feb. 10, 1992), kirkmc.d.princeton.edu/papers/mcdonald_021092.pdf
238. *Errors and Dilutions in the Measurement of CP Violation in the B-B⁻ System*, Workshop on B Physics at Proton Accelerators (SSC Lab, June 30, 1992), kirkmc.d.princeton.edu/papers/mcdonald_ssc_207_92.pdf
239. *The Forward Arm of a Bottom Collider Detector*, Workshop on B Physics at Hadron Colliders (SSC Lab, Sept. 25, 1992), kirkmc.d.princeton.edu/papers/mcdonald_ssc_92.pdf
240. (with P. Chen) *Summary of the Physics Opportunities Working Group*, A.I.P. Conf. Proc. **279**, 853 (1992), kirkmc.d.princeton.edu/examples/accel/chen_aipcp_279_853_92.pdf
241. *Induced Light-by-Light Scattering Experiment*, A.I.P. Conf. Proc. **279**, 945 (1992), kirkmc.d.princeton.edu/examples/QED/mcdonald_aipcp_279_945_92.pdf
242. *Compatibility of Collider B-Physics with a Full Acceptance Detector*, Workshop on B-Physics at Hadron Machines (SSCL, Aug. 14, 1992), kirkmc.d.princeton.edu/papers/mcdonald_ssc_081492.pdf
243. *The Forward Arm of a Bottom Collider Detector*, Mini-Workshop on B-Phys. (SSCL, Sep. 25, 1992), kirkmc.d.princeton.edu/bphys/btrans_092192.pdf
244. *Vertex Detectors for B Physics at the SSC*, SSC Science Symposium (Madison, WI, Mar. 30, 1993), kirkmc.d.princeton.edu/bphys/btrans_033093.pdf
245. (with C. Lu) *Properties of Reflective and Semitransparent CsI Photocathodes*, Princeton/HEP/92-11, Workshop on RICH Detectors (Bari, June 5, 1993), kirkmc.d.princeton.edu/papers/mcdonald_hep-93-03.pdf
246. (with J.D. Bjorken) *Proposal for a Feasibility Study of Very Large Aperture Quadrupole Magnets*, (Apr. 1993), Workshop on Physics at Current Accelerators and the Supercollider (ANL, June 2-5, 1993), kirkmc.d.princeton.edu/papers/bjorken_slac-pub-6138.pdf
247. *B-Physics at Hadron Accelerators with RHIC as an Example*, Symp. on Frontier Appl. of Accel. (BNL, Sep. 28, 1993), kirkmc.d.princeton.edu/bphys/btrans_091793.pdf
kirkmc.d.princeton.edu/papers/mcdonald_srfaa_157_93.pdf

248. (with P. Kwok *et al.*) *Progress on Plasma Lens Experiments at the Final Focus Test Beam*, Proc. PAC95, p. 2135 (1995),
kirkmcd.princeton.edu/papers/kwok_ppac_4_2135_95.pdf
249. (with C. Bula *et al.*) *Preliminary Observation of Nonlinear Effects in Compton Scattering*, SLAC-PUB-7220 (July 1995), LP95: International Symposium on Lepton Photon Interactions (IHEP, Beijing, Aug. 1995),
kirkmcd.princeton.edu/papers/bula_slac-pub-7220.pdf
250. *Compression of Beam Energy Via Off-Axis Traversal of an RF Cavity*, BNL Muon Cooling Workshop (Apr. 7, 1997), kirkmcd.princeton.edu/mumu/cavitytrans.pdf
251. (with C. Bula *et al.*) *Observation of electron positron pair production and nonlinear Compton scattering in laser-electron interactions*, Quant. Elec. and Laser Sci. Conf. (May 1997), kirkmcd.princeton.edu/papers/bula_qelsc_26_97.pdf
252. (with C. Lu) *Low-Melting-Temperature Metals for Possible Use as Primary Targets at a Muon Collider Source*, Orcas Island Workshop (May 17, 1997),
kirkmcd.princeton.edu/mumu/target/liquidtrans1.pdf
253. *Detector Issues*, Orcas Island Workshop (May 20, 1997),
kirkmcd.princeton.edu/papers/mcdonald_052097.pdf
254. *Positron Production by Laser Light*, Proc. 1997 SLAC Summer Inst. (SLAC-R-528, Aug. 1997), p. 489, kirkmcd.princeton.edu/papers/mcdonald_ssi97-029.pdf
255. (with C. Bula *et al.*) *Positron Production in Multiphoton Light-by-Light Scattering*, A.I.P. Conf. Proc. 396, 197 (1997), p. 489,
kirkmcd.princeton.edu/examples/QED/bula_aipcp_396_165_97.pdf
256. *Loose Ends in Strong-Field QED (Including Laser Acceleration)*, Workshop on Quantum Aspects of Beam Physics (Monterey, Jan. 5, 1998),
kirkmcd.princeton.edu/accel/looseends.pdf
257. (with D. Burke *et al.*) *Quantum aspects, experimental results, and beam physics implications of E-144*, Workshop on Quantum Aspects of Beam Physics (Monterey, Jan. 5, 1998), p. 357, kirkmcd.princeton.edu/examples/QED/burke_qabp_357_98.pdf
258. *Fundamental Physics during Violent Acceleration*, Working Group C Summary, Workshop on Quantum Aspects of Beam Physics (Monterey, Jan. 9, 1998),
kirkmcd.princeton.edu/examples/QED/mcdonald_qabp98_group_c_summary.pdf
259. (with S. Chattopadhyay and M.S. Zolotarev) *Vacuum Laser Acceleration of Electrons and Acceleration in Structures*, B.A.P.S. **43**, 1124 (1998),
http://kirkmcd.princeton.edu/papers/mcdonald_baps_43_1124_98.pdf
260. (with C. Lu and E.J. Prebys) *Liquid Metal Jets as Targets for a Muon Collider*, B.A.P.S. **43**, 1128 (1998), http://kirkmcd.princeton.edu/papers/mcdonald_baps_43_1128_98.pdf

261. (with C. Lu and E.J. Prebys) *A Detector Scenario for a Muon Cooling Demonstration Experiment*, B.A.P.S. **43**, 1222 (1998), http://kirkmcd.princeton.edu/papers/mcdonald_baps_43_1222_98.pdf
262. *Targetry Issues at a Muon Collider*, Muon Collider Collaboration Meeting (Orange Beach, AL, Mar. 19, 1998), kirkmcd.princeton.edu/mumu/targettrans.pdf
263. (with D. Burke *et al.*) *Scattering of e^- and production of e^+ in strong electromagnetic fields*, Proc. 33rd Rencontre de Moriond (Les Arcs, Mar. 21, 1998), p. 633, kirkmcd.princeton.edu/examples/QED/burke_c98-03-21_633.pdf
264. *The Muon Collider: Physics Opportunities, Technical Challenges*, seminar (U. Penn, Apr. 28, 1998), kirkmcd.princeton.edu/mumu/muontrans1.pdf
265. *Muon Collider Targetry R&D*, Muon Collider Targetry Workshop (BNL, May 1, 1998), kirkmcd.princeton.edu/mumu/targettrans2.pdf
266. *Muon Collider Targetry R&D Program*, Muon Collider Targetry Workshop (BNL, June 1, 1998), kirkmcd.princeton.edu/mumu/targettrans3.pdf
267. *Higher-Order QED Effects and Nonlinear QED*, Proc. XVIII Intl. Conf. on Phys. in Collision (INFN Frascati, 1998), p. 165, kirkmcd.princeton.edu/e144/qedtrans.pdf
kirkmcd.princeton.edu/e144/pic98talk.pdf
268. *Neutrino Physics at a Muon Collider*, Muon Collider Workshop (CERN, Sep. 17, 1998), kirkmcd.princeton.edu/mumu/cerntrans.pdf
269. *An R&D Program for Targetry at a Muon Collider*, Muon Collider Workshop (CERN, Sep. 17, 1998), kirkmcd.princeton.edu/mumu/target/targettrans6.pdf
270. *An R&D Program for Targetry and Capture at a Muon Collider Source*, Muon Collider Collaboration Meeting (Oct. 12, 1998), kirkmcd.princeton.edu/mumu/target/targettrans7.pdf
271. *(Some) Accelerator Physics of a Muon Collider*, seminar (PPPL, Oct. 20, 1998), kirkmcd.princeton.edu/mumu/muontrans4.pdf
272. *An R&D Program for Targetry and Capture at a Muon Collider Source*, Targetry Meeting (Fermilab, Dec. 10, 1998), kirkmcd.princeton.edu/mumu/target/targettrans9.pdf
273. *Hawking-Unruh Radiation and Radiation of a Uniformly Accelerated Charge*, in *Quantum Aspects of Beam Dynamics*, ed. by P. Chen (World Scientific, Singapore, 1999), p. 626, kirkmcd.princeton.edu/accel/unruhrad.pdf
274. *The Hawking-Unruh Temperature and Damping in a Linear Focusing Channel*, in *Quantum Aspects of Beam Dynamics*, ed. by P. Chen (World Scientific, Singapore, 1999), p. 643, kirkmcd.princeton.edu/accel/linearchannel.pdf

275. *Physics Opportunities at a Muon Collider*, DPF99 (UCLA, Jan. 7, 1999),
kirkmc.d.princeton.edu/mumu/muontrans6.pdf
kirkmc.d.princeton.edu/mumu/dpf99/dpf99_paper.pdf
276. *Physics Opportunities at a Muon Collider*, seminar (ORNL, Feb. 5, 1999),
kirkmc.d.princeton.edu/mumu/muontrans7.pdf
277. *Update on Targetry and Capture at a Muon Collider Source*, Targetry Meeting (LBNL, Feb. 20, 1999), kirkmc.d.princeton.edu/mumu/target/targettrans10.pdf
278. *Muon Colliders: Status of R&D and Future Plans*, PAC99 (New York, Mar. 31, 1999), kirkmc.d.princeton.edu/papers/mcdonald_ppac_1_310_99.pdf
kirkmc.d.princeton.edu/mumu/muontrans8.pdf
279. (with S.A. Kahn *et al.*) *The Instrumentation Channel for the MUCOOL Experiment*, PAC99 (Apr. 1, 1999), kirkmc.d.princeton.edu/papers/kahn_ppac_5_3026_99.pdf
280. *An R&D Program for Targetry and Capture at a Muon-Collider Source*, Muon Collider Collaboration Meeting (St. Croix, May 25, 1999),
kirkmc.d.princeton.edu/mumu/target/targettrans12.pdf
281. *Muons for a Neutrino Factory and a Muon Collider*, NuFact99 (Lyon, July 6, 1999),
kirkmc.d.princeton.edu/mumu/targettrans13a.pdf
282. *R&D For Muon Production in the USA*, NuFact99 (Lyon, July 7, 1999),
<http://www.ipnl.in2p3.fr/nufact99/talks/dona.html>
283. *Strong-Field QED*, Adrianfest (Rochester, Sept. 25, 1999),
kirkmc.d.princeton.edu/adrianfest/adrianfesttrans.pdf
284. *Targetry and Capture Issues at a Neutrino-Factory/Muon-Collider Source*, AccApp'99 (Long Beach, Nov. 17, 1999), kirkmc.d.princeton.edu/mumu/target/targettrans15.pdf
285. *Physics Opportunities with Muon Beams: Neutrino Factories and Muon Colliders*, NSF Prospective MRE Panel (Nov. 29, 1999),
kirkmc.d.princeton.edu/nufact/neutrino1.pdf
286. *Physics Opportunities with Muon Beams: Neutrino Factories and Muon Colliders*, 5th Int. Conf. on Phys. Potential and Development of mu+mu- Colliders (Dec. 15, 1999), kirkmc.d.princeton.edu/nufact/neutrino2.pdf
287. *The R&D Program for Targetry and Capture at a Neutrino Factory/Muon Collider Source*, Neutrino Factory/Muon Collider Collaboration Meeting (Berkeley, Dec. 13, 1999), kirkmc.d.princeton.edu/mumu/target/targettrans17.pdf
288. *The R&D Program for Targetry and Capture at a Neutrino Factory/Muon Collider Source*, Targetry Group Meeting (BNL, Jan. 24, 2000),
kirkmc.d.princeton.edu/mumu/target/targettrans18.pdf

289. *The R&D Program for Targetry and Capture at a Neutrino Factory/Muon Collider Source*, Workshop for a Feasibility Study of a Neutrino Source Based on a Muon Storage Ring (Fermilab, Feb. 15, 2000),
kirkmc.d.princeton.edu/mumu/target/targettrans19.pdf
290. *A Neutrino Factory*, colloquium at NYU (Feb. 24, 2000),
kirkmc.d.princeton.edu/nufact/neutrino3.pdf
291. *The R&D Program for Targetry and Capture at a Muon Collider Source*, HEPAP meeting (BNL, Mar. 9, 2000), kirkmc.d.princeton.edu/mumu/target/targettrans20.pdf
292. *The R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source*, Neutrino Factory and Muon Collider Collaboration Meeting (Catalina Island, May 17, 2000), kirkmc.d.princeton.edu/mumu/target/targettrans22.pdf
293. *An Initial Ionization Cooling Demonstration*, NuFACT'00 (Monterey, May 25, 2000),
kirkmc.d.princeton.edu/mumu/coolingtrans1.pdf
294. *Strong Field QED*, in *Probing Luminous and Dark Matter*, A. Das and T. Ferbel, eds. (World Scientific, Singapore, 2000), p. 191.
295. *Physics Opportunities with Muon Beams: Neutrino Factories and Muon Colliders*, A.I.P. Conf. Proc. **542**, 171 (2000),
kirkmc.d.princeton.edu/examples/accel/mcdonald_aipcp_541_171_00.pdf
296. *Neutrino Factories and Muon Colliders*, Congress of the Canadian Association of Physicists (June 5, 2000), kirkmc.d.princeton.edu/nufact/neutrino4.pdf
297. *From a Neutrino Factory to Carlsbad*, Workshop on the Next Generation U.S. Underground Science Facility (Carlsbad, NM, June 13, 2000),
kirkmc.d.princeton.edu/nufact/neutrino5.pdf
298. *Neutrino Factory Feasibility Study 2: Parameters and Tasks for Targetry and Capture*, Feasibility Study 2 Editors Meeting (LBL, Oct. 2, 2000),
kirkmc.d.princeton.edu/mumu/target/targettrans24.pdf
299. *Review of Analytic Models of the Magnetohydrodynamics of Liquid Metal Jets*, Neutrino Factory Feasibility Study 2 Workshop (BNL Dec. 16, 2000),
kirkmc.d.princeton.edu/mumu/target/liquidtrans4.pdf
300. *The Targetry System and Support Facility at a Muon-Based Neutrino Source*, Neutrino Factory Feasibility Study-II Closeout (BNL, May 4, 2001),
kirkmc.d.princeton.edu/mumu/target/targettrans29.pdf
301. (with B. Autin *et al.*) *Report of the International Working Group on Muon Beamlines*, NuFACT'01 (Tsukuba, May 28, 2001),
kirkmc.d.princeton.edu/mumu/target/muon-beams3.pdf

302. (with A. Hassenein *et al.*) *An R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source*, NuFACT'01 (Tsukuba, May 2001), kirkmc.d.princeton.edu/mumu/target/nufact01_rnd.pdf
303. (with J.C. Gallardo *et al.*) *Calculations for a Mercury Jet Target in a Solenoid Magnet Capture System*, Proc. PAC01, p. 627 (Chicago, June 20, 2001), kirkmc.d.princeton.edu/papers/gallardo_ppac_1_627_01.pdf
304. (with N. Simos *et al.*) *Thermal Shock Analysis of Windows Interacting with Energetic, Focused Beam of the BNL Muon Target Experiment*, Proc. PAC01, p. 1408 (Chicago, June 20, 2001), kirkmc.d.princeton.edu/papers/simos_ppac_2_1408_01.pdf
305. (with H. Kirk *et al.*) *Target Studies with BNL E951 at the AGS*, Proc. PAC01, p. 1535 (Chicago, June 20, 2001), kirkmc.d.princeton.edu/papers/kirk_ppac_2_1535_01.pdf
306. (with A. Hassanein *et al.*) *The Primary Target Facility for a Neutrino Factory Based on Muon Beams*, Proc. PAC01, p. 1583 (Chicago, June 20, 2001), kirkmc.d.princeton.edu/papers/hassanein_ppac_2_1583_01.pdf
kirkmc.d.princeton.edu/mumu/pac01/tpah155big.pdf
307. (with K.A. Brown *et al.*) *The R&D Program for Targetry at a Neutrino Factory*, Proc. PAC01, p. 1586 (Chicago, June 20, 2001), kirkmc.d.princeton.edu/papers/mcdonald_ppac_2_1586_01.pdf
kirkmc.d.princeton.edu/mumu/pac01/tpah156big.pdf
308. (with N. Simos *et al.*) *Thermodynamic Interaction of the Primary Proton Beam with a Mercury Jet Target at a Neutrino Factory Source*, Proc. PAC01, p. 3018 (Chicago, June 20, 2001), kirkmc.d.princeton.edu/papers/simos_ppac_4_3018_01.pdf
309. *Large Underground Space for Neutrino Detectors*, presented at Brierly Associates (June 26, 2001), kirkmc.d.princeton.edu/nufact/neutrino7.pdf
310. *A Neutrino Superbeam Physics Program as a First Stage of a Neutrino Factory*, Snowmass01 (July 14, 2001), kirkmc.d.princeton.edu/nufact/snowmasstrans_071401.pdf
311. (with M.V. Diwan *et al.*) *A Scenario for a Brookhaven Super Beam Neutrino Experiment*, BNL-68756, Snowmass01 (July 18, 2001), kirkmc.d.princeton.edu/papers/diwan_bnl-68756_01.pdf
312. (with T. Adams *et al.*) *Snowmass'01 E1 Working Group Summary: Neutrino Factories and Muon Colliders*, Snowmass01 (July 20, 2001), <https://arxiv.org/pdf/hep-ph/0111030.pdf>
313. *Snowmass'01 M1 Working Group Summary*, Snowmass01 (July 20, 2001), kirkmc.d.princeton.edu/mumu/snowmasstrans_072001.pdf
http://kirkmc.d.princeton.edu/examples/accel/mcdonald_snowmass01_m1-001.pdf

314. *Physics with a Neutrino Superbeam*, colloquia at BNL and at U. South Carolina (Nov. 1, 27, 2001), kirkmcd.princeton.edu/nufact/neutrino10.pdf
315. (with N. Simos *et al.*) *Thermal Shock Induced by a 24 GeV Proton Beam in the Test Windows of the Muon Collider Experiment E951 – Test Results and Theoretical Predictions*, AccApp'01 (Nov. 9, 2001),
kirkmcd.princeton.edu/mumu/target/simos/e951_windows_AccAPP2001.pdf
316. (with N. Simos *et al.*) *Interaction of a 24 GeV Proton Beam with a Muon Collider Mercury Jet Target. Experimental Results and Thermodynamic Assessment*, AccApp'01 (Nov. 20, 2001),
kirkmcd.princeton.edu/mumu/target/simos/e951_jet_AccAPP2001.pdf
317. *Carbon and Mercury Targets for Neutrino Beams and a Muon Collider Source*, ICFA Workshop on High Intensity High Brightness Proton Beams (Fermilab, Apr. 9, 2002),
kirkmcd.princeton.edu/mumu/target/targettrans33_040902.pdf
318. *A Strategy for Accelerator-Based Neutrino Physics in the USA*, Muon Collider Collaboration Meeting (Shelter Island, May 14, 2002),
kirkmcd.princeton.edu/nufact/neutrino12.pdf
319. (with N. Simos *et al.*) *Study of Graphite Targets Interacting with the 24 GeV Proton Beam of the BNL Muon Target Experiment*, EPAC02 (May 24, 2002),
physics.princeton.edu/mumu/target/simos/TUPD0024.pdf
320. *On the Feasibility of a Very Large Liquid Argon Detector for Neutrino Oscillation Physics*, NuFACT'02 (London, July 4, 2002),
kirkmcd.princeton.edu/nufact/neutrino13.pdf
321. *Strategies for Future Neutrino Experiments, Remarks on Sources and Detectors, Neutrinos and Implications for Physics Beyond the Standard Model* (Stony Brook, Oct. 13, 2002), kirkmcd.princeton.edu/nufact/neutrino14.pdf
322. *Large and Small (Far and Near) Liquid Argon Detectors for an Off-Axis NuMI Beam*, NuINT'02 (UC Irvine, Dec. 15, 2002), kirkmcd.princeton.edu/nufact/neutrino15.pdf
323. *Large and Small (Far and Near) Liquid Argon Detectors for an Off-Axis NuMI Beam*, NuMI Off-Axis Experiment Detector Workshop (SLAC, Jan. 24, 2003),
kirkmcd.princeton.edu/nufact/neutrino16.pdf
324. (with N. Simos *et al.*) *BNL Very Long Baseline Neutrino Oscillation Experiment - Technical Challenges in Getting There*, Am. Phys. Soc. Meeting (Philadelphia, Apr. 5, 2003).
325. *Large and Small (Far and Near) Liquid Argon Detectors for an Off-Axis NuMI Beam*, NuMI Off-Axis Experiment Detector Workshop (ANL, Apr. 26, 2003),
kirkmcd.princeton.edu/nufact/neutrino17.pdf

326. (with H. Kirk *et al.*) *Super-Invar as a Target for a Pulsed High-Intensity Proton Beam*, Proc. PAC03, p. 1628 (May 15, 2003),
kirkmc.d.princeton.edu/papers/kirk_ppac_3_1628_03.pdf
327. (with H.G. Kirk *et al.*) *A High-Field Pulsed Solenoid Magnet for Liquid Metal Target Studies*, Proc. PAC03, p. 1631 (May 15, 2003),
kirkmc.d.princeton.edu/papers/kirk_ppac_3_1631_03.pdf
kirkmc.d.princeton.edu/mumu/target/pac03/tppb003_big.pdf
328. (with P. Thieberger *et al.*) *Moving Solid Metallic Targets for Pion Production in the Muon Collider / Neutrino Factory Project*, Proc. PAC03, p. 1634 (May 15, 2003),
kirkmc.d.princeton.edu/papers/thieberger_ppac_3_1634_03.pdf
329. (with N. Simos *et al.*) *Concept Design of the Target/Horn System for the BNL Neutrino Oscillation Experiment*, Proc. PAC03, p. 1709 (May 15, 2003),
kirkmc.d.princeton.edu/papers/simos_ppac_3_1709_03.pdf
330. (with R. Samulyak *et al.*) *Numerical Simulation of Free Surface MHD Flows: Richtmyer-Meshkov Instability and Applications*, ICCSA 2003 (Montreal, May 21, 2003), Lect. Notes Comp. Sci. **2667**, 558 (2003),
kirkmc.d.princeton.edu/examples/accel/samulyak_lncs_2667_558_03.pdf
331. *E-166, Undulator-Based Production of Polarized Positrons*, American Linear Collider Workshop (Cornell, July 15, 2003), kirkmc.d.princeton.edu/e166/cornell_071503.pdf
332. *Solenoid Horn to Produce a Multiband Beam for Neutrino Oscillation Studies*, BNL/UCLA Workshop (Dec. 5, 2003), kirkmc.d.princeton.edu/nufact/neutrino18.pdf
333. *Comments on Ultrahigh-Energy Neutrino Beams*, Neutrino and Arms Control Workshop (U. Hawaii, Feb. 5, 2004), kirkmc.d.princeton.edu/nufact/uh_020504.pdf
334. (with N. Simos *et al.*) *Material Studies for Pulsed High-Intensity Proton Beam Targets*, ICONE12 (Apr. 25, 2004), kirkmc.d.princeton.edu/mumu/target/simos/ICONE12_49441.pdf
335. *Futures in Accelerator-Based Physics*, seminar at U. Ioannina (Greece, May 21, 2004), kirkmc.d.princeton.edu/accel/ioanninatrans.pdf
336. (with N. Simos *et al.*) *Target Material Irradiation Studies for High-Intensity Accelerator Beams*, NuFACT'04, Nucl. Phys. B (Proc. Suppl.) **149**, 259 (2005),
[kirkmc.d.princeton.edu/papers/simos_npb\(ps\)_149_259_05.pdf](http://kirkmc.d.princeton.edu/papers/simos_npb(ps)_149_259_05.pdf)
337. (with H.G. Kirk *et al.*) *Post-Irradiation Properties of Candidate Materials for High-Power Targets*, Proc. PAC05, p. 333 (Knoxville, May 18, 2005),
kirkmc.d.princeton.edu/papers/kirk_ppac_333_05.pdf
kirkmc.d.princeton.edu/mumu/target/simos/PAC05_Irrad_POSTER_NSimos.pdf
338. (with H.G. Kirk *et al.*) *A High-Power Target Experiment*, Proc. PAC05, p. 3745 (Knoxville, May 18, 2005), kirkmc.d.princeton.edu/papers/kirk_ppac_3745_05.pdf

339. (with P.T. Spampinato *et al.*) *A Free-Jet Mercury System for Use in a High-Power Target Experiment*, Proc. PAC05, p. 3895 (Knoxville, May 18, 2005),
kirkmc.d.princeton.edu/papers/spampinato_ppac_3895_05.pdf
kirkmc.d.princeton.edu/mumu/target/spampinato/PAC05_Poster.pdf
340. *High-Power Targets and Particle Collection*, NuFACT'05 (Frascati, June 22, 2005),
kirkmc.d.princeton.edu/mumu/target/targettrans49.pdf
341. (with V.B. Graves *et al.*) *A Free Jet Hg Target Operating In a High Magnetic Field Intersecting a High Power Proton Beam*, AccApp05 (Aug. 9, 2005),
kirkmc.d.princeton.edu/mumu/target/graves/AccApp05Paper.pdf
342. (with T. Shutt *et al.*) *The XENON dark matter experiment*, Nucl. Phys. B (Proc. Suppl.) **138**, 156 (2005), kirkmc.d.princeton.edu/examples/detectors/shutt_npbps_138_156_05.pdf
343. (with N. Simos *et al.*) *Solid Target Studies for Muon Colliders and Neutrino Beams*, NuFACT'05, Nucl. Phys. B (Proc. Suppl.) **155**, 288
(2006), [kirkmc.d.princeton.edu/papers/simos_npb\(ps\)_155_288_06.pdf](http://kirkmc.d.princeton.edu/papers/simos_npb(ps)_155_288_06.pdf)
344. *The MERIT Targetry Experiment at CERN* ISS Plenary Meeting (KEK, Jan 24, 2006), kirkmc.d.princeton.edu/mumu/target/targettrans51.pdf
345. *Considerations on Target (and Beam Dump), Capture and Decay for a 4-MW Neutrino Factory and a 4-MW Neutrino Superbeam* ISS Plenary Meeting (KEK, Jan. 24, 2006), kirkmc.d.princeton.edu/mumu/target/isstargettrans1.pdf
346. (with J. Kovermann *et al.*) *The E166 experiment: Development of an undulator-based polarized positron source for the international linear collider*, Intl. linear Collider Workshop (Bangalore, March 2006),
kirkmc.d.princeton.edu/examples/accel/kovermann_pramana_69_1165_07.pdf
347. *MERIT Mercury Delivery System and Diagnostics*, MUTAC Meeting (Fermilab, Mar. 17, 2006), kirkmc.d.princeton.edu/mumu/target/targettrans52.pdf
348. (with N. Simos *et al.*) *Experimental Studies of Targets and Collimators for High Intensity Beams*, Proc. HB06 (Tsukuba, May, 2006), TUBZ04,
<http://www.kirkmc.d.princeton.edu/mumu/target/HB06/TUBZ04.pdf>
349. (with N. Simos *et al.*) *Material Studies for Pulsed High-Intensity Proton Beam Targets*, EPAC06 (Edinburgh, Jun. 27, 2006),
kirkmc.d.princeton.edu/mumu/target/simos/tupls133.pdf
350. (with J. Kovermann *et al.*) *Undulator-Based Production of Polarized Positrons*, EPAC06 (Edinburgh, Jun. 28, 2006), kirkmc.d.princeton.edu/e166/EPAC06/wepls062.pdf
kirkmc.d.princeton.edu/e166/EPAC06/wepls062_poster.jpg

351. (with H.G. Kirk *et al.*) *A 15-T Pulsed Solenoid for a High-Power Target Experiment*, EPAC06 (Edinburgh, Jun. 28, 2006),
physics.princeton.edu/~mcdonald/mumu/target/EPAC06/wepls086.pdf
kirkmcd.princeton.edu/mumu/target/EPAC06/wepls086_poster.jpg
352. (with H.G. Kirk *et al.*) *A Proof-of-Principle Experiment for a High-Power Target System*, EPAC06 (Edinburgh, Jun. 29, 2006),
kirkmcd.princeton.edu/mumu/target/EPAC06/thpch196.pdf
kirkmcd.princeton.edu/mumu/target/EPAC06/thpch196_poster.jpg
353. (with N. Simos *et al.*) *Experimental Studies of Targets and Collimators for High Intensity Beams*, Workshop on High Intensity High Brightness Hadron Beams (Tsukuba, May 29-June 6, 2006),
kirkmcd.princeton.edu/mumu/target/simos/ICFA_HB2006_TUBZ04.pdf
354. (with N. Simos *et al.*) *Irradiation Damage Studies of High Power Accelerator Materials*, 8th Intl. Workshop on Spallation Materials (Taos, October 16-20, 2006),
kirkmcd.princeton.edu/mumu/target/simos/IWSMT8_NSimos.pdf
355. *High-Power Targets Neutrino Superbeams, Neutrino Factories and Muon Colliders*, NF&MCC Meeting (UCLA, Jan. 29, 2007),
kirkmcd.princeton.edu/mumu/target/targettrans54.pdf
356. *MERIT 15-T Pulsed Solenoid Magnet*, MERIT Safety Review (CERN, Mar. 30, 2007), kirkmcd.princeton.edu/mumu/target/targettrans55.pdf
357. (with H.G. Kirk *et al.*) *A High-Power Target Experiment at the CERN PS*, Proc. PAC07, p. 646 (Albuquerque, June 25, 2007),
kirkmcd.princeton.edu/papers/kirk_ppac_646_07.pdf
kirkmcd.princeton.edu/mumu/target/pac07/MOPAS094_poster.jpg
358. (with V.B. Graves *et al.*) *Systems Testing of a Free Hg Jet System for Use in a High-Power Target Experiment*, Proc. PAC07, p. 3136 (Albuquerque, June 28, 2007),
kirkmcd.princeton.edu/papers/graves_ppac_3136_07.pdf
kirkmcd.princeton.edu/mumu/target/pac07/THPMS068_poster.pdf
359. (with A. Mikhailichenko *et al.*) *The E166 Experiment: Undulator-Based Production of Polarized Positrons*, A.I.P. Conf. Proc. **915**, 1095 (2007),
kirkmcd.princeton.edu/examples/accel/mikhailichenko_aipcp_915_1095_07.pdf
360. (with H.-J. Park *et al.*) *Results of Optical Diagnostics of the MERIT Experiment*, Neutrino Factory International Design Study Plenary Meeting (FNAL, June 10, 2008), kirkmcd.princeton.edu/mumu/target/Park/MERIT_IDS_FERMILAB4.pdf
361. (with I. Efthymiopoulos *et al.*) *The MERIT (nTOF-11) High Intensity Liquid Mercury Target Experiment at the CERN PS*, EPAC08 (Genoa, June 23, 2008),
kirkmcd.princeton.edu/mumu/target/EPAC08/MOPC087.pdf

362. (with N. Simos *et al.*) *Experimental Study of Radiation Damage in Carbon Composites and Graphite Considered as Targets in the Neutrino Super Beam*, EPAC08 (Genoa, June 23, 2008), kirkmcd.princeton.edu/mumu/target/EPAC08/MOPC093.pdf
363. (with N. Simos *et al.*) *Irradiation Effects on the Physio-mechanical Properties of Super-alloys Characterized by Low Thermal Expansion*, EPAC08 (Genoa, June 23, 2008), kirkmcd.princeton.edu/mumu/target/EPAC08/MOPC094.pdf
364. (with H.G. Kirk *et al.*) *The MERIT High-Power Target Experiment at the CERN PS*, EPAC08 (Genoa, June 25, 2008),
physics.princeton.edu/~mcdonald/mumu/target/EPAC08/WEPP169.pdf
kirkmcd.princeton.edu/mumu/target/EPAC08/wepp169_poster.ppt
365. (with H.G. Kirk *et al.*) *A 15-T Pulsed Solenoid for a High-Power Target Experiment*, EPAC08 (Genoa, June 25, 2008),
physics.princeton.edu/~mcdonald/mumu/target/EPAC08/wepp170.pdf
kirkmcd.princeton.edu/mumu/target/EPAC08/wepp170_poster.ppt
366. *High-Power Targets for Superbeams, Neutrino Factories and Muon Colliders*, NuFact08 (Valencia, July 3, 2008), kirkmcd.princeton.edu/mumu/target/targettrans63.pdf
367. *High-Power Targets for Superbeams, Neutrino Factories and Muon Colliders*, 2nd Oxford-Princeton High-Power Target Workshop (Princeton, Nov. 6, 2008), kirkmcd.princeton.edu/mumu/target/targettrans64.pdf
368. *2nd Oxford-Princeton High-Power Target Workshop*, EUROnu WP2 Target Workshop (CERN, Dec. 16, 2008), kirkmcd.princeton.edu/mumu/target/targettrans65.pdf
369. *High-Power Targets for Neutrino Beams and Muon Colliders*, Neutrino Factory and Muon Collider Collaboration Meeting (Berkeley, Jan. 26, 2009), kirkmcd.princeton.edu/mumu/target/targettrans66.pdf
370. *High-Power Targets for Neutrino Beams and Muon Colliders*, TU4GRI03, PAC09 (Vancouver, May 5, 2009), kirkmcd.princeton.edu/mumu/target/pac09/tu4gri03.pdf
371. (with I. Efthymiopoulos *et al.*) *Time Structure of Particle Production in the MERIT High-Power Target Experiment*, TU6PFP085, PAC09 (Vancouver, May 6, 2009), kirkmcd.princeton.edu/mumu/target/pac09/TU6PFP085.pdf
kirkmcd.princeton.edu/mumu/target/pac09/TU6PFP085_poster.pdf
372. (with V.B. Graves *et al.*) *Operation of a Free HG Jet Delivery System in a High-Power Target Experiment*, WE6PFP086, PAC09 (Vancouver, May 6, 2009), kirkmcd.princeton.edu/mumu/target/pac09/we6pfp086.pdf
373. (with H.G. Kirk *et al.*) *Optical Diagnostic Results from the MERIT High-Power Target Experiment*, WE6RFP010, PAC09 (Vancouver, May 6, 2009), kirkmcd.princeton.edu/mumu/target/pac09/we6rfp010.pdf
kirkmcd.princeton.edu/mumu/target/pac09/we6rfp010_poster.pdf

374. (with F. Haug *et al.*) *Cooling System for the MERIT High-Power Target Experiment*, Cryogenic Eng. Conf. (Tucson, June 30, 2009), kirkmc.d.princeton.edu/papers/haug_aipcp_1218_1023_10.pdf
375. (with I. Efthymiopoulos *et al.*) *The MERIT High-Intensity Liquid Mercury Target Experiment at CERN PS*, Workshop on European Strategy for Future Neutrino Physics (CERN, Oct. 1, 2009), kirkmc.d.princeton.edu/mumu/target/Ilias/Poster_CERNWorkshop.pdf
376. (with N. Simos *et al.*) *Material Irradiation Damage Studies at BNL BLIP*, Workshop on Applications of High Intensity Proton Accelerators (FNAL, Oct. 20, 2009), kirkmc.d.princeton.edu/mumu/target/simos/simos_102009.pdf
377. *The Capture Solenoid as an Emittance-Reducing Element*, Neutrino Factory and Muon Collider Collaboration Meeting (Oxford, MS, Jan. 14, 2010), kirkmc.d.princeton.edu/mumu/target/targettrans72.pdf
378. (with H.G. Kirk *et al.*) *The MERIT High-Power Target Experiment at the CERN PS*, Int'l. Part. Accel. Conf. (Kyoto, May 25, 2010), kirkmc.d.princeton.edu/mumu/target/ipac10/wepe078.pdf
kirkmc.d.princeton.edu/mumu/target/ipac10/wepe078_poster.pdf
379. (with H.G. Kirk *et al.*) *A 4-MW Target Station for a Muon Collider or Neutrino Factory*, Int'l. Part. Accel. Conf. (Kyoto, May 25, 2010), kirkmc.d.princeton.edu/mumu/target/ipac10/wepe101.pdf
kirkmc.d.princeton.edu/mumu/target/ipac10/wepe101_poster.pdf
380. (with H.G. Kirk *et al.*) *High-Power Targets for a Neutrino Factory*, Neutrino2010 (Athens, June 14, 2010), kirkmc.d.princeton.edu/mumu/target/ipac10/neutrino2010_poster.pdf
kirkmc.d.princeton.edu/mumu/target/ipac10/neutrino2010_slides.pdf
381. (with M. Iarocci *et al.*) *Use of He Gas Cooled by Liquid Hydrogen with a 15-T Pulsed Copper Solenoid Magnet*, Proc. ICEC23-ICMC2010, p. 365 (Wroclaw, July 20, 2010), kirkmc.d.princeton.edu/mumu/target/icec_paper.pdf
kirkmc.d.princeton.edu/mumu/target/targettrans75.pdf
382. (with Y. Zhan *et al.*) *The dynamics of mercury flow in a curved pipe*, APS Fluid Dynamics Meeting (Long Beach, Nov. 22, 2010), kirkmc.d.princeton.edu/mumu/target/Yan/zhan_112210.pdf
383. (with N. Souchlas *et al.*) *Energy Deposition within Superconducting Coils of a 4-MW Target Station*, TUP179, PAC11 (New York, Mar. 29, 2011), kirkmc.d.princeton.edu/mumu/target/pac11/tup179.pdf
kirkmc.d.princeton.edu/mumu/target/pac11/tup179_poster_v6.pdf
384. (with H.G. Kirk *et al.*) *A Solenoid Capture System for a Muon Collider*, TUP265, PAC11 (New York, Mar. 29, 2011), kirkmc.d.princeton.edu/mumu/target/pac11/tup265.pdf
kirkmc.d.princeton.edu/mumu/target/pac11/tup265_poster.pdf

385. *The High-Power Target System for a Muon Collider or Neutrino Factory*, 4th High-Power Target Workshop (Malmö, May 2, 2011), kirkmc.d.princeton.edu/mumu/target/targettrans80.pdf
386. *The Target System Baseline*, Muon Collider 2011 (Telluride, June 28, 2011), kirkmc.d.princeton.edu/mumu/target/targettrans82.pdf
387. *The High-Power Target System for a Muon Collider or Neutrino Factory*, NuFact11 (Geneva, Aug. 4, 2011), kirkmc.d.princeton.edu/mumu/target/targettrans83.pdf
388. *Physics at the High-Energy Frontier with Colliding Beams of Muons*, U. Tennessee (Knoxville, Aug. 21, 2011), kirkmc.d.princeton.edu/mumu/target/targettrans84.pdf
389. (with R.J. Weggel *et al.*) *A Target Magnet System for a Muon Collider and Neutrino Factory*, TUPS053, IPAC11 (San Sebastian, Sept. 6, 2011), kirkmc.d.princeton.edu/mumu/target/ipac11/tups053.pdf
kirkmc.d.princeton.edu/mumu/target/ipac11/tups053_poster.pdf
390. (with N. Souchlas *et al.*) *Beam-Power Deposition in a 4-MW Target Station for a Muon Collider or a Neutrino Factory*, TUPS054, IPAC11 (San Sebastian, Sept. 6, 2011), kirkmc.d.princeton.edu/mumu/target/ipac11/tups054.pdf
kirkmc.d.princeton.edu/mumu/target/ipac11/tups054_poster.pdf
391. (with N. Simos *et al.*) *Radiation Damage and Radio-chemistry Issues*, Proton Accelerators for Science and Innovation Workshop (Fermilab, Jan. 13, 2012), kirkmc.d.princeton.edu/mumu/target/pasiw12/simos_011312.pdf
392. *Target-System Challenges at a Muon Collider and Neutrino Factory*, Proton Accelerators for Science and Innovation Workshop (Fermilab, Jan. 13, 2012), kirkmc.d.princeton.edu/mumu/target/targettrans86.pdf
393. *Radiation-Damage Considerations for the High-Power-Target System at a Muon Collider and Neutrino Factory*, Workshop on Radiation Effects in Superconducting Magnet Materials (Fermilab, Feb. 6, 2012), kirkmc.d.princeton.edu/mumu/target/targettrans87.pdf
394. (with X. Ding *et al.*) *Gallium as a possible target material for a Muon Collider or Neutrino Factory*, MOPPC044, IPAC12 (New Orleans, May. 21, 2012), kirkmc.d.princeton.edu/mumu/target/ipac12/MOPPC044.pdf
kirkmc.d.princeton.edu/mumu/target/ipac12/MOPPC044_poster.pdf
395. (with N. Souchlas *et al.*) *Energy Flow and Deposition in a 4-MW Muon-Collider Target System*, WEPPD036, IPAC12 (New Orleans, May. 22, 2012), kirkmc.d.princeton.edu/mumu/target/ipac12/weppd036.pdf
kirkmc.d.princeton.edu/mumu/target/ipac12/weppd036_poster.pdf

396. (with R.J. Weggel *et al.*) *Shielding of Superconducting Coils for a 4-MW Muon-Collider Target System*, WEPPD037, IPAC12 (New Orleans, May. 22, 2012), kirkmc.d.princeton.edu/mumu/target/ipac12/weppd037.pdf
kirkmc.d.princeton.edu/mumu/target/ipac12/weppd037_poster.pdf
397. (with V.B. Graves *et al.*) *Mercury Handling for the Target System for a Muon Collider*, WEPPD038, IPAC12 (New Orleans, May. 22, 2012), kirkmc.d.princeton.edu/mumu/target/ipac12/weppd038.pdf
kirkmc.d.princeton.edu/mumu/target/ipac12/weppd038_poster.pdf
398. (with K.V. Tsang *et al.*) *Results from the Daya Bay Reactor Neutrino Experiment*, Proc. 9th Intl. Symp. Cosm. Part. Astro. (Taipei, Nov. 2012), Nucl. Phys. B (Proc. Suppl.) **246-247**, 18 (2014), kirkmc.d.princeton.edu/examples/neutrinos/tsang_npbps_246-247_18_14.pdf
399. (with H.K. Sayed and H.G. Kirk) *Progress On The Neutrino Factory Target System Design*, Proc. NuFact12 (Nov. 16, 2012), kirkmc.d.princeton.edu/mumu/target/nufact12/hsayed_nufact12k4.pdf
400. *Radiation-Damage Considerations for the High-Power-Target System at a Muon Collider and Neutrino Factory*, 2nd Proton Accelerators for Science and Innovation Workshop (RAL, Apr. 4, 2013), kirkmc.d.princeton.edu/mumu/target/targettrans92.pdf
401. *The High-Power-Target System of a Neutrino Factory*, 10th Plenary Meeting, Intl. Design Study for a Neutrino Factory (RAL, Apr. 6, 2013), kirkmc.d.princeton.edu/mumu/target/targettrans93.pdf
402. *Engineering Issues for the High-Power-Target System of a Neutrino Factory*, 10th Plenary Meeting, Intl. Design Study for a Neutrino Factory (RAL, Apr. 6, 2013), kirkmc.d.princeton.edu/mumu/target/targettrans94.pdf
403. *The High-Power-Target System of a Muon Collider or Neutrino Factory*, Snowmass Workshop on Frontier Capability (BNL, Apr. 19, 2013), kirkmc.d.princeton.edu/mumu/target/targettrans95.pdf
404. (with X. Ding *et al.*) *Influence of Proton Beam Emittances on Particle Production off a Muon Collider Target*, TUPFI069, IPAC13 (Shanghai, May 14, 2013), kirkmc.d.princeton.edu/mumu/target/ipac13/TUPFI069.pdf
kirkmc.d.princeton.edu/mumu/target/ipac13/TUPFI069_poster.pdf
405. (with R.J. Weggel *et al.*) *Design of Magnets for the Target and Decay Region of a Muon Collider/Neutrino Factory*, TUPFI073, IPAC13 (Shanghai, May 14, 2013), kirkmc.d.princeton.edu/mumu/target/ipac13/tupfi073.pdf
kirkmc.d.princeton.edu/mumu/target/ipac13/tupfi073_poster.pdf

406. (with J. Pasternak *et al.*) *Design of the Final Focus of the Proton Beam for a Neutrino Factory*, TUPFI074, IPAC13 (Shanghai, May 14, 2013),
kirkmc.d.princeton.edu/mumu/target/ipac13/tupfi074.pdf
kirkmc.d.princeton.edu/mumu/target/ipac13/tupfi074_poster.pdf
407. (with H.K. Sayed *et al.*) *Optimizing Muon Capture and Transport for a Neutrino Factory/Muon Collider Front End*, TUPFI075, IPAC13 (Shanghai, May 14, 2013),
kirkmc.d.princeton.edu/mumu/target/ipac13/tupfi075.pdf
kirkmc.d.princeton.edu/mumu/target/ipac13/tupfi075_poster.pdf
408. (with V.B. Graves *et al.*) *Design of the Mercury Handling System for a Neutrino Factory/Muon Collider Target*, THPFI092, IPAC13 (Shanghai, May 16, 2013),
kirkmc.d.princeton.edu/mumu/target/ipac13/thpfi092.pdf
kirkmc.d.princeton.edu/mumu/target/ipac13/thpfi092_poster.pdf
409. *The High-Power-Target System of a Muon Collider or Neutrino Factory*, NuFact'13 (Beijing, Aug 20, 2013), kirkmc.d.princeton.edu/mumu/target/targettrans97.pdf
410. (with R. Samulyak *et al.*) *Simulation of High Power Mercury Jet Targets for Neutrino Factory and Muon Collider*, TUPBA09, NAPAC13 (Pasadena, Oct. 1, 2013),
kirkmc.d.princeton.edu/mumu/target/napac13/TUPBA09.pdf
kirkmc.d.princeton.edu/mumu/target/napac13/TUPBA09_poster.pdf
411. (with H.K. Sayed *et al.*) *Impact of the Initial Proton Bunch Length on the Performance of the Muon Front End*, TUPBA10, NAPAC13 (Pasadena, Oct. 1, 2013), kirkmc.d.princeton.edu/mumu/target/napac13/TUPBA10.pdf
kirkmc.d.princeton.edu/mumu/target/napac13/TUPBA10_poster.pdf
412. (with H.K. Sayed *et al.*) *Towards a Global Optimization of the Muon Accelerator Front End*, TUPBA11, NAPAC13 (Pasadena, Oct. 1, 2013),
kirkmc.d.princeton.edu/mumu/target/napac13/TUPBA11.pdf
kirkmc.d.princeton.edu/mumu/target/napac13/TUPBA11_poster.pdf
413. (with H.K. Sayed *et al.*) *Optimization of the Capture Section of a Staged Neutrino Factory*, THPHO11, NAPAC13 (Pasadena, Oct. 3, 2013),
kirkmc.d.princeton.edu/mumu/target/napac13/THPHO11.pdf
kirkmc.d.princeton.edu/mumu/target/napac13/THPHO11_poster.pdf
414. (with P. Snopok *et al.*) *Energy Deposition in Magnets and Shielding of the Target System of a Staged Neutrino Factory*, THPMA10, NAPAC13 (Pasadena, Oct. 3, 2013), kirkmc.d.princeton.edu/mumu/target/napac13/THPMA10.pdf
kirkmc.d.princeton.edu/mumu/target/napac13/THPMA10_poster.pdf
415. (with X. Ding *et al.*) *Optimization of Particle Production for a Staged Neutrino Factory*, THPMA11, NAPAC13 (Pasadena, Oct. 3, 2013),
kirkmc.d.princeton.edu/mumu/target/napac13/THPMA11.pdf
kirkmc.d.princeton.edu/mumu/target/napac13/THPMA11_poster.pdf

416. (with C. Lu *et al.*) *Electronics Challenges for HL-LHC pileup Mitigation with HyperFast Timing*, 4th Common ATLAS CMS Electronics Workshop (CERN, May 19, 2014), kirkmc.d.princeton.edu/papers/acesposter_swhite_031914.pdf
417. *Target System Concept for a Muon Collider/Neutrino Factory*, 5th High Power Targetry Workshop (FNAL, May 20, 2014), kirkmc.d.princeton.edu/mumu/target/hptw5_poster.pdf
418. (with H.K. Sayed *et al.*) *Study of High Intensity Muon Beam Production for Neutrino Experiments*, MOPRI007, IPAC14 (Dresden, June 16, 2014), kirkmc.d.princeton.edu/mumu/target/ipac14/MOPRI007.pdf
kirkmc.d.princeton.edu/mumu/target/ipac14/MOPRI007_poster.pdf
419. (with H.G. Kirk *et al.*) *Target System Concept for a Muon Collider/Neutrino Factory*, TUPRI008, IPAC14 (Dresden, June 17, 2014), kirkmc.d.princeton.edu/mumu/target/ipac14/tupri008.pdf
kirkmc.d.princeton.edu/mumu/target/ipac14/tupri008_poster.pdf
420. (with R.J. Weggel *et al.*) *Magnet Design for the Target System of a Muon Collider/Neutrino Factory*, THPRI087, IPAC14 (Dresden, June 19, 2014), kirkmc.d.princeton.edu/mumu/target/ipac14/thpri087.pdf
kirkmc.d.princeton.edu/mumu/target/ipac14/thpri087_poster.pdf
421. (with H.G. Kirk *et al.*) *Energy Deposition in the Target System of a Muon Collider/Neutrino Factory*, THPRI088, IPAC14 (Dresden, June 19, 2014), kirkmc.d.princeton.edu/mumu/target/ipac14/thpri088.pdf
kirkmc.d.princeton.edu/mumu/target/ipac14/thpri088_poster.pdf
422. (with X. Ding *et al.*) *Optimization of Particle Production for a Muon Collider/Neutrino Factory with a 6.75 GeV Proton Driver*, THPRI089, IPAC14 (Dresden, June 19, 2014), kirkmc.d.princeton.edu/mumu/target/ipac14/THPRI089.pdf
kirkmc.d.princeton.edu/mumu/target/ipac14/THPRI089_poster.pdf
423. *Target System Concept for a Muon Collider/Neutrino Factory*, NuFact14 (Glasgow, Aug. 29, 2014), kirkmc.d.princeton.edu/mumu/target/targettrans106.pdf
424. (with X. Ding and H.G. Kirk) *Particle Production of a Graphite Target System for the Intensity Frontier*, WEPJE010, IPAC15 (Richmond, May 6, 2015), <http://www.kirkmc.d.princeton.edu/mumu/target/ipac15/WEPJE010.pdf>
http://www.kirkmc.d.princeton.edu/mumu/target/ipac15/WEPJE010_poster.pdf
425. *18 Years of Muon Collider Studies*, MAP Collaboration Meeting (FNAL, May 19, 2015), kirkmc.d.princeton.edu/mumu/target/targettrans110.pdf
426. (with X. Ding and H.G. Kirk) *Particle Production of a Carbon/Mercury Target System for the Intensity Frontier*, MAP Collaboration Meeting (FNAL, May 19, 2015), http://www.kirkmc.d.princeton.edu/mumu/target/Ding/ding_150519.pdf

427. *DUNE Near Detectors*, NuFact15 (Rio de Janeiro, Aug. 11, 2015), kirkmc.d.princeton.edu/neutrino/DUNE/mcdonald_dune_nd_150811.pdf
428. *High-Power Targets for Muon (and Neutrino) Production*, NuFact15 (Rio de Janeiro, Aug. 14, 2015), kirkmc.d.princeton.edu/mumu/target/targettrans111.pdf
429. (with X. Ding *et al.*) *Carbon and Mercury Target Systems for Muon Colliders and Neutrino Factories*, TUPMY044, IPAC16 (Busan, May 10, 2016), <http://www.kirkmc.d.princeton.edu/mumu/target/ipac16/tupmy044.pdf>
http://www.kirkmc.d.princeton.edu/mumu/target/ipac16/tupmy044_poster.pdf
430. (with M. Centis Vignali *et al.*) *Study of Deep Diffused APDs for Timing Applications*, 30st RD50 Workshop (Krakow, June 6, 2017), kirkmc.d.princeton.edu/LHC/Vignali/presRD50krakow.pdf
431. (with U. Akhouri) *Past Experiments Exclude Light Majorana Neutrino States*, Lepton-Photon 2017 (Guangzhou, Aug. 7-12, 2017), kirkmc.d.princeton.edu/examples/majorana_poster_lp17.pdf
kirkmc.d.princeton.edu/examples/majorana_170811.pdf
432. (with S.O. Ugobono *et al.*) *Characterisation on Neutron-Irradiated Deep-Diffused APDs*, 31st RD50 Workshop (CERN, Nov. 21, 2017), kirkmc.d.princeton.edu/LHC/Ugobono/ugobono_171121.pdf
433. (with M. Centis Vignali *et al.*) *Characterization of Irradiated APDs for Timing Applications*, 31st RD50 Workshop (CERN, Nov. 21, 2017), kirkmc.d.princeton.edu/LHC/Vignali/vignali_171121.pdf
434. (with M. Centis Vignali *et al.*) *Characterization of irradiated APDs for picosecond time measurements*, Jinst **13**, c01041 (2018), kirkmc.d.princeton.edu/examples/detectors/vignali_jinst_13_c01041_18.pdf
435. *Nonlinear, Strong Field QED: SLAC Experiment E-144*, Workshop on Probing Strong-Field QED in Electron-Photon Interactions (DESY, Aug. 22, 2018), kirkmc.d.princeton.edu/examples/mcdonald_180822.pdf
436. *Reactor Neutrino Experiments*, XII Latin American Symposium of High Energy Physics (Lima, Nov. 27, 2018), kirkmc.d.princeton.edu/examples/mcdonald_silafae_181127.pdf
437. *High-Power Targets for Muon (and Neutrino) Production*, 2nd Muon Community Meeting (July 12, 2015), kirkmc.d.princeton.edu/mumu/target/targettrans112.pdf
438. *Nonlinear, Strong Field QED: SLAC Experiment E-144*, ExHILP21, (Jena, Sept. 17, 2021), http://kirkmc.d.princeton.edu/examples/mcdonald_210917.pdf

Proposals and Progress Reports

439. (with K.J. Anderson *et al.*) *A Proposal for Continued Studies of Hadron Induced μ -Pairs in a Large Acceptance Spectrometer*, P443, submitted to FNAL (Sept. 24, 1975), kirkmc.d.princeton.edu/papers/nal_443.pdf
440. (with K.J. Anderson *et al.*) *A Special Request for High-Priority Running to Measure High-Mass Muon Pairs*, P444, submitted to FNAL (Sept. 26, 1975), kirkmc.d.princeton.edu/papers/nal_444.pdf
441. *Proposal to Measure the Synchrotron-Čerenkov Effect*, DOE/ER/3072-29, submitted to Bates Laboratory (Nov. 13, 1985), kirkmc.d.princeton.edu/papers/mcdonald_851113.pdf
442. *Proposal to Measure the Synchrotron-Čerenkov Effect*, DOE/ER/3072-30, submitted to Brookhaven National Laboratory (Nov. 20, 1985), kirkmc.d.princeton.edu/papers/mcdonald_851120.pdf
443. (with R.C. Fernow *et al.*) *Proposal for Experimental Studies of Nonlinear Quantum Electrodynamics*, DOE/ER/3072-39 (Sept. 9, 1986), kirkmc.d.princeton.edu/papers/mcdonald_090986.pdf
444. (with N. Lockyer *et al.*) *Status Report of the Fermilab B Collider Study Group*, DOE/ER/3072-45 (June 20, 1988), kirkmc.d.princeton.edu/papers/breport_062088.pdf
445. (with M.V. Purohit) *Proposal for Generic Detector Development (Silicon Drift Chambers)*, (Aug. 31, 1988), kirkmc.d.princeton.edu/papers/generic88.pdf
446. (with H. Castro *et al.*) *Letter of Intent for the BCD: A Bottom Collider Detector for the Fermilab Tevatron* (Oct. 7, 1988), kirkmc.d.princeton.edu/papers/bcd_loi.pdf
447. (with H. Castro *et al.*) *Proposal for Research and Development: Vertexing, Tracking and Data Acquisition for the Bottom Collider Detector*, submitted to the Fermilab P.A.C. (Jan. 2, 1989), approved as Fermilab E784, kirkmc.d.princeton.edu/papers/p784.pdf
448. *Research and Development on Vertexing and Tracking for the Bottom Collider Detector*, submitted to the DOE (Feb. 15, 1989), kirkmc.d.princeton.edu/papers/prop1_89.pdf
449. *Detector Research and Development*, DOE Review (June 1989), kirkmc.d.princeton.edu/papers/doe0689.pdf
450. *Nonlinear QED*, DOE Review (June 1989), kirkmc.d.princeton.edu/atf/doe689.pdf
451. (with C. Lu *et al.*) *Proposal for Generic Detector Development in FY90*, (Sept. 1, 1989), kirkmc.d.princeton.edu/papers/generic89.pdf

452. (with L.D. Gladney *et al.*) *Proposal to SSC Laboratory for Research and Development for a Parallel Computing Farm*, (Sept. 29, 1989), kirkmcd.princeton.edu/papers/farm.pdf
453. (with C. Lu *et al.*) *Proposal to the SSC Laboratory for Research and Development of a Straw-Tube Tracking System*, (Sept. 30, 1989), kirkmcd.princeton.edu/papers/ssc_straw_89.pdf
454. (with H. Castro *et al.*) *Bottom Collider Detector (BCD) An Intermediate- and Low- P_t Detector for the SSC*, SSC-240 (Oct. 1, 1989)), kirkmcd.princeton.edu/papers/ssc-240.pdf
455. (with W. Chen *et al.*) *SSC Detector Subsystem R&D Proposal to Develop Track and Vertex Detector Based on Silicon Drift Devices*, (Oct. 1, 1989)), kirkmcd.princeton.edu/papers/chen_ssc_silicon_drift.pdf
456. (with E. Arens *et al.*) *SSC Detector R&D Proposal: Development of Technology for Pixel Vertex Detector*, (Oct. 1, 1989), kirkmcd.princeton.edu/papers/arens.pdf
457. (with R.C. Fernow *et al.*) *Proposal for an Experiment Study of Nonlinear Compton Scattering*, DOE/ER/3072-55, submitted to Brookhaven Lab (Oct. 27, 1989), kirkmcd.princeton.edu/e144/nltprop.pdf
458. (with W. Chen *et al.*) *Proposal for a Study of Laser Acceleration of Electron Using Micrograting Structures at the ATF*, BNL-43465, (Oct. 29, 1989), kirkmcd.princeton.edu/papers/chen_bnl-43465_89.pdf
459. (with R. Burnstein *et al.*) *Research and Development for a Bottom Collider Detector in FY 1990*, submitted to DOE, (Jan. 31, 1990), kirkmcd.princeton.edu/papers/doesup_13190.pdf
460. (with J.G. Heinrich *et al.*) *Proposal to SSC Laboratory for R&D of a Parallel Computing Farm*, DOE/ER/3072-58 (Feb. 12, 1990), kirkmcd.princeton.edu/papers/mcdonald_021290.pdf
461. *Proposal for Research and Development of a Silicon-Drift-Chamber Tracking Subsystem*, submitted to DOE (Mar. 8, 1990), kirkmcd.princeton.edu/papers/siliconprop_3890.pdf
462. (with H. Castro *et al.*) *Expression of Interest for a Bottom Collider Detector at the SSC*, submitted to the SSC Lab (May 25, 1990), kirkmcd.princeton.edu/papers/bcd_eoi.pdf
463. (with C. Lu *et al.*) *Proposal for Generic Detector Development in FY 1990 (Silicon Drift Chambers)*, (June 1, 1990).
464. *Princeton University – Task G, DOE Review* (June 6, 1990), kirkmcd.princeton.edu/papers/doereview_6690.pdf

465. (with H. Castro *et al.*) *Response to the SSC PAC*, (July 11, 1990), kirkmc.d.princeton.edu/papers/mcdonald_ssc_pac.pdf
466. *Progress Report and Renewal Request for R&D on Silicon Drift Chambers*, submitted to DOE (Aug. 28, 1990), kirkmc.d.princeton.edu/papers/silsub_82890.pdf
467. (with W. Chen *et al.*) *SSC Detector Subsystem R&D Interim Report on Silicon Drift Devices for Tracking and Vertex Detection*, (Sep. 1, 1990).
468. (with the Pixel Detector Development Collaboration) *Summary Report for FY90 and Proposed Effort for FY91*, (Sep. 1, 1990).
469. (with W. Brabson *et al.*) *Progress Report and Renewal Request for R&D on Central and Forward Tracking*, (Sep. 1, 1990).
470. (with W.S. Anderson *et al.*) *Addendum to the Progress Report and Renewal Request for R&D on Central and Forward Tracking*, (Sep. 4, 1990), kirkmc.d.princeton.edu/papers/mcdonald_090490.pdf
471. (with L.D. Gladney *et al.*) *Subsystem Renewal Proposal to SSC Laboratory for R&D of a Parallel Computing Farm*, (Sep. 11, 1990).
472. *Continuation of T784: Test Beam Requests for the 1991 Fixed Target Run* (Oct. 1, 1990), kirkmc.d.princeton.edu/bphys/testbeam_100190.pdf
473. (with H. Castro *et al.*) *Proposal for a B-Physics Experiment at TEV I: The μ BCD*, Fermilab P-827 (Oct. 8, 1990), kirkmc.d.princeton.edu/bphys/main_tev.pdf
474. (with D.P. Russell) *Nonlinear Compton Scattering*, DOE Germantown (Oct. 12, 1990), kirkmc.d.princeton.edu/papers/mcdonald_101290.pdf
475. (with P. Denes *et al.*) *Development of Detectors for the Superconducting Super Collider*, submitted to the Texas National Research Laboratory Commission (Oct. 31, 1990), kirkmc.d.princeton.edu/papers/mcdonald_tnrlc_90.pdf
476. (with H. Castro *et al.*) *Addendum to the Proposal for a B-Physics Experiment at TEV I: The μ BCD*, Fermilab P-827/Add.1 (Jan. 7, 1991), kirkmc.d.princeton.edu/papers/microBCDadd1.pdf
477. *B-Physics at the Tevatron Collider*, submitted to the FNAL PAC (Mar. 21, 1991), kirkmc.d.princeton.edu/bphys/pac_032191.pdf
478. *Silicon R&D – Summer '91*, (Apr. 5, 1991), kirkmc.d.princeton.edu/bphys/bcd_040591.pdf
479. *OSSC Major Detector Subsystem Funding Request*, (Apr. 10, 1991), kirkmc.d.princeton.edu/bphys/sscrequest_041091.pdf

480. (with H. Castro *et al.*) *Addendum 2 to the Proposal for a B-Physics Experiment at TEV I: The μ BCD*, Fermilab P-827/Add.2 (June 4, 1991), kirkmcd.princeton.edu/papers/microBCDadd2.pdf
481. (with W.S. Anderson *et al.*) *Progress Report and Renewal Request for R&D on Precision Straw Tube Tracking*, submitted to the SSC Laboratory (Sept. 15, 1991), kirkmcd.princeton.edu/papers/mcdonald_ssc_straws_91.pdf
482. (with D. Gunter *et al.*) *Progress Report and Renewal Request for R&D on a Silicon Vertex Detector with Interleaved Disks and Barrels*, submitted to the SSC Laboratory (Sept. 15, 1991), kirkmcd.princeton.edu/papers/mcdonald_ssc_svd_91.pdf
483. (with D.F. Anderson *et al.*) *Progress Report on Development of Solid Photocathodes and Construction of a Prototype RICH Detector*, submitted to the SSC Laboratory (Sept. 30, 1991), kirkmcd.princeton.edu/papers/mcdonald_ssc_rich_91.pdf
484. (with K. Anupindi *et al.*) *Subsystem Renewal Proposal to SSC Laboratory for R&D of a Parallel Computing Farm*, (Sept. 30, 1991), kirkmcd.princeton.edu/papers/mcdonald_ssc_farm_91.pdf
485. (with J.G. Heinrich *et al.*) *Proposal for a Study of QED at Critical Field Strength in Intense Laser-High Energy Electron Collisions at the Stanford Linear Accelerator Center*, submitted to SLAC (Oct. 20, 1991), kirkmcd.princeton.edu/e144/qedprop.pdf
486. (with P. Denes *et al.*) *Development of Detectors for the Superconducting Super Collider*, submitted to the Texas National Research Laboratory Commission (Oct. 31, 1991).
487. *QED at Critical Field Strength (SLA Experiment 144)* (Mar. 22 1992), kirkmcd.princeton.edu/papers/mcdonald_032392.pdf
488. (with N.S. Lockyer *et al.*) *Development of a Fast RICH Detector with a Solid Cesium-Iodide Photocathode: Summary of Research in FY92*, submitted to SSC Laboratory (Oct. 1, 1992), kirkmcd.princeton.edu/papers/mcdonald_ssc_rnd_summary_92.pdf
489. (with N.S. Lockyer *et al.*) *Development of a Fast RICH Detector with a Solid Cesium-Iodide Photocathode: Proposed Research in FY93*, submitted to SSC Laboratory (Oct. 1, 1992), kirkmcd.princeton.edu/papers/mcdonald_ssc_rnd_proposal_92.pdf
490. (with C. Lu *et al.*) *Development of Detectors for the Superconducting Super Collider*, submitted to the Texas National Research Laboratory Commission (Oct. 26, 1992), kirkmcd.princeton.edu/papers/mcdonald_tnrlc_92.pdf
491. (with C. Lu and Y. Zhu) *R&D for B-Physics at the SSC*, DOE Review (May 3, 1993), kirkmcd.princeton.edu/bphys/btrans_050393.pdf

492. (with V. Balasubramanian *et al.*) *QED at Critical Field Strength (SLAC Experiment 144)*, DOE Review (May 3, 1993), kirkmcd.princeton.edu/papers/mcdonald_050393.pdf
493. (with C. Lu *et al.*) *Development of Detectors for the Superconducting Super Collider*, submitted to the Texas National Research Laboratory Commission (Oct. 31, 1993), kirkmcd.princeton.edu/papers/mcdonald_tnrlc_93.pdf
494. *QED at Critical Field Strength (SLAC Experiment 144)*, SLAC Readiness Review (Mar. 1, 1994), kirkmcd.princeton.edu/papers/mcdonald_030194.pdf
495. (with J. Antos *et al.*) *Expression of Interest in a Future Collider Detector in B0 Fermilab* (May 3, 1994), kirkmcd.princeton.edu/papers/antos_eoi_fnal_94.pdf
496. (with C. Bula and E. Prebys) *SLAC Experiment 144. QED at Critical Field Strength*, DOE Review (June 15, 1994), kirkmcd.princeton.edu/papers/mcdonald_061594.pdf
497. *Supplementary Travel Budget for Task G*, submitted to DOE (Jan. 1995), kirkmcd.princeton.edu/papers/mcdonald_0195.pdf
498. *SLAC Experiment 144: QED at Critical Field Strength*, Progress Report (Feb. 7, 1995), kirkmcd.princeton.edu/papers/mcdonald_020795.pdf
499. (with C. Bula *et al.*) *SLAC Experiment 144: QED at Critical Field Strength*, DOE Review (May 31, 1995), kirkmcd.princeton.edu/papers/mcdonald_053195.pdf
500. *Proposal for R&D at Princeton U. in FY96*, submitted to the BABAR Collaboration (Oct. 20, 1995), kirkmcd.princeton.edu/papers/babar_rnd_102095.pdf
501. (with C. Bula *et al.*) *SLAC Experiment 144: QED at Critical Field Strength*, Progress Report (Apr. 8, 1996), kirkmcd.princeton.edu/papers/mcdonald_040896.pdf
502. (with C. Bula *et al.*) *SLAC Experiment 144: QED at Critical Field Strength* (Apr. 12, 1996), kirkmcd.princeton.edu/e144/e144trans_041296.pdf
503. (with K. Berry *et al.*) *SLAC Experiment 144. Positron Production by Laser Light* (May 29, 1997), kirkmcd.princeton.edu/e144/e144trans_052897.pdf
504. (with C.M. Ankenbrandt *et al.*) *Ionization Cooling R&D Program for a High Luminosity Muon Collider*, submitted to Fermilab (Apr. 15, 1998), <http://kirkmcd.princeton.edu/mumu/muc/muc0001.pdf>
505. (with H. Guler *et al.*) *R&D Towards a Muon Collider*, DOE progress report (May 26, 1998), kirkmcd.princeton.edu/hilite/doetrans_052398.pdf
506. *An R&D Program for Targetry at a Muon Collider*, DOE Review (Aug. 7, 1998), kirkmcd.princeton.edu/mumu/target/targettrans5.pdf

507. (with J. Alessi *et al.*) *A Proposal for an R&D Program for Targetry and Capture at a Muon-Collider Source*, submitted to BNL (Sept. 29 1998), kirkmc.d.princeton.edu/mumu/target/targetprop.pdf
508. *An R&D Program for Targetry and Capture at a Muon Collider Source*, DOE Review (Nov. 23, 1998), kirkmc.d.princeton.edu/mumu/target/targettrans8.pdf
509. *Muon Collider R&D at Princeton*, Princeton Physics Department Advisory Council Meeting (Dec. 4, 1998), kirkmc.d.princeton.edu/mumu/muontrans5.pdf
510. *Princeton High Energy Physics Task G*, DOE Review (May 17, 1999), kirkmc.d.princeton.edu/hilite/doetrans_052199.pdf
511. *An R&D Program for Targetry and Capture at a Muon-Collider Source*, Muon Collider Collaboration Meeting (St. Croix, May 25, 1999), kirkmc.d.princeton.edu/mumu/target/targettrans12.pdf
512. *Muons for a Muon Collider*, BSA Science and Technology Steering Committee Meeting (BNL, June 4, 1999), kirkmc.d.princeton.edu/mumu/target/targettrans13.pdf
513. *An R&D Program for Targetry and Capture at a Muon-Collider Source*, MUTAC Review (July 22, 1999), kirkmc.d.princeton.edu/mumu/target/targettrans14.pdf
514. (with D. Ayers *et al.*) *Expression of Interest for R&D towards a Neutrino Factory Based on a Storage Ring and a Muon Collider*, submitted to the NSF (Nov. 7, 1999), kirkmc.d.princeton.edu/mumu/NSFletter/nsfmain.pdf
515. *The R&D Program for Targetry and Capture at a Neutrino Factory/Muon Collider Source*, Neutrino Factory/Muon Collider Technical Board Meeting (Dec. 6, 1999), kirkmc.d.princeton.edu/mumu/target/targettrans16.pdf
516. *Liquid Jet Simulation Studies*, Neutrino Factory/Muon Collider Technical Board Meeting (Dec. 6, 1999), kirkmc.d.princeton.edu/mumu/target/simulationtrans1.pdf
517. *An R&D Program for Targetry and Capture at a Muon Collider/Neutrino Factory Source* (Mar. 28, 2000), kirkmc.d.princeton.edu/mumu/target/e951execsum.pdf
518. *The R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source*, BNL DOE Annual Program Review (Apr. 27, 2000), kirkmc.d.princeton.edu/mumu/target/targettrans21.pdf
519. *The R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source*, MUTAC Review (BNL, June 15, 2000), kirkmc.d.princeton.edu/mumu/target/targettrans23.pdf
520. *Nonlinear QED, Neutrino Factory and Muon Collider R&D*, DOE Review (June 22, 2000), kirkmc.d.princeton.edu/hilite/doetrans_062100.pdf

521. (with C.-X. Wang *et al.*) *Proposal for a Study of Ionization Cooling of a Low-Energy Muon Beam by LH₂ and LiH Absorbers* (July 5, 2000),
kirkmc.d.princeton.edu/mumu/cool_loi.pdf
522. *The R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source*, NF&MCC Technical Board Meeting (LBL, Oct. 3, 2000),
kirkmc.d.princeton.edu/mumu/target/targettrans25.pdf
523. *Tests of Targets Interacting with an Intense Proton Beam*, Targetry Workshop (BNL, Dec. 15, 2000), kirkmc.d.princeton.edu/mumu/target/liquidtrans2.pdf
524. *Lab Tests of the Magnetohydrodynamics of Liquid Metal Jets*, Targetry Workshop (BNL, Dec. 15, 2000), kirkmc.d.princeton.edu/mumu/target/liquidtrans3.pdf
525. *R&D Issues for Targetry and Capture at a Neutrino Factory and Muon Collider Source*, Targetry Workshop (BNL, Dec. 15, 2000),
kirkmc.d.princeton.edu/mumu/target/targettrans26.pdf
526. *The R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source* (Feb. 2, 2001), kirkmc.d.princeton.edu/mumu/target/targettrans27.pdf
527. *The R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source* (Apr. 19, 2001), kirkmc.d.princeton.edu/mumu/target/targettrans28.pdf
528. *An R&D Program for Targetry and Capture at a Neutrino Factory and Muon Collider Source* (Oct. 19, 2001), kirkmc.d.princeton.edu/mumu/target/targettrans31.pdf
529. (with C. Lu) *Studies of a Liquid Argon Time Projection Chamber in a Magnetic Field*, submitted to DOE Advanced Detector Research Program (Oct. 30, 2001),
kirkmc.d.princeton.edu/nufact/argonprop_103001.pdf
530. (with M. Atac *et al.*) *Liquid Xenon R&D for Future Large-Scale Dark-Matter Detectors*, submitted to DOE Advanced Detector Research Program (Oct. 30, 2001),
kirkmc.d.princeton.edu/nufact/DOE_Ad_Det_RD_2001.pdf
531. (with A. Badertscher *et al.*) *Magnetized Liquid Argon Detector for Electron Charge Sign Discrimination*, submitted to the CERN SPSSC (Jan. 3, 2002),
kirkmc.d.princeton.edu/nufact/uL@CERN_LOI.pdf
532. *The R&D Program for a 4-MW Target Station for a Neutrino Factory and Muon Collider Source* (Feb. 9, 2002), kirkmc.d.princeton.edu/mumu/target/targettrans32_013102.pdf
533. (with M.V. Diwan *et al.*) *Proposal to Measure the Efficiency of Electron Charge Sign Determination up to 10 GeV in a Magnetized Liquid Argon Detector (μ LANNDD)*, (P-965) submitted to BNL (Apr. 12, 2002), kirkmc.d.princeton.edu/nufact/bnl_loi/argonprop.pdf
534. (with M.V. Diwan *et al.*) *Letter of Intent – Neutrino Physics with Detectors at 100-1000 km from BNL*, submitted to BNL (Apr. 12, 2002),
kirkmc.d.princeton.edu/nufact/bnl_loi/bnl_loi_short.pdf

535. (with D.B. Cline *et al.*) *Proposal to Study the Feasibility to Site Various Neutrino Detectors at WIPP for Neutrino Factories or Superbeams*, submitted to the DOE (Apr. 17, 2002), kirkmcd.princeton.edu/neutrino/Cline/April17-WIPP-proposal.pdf
536. (with M.V. Diwan *et al.*) *LANNDD – Liquid Argon Neutrino and Nucleon Decay Detector*, submitted to the National Research Council (Apr. 23, 2002), kirkmcd.princeton.edu/nufact/nrc_lanndd.pdf
537. *Carbon and Mercury Targets for Neutrino Beams and a Muon Collider Source* (May 9, 2002), kirkmcd.princeton.edu/mumu/target/targettrans34.pdf
538. (with D. Ayres *et al.*) *Letter of Intent to Build an Off-Axis Detector to Study $\nu_\mu \rightarrow \nu_e$ Oscillations with the NUMI Neutrino Beam*, (P-929) submitted to Fermilab (July 17, 2002), kirkmcd.princeton.edu/nufact/para/loi_v6.pdf
539. *Princeton High Energy Physics Task G*, DOE Review (Aug. 20, 2002), kirkmcd.princeton.edu/hilite/doetrans02.pdf
540. *The E-951 Pulsed Solenoid Magnet R&D Facility for a Neutrino Beams / Muon Collider Source* (Sep. 6, 2002), kirkmcd.princeton.edu/mumu/target/targettrans35.pdf
541. (with G. Alexander *et al.*) *A Two-Stage Proposal to Test Production of Polarized Positrons with the SLAC 50-GeV Beam in the FFTB*, (P-166) submitted to SLAC (Oct. 22, 2002), kirkmcd.princeton.edu/e166/E-166-Proposal.pdf
542. *The R&D Program for a 4-MW Target Station for a Neutrino Factory and Muon Collider Source* (Jan. 15, 2003), kirkmcd.princeton.edu/mumu/target/targettrans36.pdf
543. (with S. Kahn *et al.*) *Studies of a Target System for a 4-MW, 50-GeV Proton Beam*, submitted to J-PARC (Jan. 21, 2003), kirkmcd.princeton.edu/mumu/target/jparc/jparc_loi.pdf
544. (with C. Lu) *Studies of a Liquid Argon Time Projection Chamber in a Magnetic Field*, submitted to DOE Advanced Detector Research Program (Feb. 4, 2003), kirkmcd.princeton.edu/nufact/argon_rnd_prop_020403.pdf
545. (with G. Alexander *et al.*) *Undulator-Based Production of Polarized Positrons*, (E-166) submitted to SLAC (May 16, 2003), kirkmcd.princeton.edu/e166/e166prop03.pdf
546. *The R&D Program for a 4-MW Target Station for a Neutrino Factory and Muon Collider Source* (May 16, 2003), kirkmcd.princeton.edu/mumu/target/targettrans37.pdf
547. *Targetry for a Neutrino Factory and Muon Collider* (June 9, 2003), kirkmcd.princeton.edu/mumu/target/targettrans39.pdf
548. *Studies of a Target System for a 4-MW, 50-GeV Proton Beam* (June 27, 2003), physics.princeton.edu/~mcdonald/mumu/target/targettrans40.pdf
549. *Targets for Multimewatt Proton Beams* (Aug. 8, 2003), kirkmcd.princeton.edu/mumu/target/targettrans41.pdf

550. *Targets for Neutrino Factories and Muon Colliders* (Sep. 10, 2003), kirkmc.d.princeton.edu/mumu/target/targettrans42.pdf
551. *Targets for Neutrino Factories and Muon Colliders* (Sep. 19, 2003), kirkmc.d.princeton.edu/mumu/target/targettrans43.pdf
552. (with J.R.J. Bennett *et al.*) *Studies of a Target System for a 4-MW, 24-GeV Proton Beam*, A Letter of Intent to the ISOLDE and Neutron Time-of-Flight Experiments Committee (Oct. 23, 2003), kirkmc.d.princeton.edu/mumu/target/cern_loi.pdf
553. (with S. Berridge *et al.*) *Linear Collider Accelerator Physics R&D Proposal. Undulator-Based Production of Polarized Positrons (SLAC Experiment E-166)* (Oct. 24, 2003), kirkmc.d.princeton.edu/e166/lcrd04.pdf
554. *Status Report on E-166, Undulator-Based Production of Polarized Positrons*, presented to the SLAC EPAC (Nov. 15, 2003), kirkmc.d.princeton.edu/e166/epac_111503.pdf
555. *Targets for Neutrino Factories and Muon Colliders* (Jan. 29, 2004), kirkmc.d.princeton.edu/mumu/target/targettrans44.pdf
556. (with E. Aprile *et al.*) *XENON: A Liquid Xe Dark Matter Search Experiment at LNGS*, A Letter of Intent to the Laboratory for Neutrinos at Gran Sasso, Italy (March, 2004), kirkmc.d.princeton.edu/xenon/Xe_LOI_GS8.pdf
557. (with J.R.J. Bennett *et al.*) *Studies of a Target System for a 4-MW, 24-GeV Proton Beam*, A Proposal to the ISOLDE and Neutron Time-of-Flight Experiments Committee (Apr. 26, 2004), kirkmc.d.princeton.edu/mumu/target/cern_proposal.pdf
558. *The High-Power Targetry R&D Program* (Apr. 28, 2004), kirkmc.d.princeton.edu/mumu/target/targettrans46.pdf
559. (with L. Bartoszek *et al.*) *FLARE. Fermilab Liquid Argon Experiments*, A Letter of Intent to Fermilab (July 13, 2004), <http://xxx.arxiv.org/abs/hep-ex/0408121>
560. *Nozzle R&D for a 20-m/s, 1-cm-diameter Mercury Jet* (Feb. 7, 2005), kirkmc.d.princeton.edu/mumu/target/pump/nozzle_rnd_trans1.pdf
561. *Nozzle R&D for a 20-m/s, 1-cm-diameter Mercury Jet* (Feb. 16, 2005), kirkmc.d.princeton.edu/mumu/target/pump/nozzle_rnd_trans2.pdf
562. *The High-Power Targetry R&D Program* (Feb. 16, 2005), kirkmc.d.princeton.edu/mumu/target/targettrans47.pdf
563. *The High-Power Targetry R&D Program* (Apr. 25, 2005), kirkmc.d.princeton.edu/mumu/target/targettrans48.pdf
564. *Princeton High Energy Physics Task G*, DOE Review (July 29, 2005), kirkmc.d.princeton.edu/hilite/doetrans05.pdf

565. *Nozzle R&D for a 20-m/s, 1-cm-diameter Mercury Jet* (Oct 19, 2005),
kirkmc.princeton.edu/mumu/target/pump/nozzle_rnd_trans3.pdf
566. *MERIT Experiment Review* (Dec 12, 2005),
kirkmc.princeton.edu/mumu/target/targettrans50.pdf
567. (with C. Bromberg *et al.*) *Research and Development for Massive Liquid Argon TPCs (LArTPC) for Long-Baseline Neutrino Physics* (Jan 27, 2006),
kirkmc.princeton.edu/nufact/LArInitiative.pdf
568. (with D.B. Cline *et al.*) *Letter of Intent for a Study of a Liquid Argon Neutrino and Nucleon Decay Detector (LANNDD) of 100 kTon at DUSEL/Homestake* (Feb 10, 2006), kirkmc.princeton.edu/nufact/loihomestake_k.pdf
569. (with C. Bromberg *et al.*) *Research and Development for Massive Liquid Argon TPCs (LArTPC) for Long-Baseline Neutrino Physics* (Mar 13, 2006),
kirkmc.princeton.edu/nufact/LArInitiative_NSF.pdf
570. (with M. Diwan *et al.*) *Proposal for an Experimental Program in Neutrino Physics and Proton Decay in the Homestake Laboratory* (July 12, 2006),
<http://arxiv.org/abs/hep-ex/0608023>
571. *Princeton High Energy Physics Task G, DOE Review* (Aug. 10, 2006),
kirkmc.princeton.edu/hilite/doetrans06.pdf
572. (with X. Guo *et al.*) *Daya Bay Project Physics Proposal* (Oct. 3, 2006),
kirkmc.princeton.edu/dayabay/cdr_review.pdf
573. (with X. Guo *et al.*) *A Precision Measurement of the Neutrino Mixing Angle θ_{13} Using Reactor Antineutrinos At Daya Bay* (Dec 1, 2006),
<http://xxx.arxiv.org/abs/hep-ex/0701029>
574. (with X. Guo *et al.*) *Daya Bay Project Conceptual Design Report* (Apr. 2, 2007),
kirkmc.princeton.edu/dayabay/cdr_cd1.pdf
575. *The High-Power Targetry R&D Program, MUTAC Review* (BNL, Apr. 18, 2007),
kirkmc.princeton.edu/mumu/target/targettrans56.pdf
576. (with G. Aarons *et al.*) *International Linear Collider Reference Design Report, ILC-Report-2007-001* (Aug. 2007), <http://www.linearcollider.org/cms/?pid=1000437>
577. *Princeton High Energy Physics Task G, DOE Review* (Aug. 24, 2007),
kirkmc.princeton.edu/hilite/doetrans07.pdf
578. *MERIT Experiment Status* (Aug. 30, 2007),
kirkmc.princeton.edu/mumu/target/MERIT/MERIT_status_070830.pdf
579. (with X. Guo *et al.*) *Daya Bay Project Technical Design Report* (Jan. 28, 2008),
kirkmc.princeton.edu/dayabay/tdr.pdf

580. *Overview of the Targetry R&D Program*, presented at the NFMCC Meeting (FNAL, Mar. 18, 2008), kirkmc.d.princeton.edu/mumu/target/targettrans58.pdf
581. *Future Targetry R&D*, presented at the NFMCC Meeting (FNAL, Mar. 19, 2008), kirkmc.d.princeton.edu/mumu/target/targettrans59.pdf
582. *The Targetry R&D Program*, presented at the MUTAC Review (LBNL, Apr. 8, 2008), kirkmc.d.princeton.edu/mumu/target/targettrans60.pdf
583. (with C. Lu) *Resistive Plate Chamber Gas System Final Design Review* (IHEP, Apr. 11, 2008), kirkmc.d.princeton.edu/dayabay/rpc_fdr_D.pdf
584. *The MERIT Experiment*, Accelerator Physics and Technology Seminar (FNAL, Apr. 24, 2008), kirkmc.d.princeton.edu/mumu/target/targettrans62.pdf
585. (with C. Lu) *Resistive Plate Chamber Gas Safety System Final Design Review* (June 19, 2008), kirkmc.d.princeton.edu/dayabay/Lu/GasSafetySystemFDR_F.pdf
586. (with J.S. Berg *et al.*) *Accelerator design concept for future neutrino facilities* (Sept. 10, 2008), kirkmc.d.princeton.edu/examples/accel/ISS-AcceleratorWG-final.pdf
587. (with V.B. Graves and H.G. Kirk) *Muon collider / Neutrino Factory Targetry R&D 2009-2012* (Aug. 4, 2008), kirkmc.d.princeton.edu/mumu/target/nfmcc_target_r&d_0808.pdf
588. *Princeton High Energy Physics Task G*, DOE Review (Aug. 12, 2008), kirkmc.d.princeton.edu/hilite/doetrans08.pdf
589. (with C. Lu) *Proposed Revision to the Design of the Daya Bay RPC Gas Mixing Panels* (Sept. 3, 2008), kirkmc.d.princeton.edu/dayabay/mixing_panel.pdf
590. (with C. Lu *et al.*) *Aging Study for SiD Hcal and Muon System RPCs*, proposal to the ILC University R&D Program (Jan. 23, 2009), kirkmc.d.princeton.edu/ILC/RPC_Princeton_k.pdf
591. (with P. Kyberd *et al.*) *Study of Low-Energy Neutrino Factory at the Fermilab to DUSEL Baseline*, Letter of Intent to DUSEL (July 17, 2009), kirkmc.d.princeton.edu/DUSEL/Bross/LENF-DUSEL_LOI-Final.pdf
592. *McDonald Group*, DOE Review (Aug. 12, 2009), kirkmc.d.princeton.edu/hilite/doetrans09.pdf
593. (with H.G. Kirk) *High-Power Targets*, White Paper for the Oct. 2009 DOE Accelerator Physics Review (Sep. 28, 2009), kirkmc.d.princeton.edu/mumu/target/hkirk/High-PowerTargets_V8.pdf
594. (with X. Bai *et al.*) *Proposal to Support the Preliminary Design of the Long-Baseline Neutrino Experiment (LBNE)*, submitted to DOE (May 13, 2010), kirkmc.d.princeton.edu/papers/LBNEPreliminaryDesignUniProposal.pdf

595. (with H.G. Kirk) *The Muon Collider/Neutrino Factory Target System*, contribution to the Muon Accelerator Program technical proposal (Aug. 14, 2010), kirkmc.princeton.edu/mumu/target/Baseline_v8.pdf
596. *MERIT and Future Plans*, Muon Accelerator Program Review (Fermilab, Aug. 24, 2010), kirkmc.princeton.edu/mumu/target/targettrans76.pdf
597. (with H.G. Kirk) *The Muon Collider/Neutrino Factory Target R&D Plan*, for the Muon Accelerator Program (Sept. 28, 2010), kirkmc.princeton.edu/mumu/target/Target_R&D_Plan_v2.pdf
598. *Updating the Target-System Baseline*, Muon Accelerator Program weekly meeting (Oct. 1, 2010), kirkmc.princeton.edu/mumu/target/targettrans77.pdf
599. *FY11 Target System Budget Proposal*, Muon Accelerator Program Technical Board Meeting (Nov. 1, 2010), kirkmc.princeton.edu/mumu/target/targettrans78.pdf
600. (with M. Chiu *et al.*) *Fast-Timing R&D addressing High-Rate-Capable Technologies using a Single-Electron, 3-Picosecond Beam*, proposal to the Brookhaven Accelerator Test Facility (Dec. 3, 2010), kirkmc.princeton.edu/LHC/White/ATF_proposal_final.pdf
601. (with C. Lu *et al.*) *Fast Timing Detectors for High-Rate Environments*, proposal to the DOE Detector R&D Program (Dec. 16, 2010), kirkmc.princeton.edu/LHC/KTM/doeprop_121010_narrative.pdf
602. *DoE Grant Renewal Proposal*, (Apr. 25 2011), kirkmc.princeton.edu/hilite/Template_2011/Renewal_Driver.pdf
603. (with C. Lu *et al.*) *New Materials and Gases for Resistive Plate Chambers for Hcal and Muon Systems in a Lepton Collider Detector*, proposal to the DOE Collider Detector R&D Program (Mar. 15, 2011), kirkmc.princeton.edu/ILC/proposal/princeton_lcdrd_narrative_031311_v3.pdf
604. (with the IDS-NF Collaboration) *Interim Design Report* (Oct. 19, 2011), kirkmc.princeton.edu/papers/abrams_1112.2853.pdf
605. *The MAP Targetry Program in FY11 and FY12*, Muon Accelerator Program Technical Board Meeting (Oct. 20, 2011), kirkmc.princeton.edu/mumu/target/targettrans85.pdf
606. (with T. Akiri *et al.*) LBNE Collaboration, *The 2010 Interim Report of the Long-Baseline Neutrino Experiment Collaboration Physics Working Groups* (Oct. 27, 2011), <http://arxiv.org/abs/1110.6249>
607. *DoE Grant Renewal Proposal*, (Nov. 4, 2011), kirkmc.princeton.edu/hilite/Template_2012/Renewal_Driver.pdf

608. *Muon Accelerator Program, Target System End of FY11 Report* (Nov. 21, 2011), kirkmcd.princeton.edu/mumu/target/MAP-End-of-Year-Report_princeton_fy11.pdf
609. (with S. Choubey *et al.*) IDS-NF Collaboration, *Interim Design Report*, International Design Study for a Neutrino Factory (Dec. 13, 2011), <http://arxiv.org/abs/1112.2853>
610. (with H. Chen *et al.*) *The MicroBooNE Technical Design Report*, (Feb. 24, 2012), kirkmcd.princeton.edu/papers/uBooNE_TDRCD3.pdf
611. (with B. Fleming *et al.*) *Neutrino Oscillation Experiment on the Booster Neutrino Beamline: LAr1*, Letter of Intent to Fermilab (June 13, 2012), kirkmcd.princeton.edu/papers/LAr1_061312.pdf
612. *Target and Absorbers for a Muon Collider/Neutrino Factory*, MUPAC (Fermilab, July 11, 2012), kirkmcd.princeton.edu/mumu/target/targettrans90.pdf
613. (with H.K. Sayed and H.G. Kirk) *Magnetic Configuration of the Muon Collider/Neutrino Factory Target System*, MUPAC (Fermilab, July 11, 2012), kirkmcd.princeton.edu/mumu/target/Sayed/sayed_070312.pdf
614. *Accelerator-Based Neutrino Physics*, Letter of Intent to the DoE Office of Science (July 12, 2012), kirkmcd.princeton.edu/hilite/doe_loi_071212_neutrino.pdf
615. (with C. Lu) *Fast Timing Detectors for High-Rate Environments*, Letter of Intent to the DoE Office of Science (July 12, 2012), kirkmcd.princeton.edu/hilite/doe_loi_071212_timing.pdf
616. (with C. Lu) *New Materials and Gases for Resistive Plate Chambers for Hadron Calorimeters and Muon Systems*, Letter of Intent to the DoE Office of Science (July 12, 2012), kirkmcd.princeton.edu/hilite/doe_loi_071212_rpc.pdf
617. *Muon Accelerator Program, Target System End of FY12 Report* (Aug. 13, 2012), kirkmcd.princeton.edu/mumu/target/MAP_fy12_princeton.pdf
618. *Target and Absorbers for a Muon Collider/Neutrino Factory*, MAP DoE Review (Fermilab, Aug. 30, 2012), kirkmcd.princeton.edu/mumu/target/targettrans91.pdf
619. *Accelerator-Based Neutrino Physics*, Proposal to the DoE Office of Science (Sept. 3, 2012), kirkmcd.princeton.edu/hilite/doe_prop_090312_neutrino.pdf
620. (with C. Lu) *Fast Timing Detectors for High-Rate Environments*, Proposal to the DoE Office of Science (Sept. 3, 2012), kirkmcd.princeton.edu/hilite/doe_prop_090312_timing.pdf
621. (with C. Lu) *New Materials and Gases for Resistive Plate Chambers for Hadron Calorimeters and Muon Systems*, Proposal to the DoE Office of Science (Sept. 3, 2012), kirkmcd.princeton.edu/hilite/doe_prop_090312_rpc.pdf

622. *DoE Grant Renewal Proposal*, (Jan. 1 2013),
kirkmc.d.princeton.edu/hilite/renewal_010213/Renewal_Driver_ktm_010213.pdf
623. (with R. Brown *et al.*) *R&D towards large-liquid scintillator detectors and measurement of neutrino mass hierarchy with reactor antineutrinos at ≈ 60 km*, Proposal to the DOE Office of Science (Mar. 4, 2013),
kirkmc.d.princeton.edu/papers/USLLSD_RD_prop.pdf
624. (with P. Kyberd *et al.*) *Neutrinos from Stored Muons (ν STORM)*, Expression of Interest to the CERN SPSC (Apr. 5, 2013), kirkmc.d.princeton.edu/papers/nuSTORM-EoI.pdf
625. *MAP Target System Activities FY13-15*, Report to the Muon Accelerator Project (Apr. 15, 2013), kirkmc.d.princeton.edu/mumu/target/target_fy13-15.pdf
626. (with D. Adey *et al.*) *ν STORM: Neutrinos from Stored Muons*, Proposal to Fermilab (May 30, 2013), kirkmc.d.princeton.edu/papers/nustorm_proposal_073113.pdf
<https://arxiv.org/abs/1308.6822>
627. (with P. Kyberd *et al.*) *ν STORM*, White Paper to CSS2013 (May 31, 2013),
kirkmc.d.princeton.edu/papers/nuSTORM_WP_CSS2013.pdf
628. (with S. Kettell *et al.*) *Neutrino mass hierarchy determination and other physics potential of medium-baseline reactor neutrino oscillation experiments*, submitted to Snowmass 2013 (July 28, 2013), <http://arxiv.org/abs/1307.7419>
629. (with C. Williams *et al.*) *Development of Pileup Mitigation Tools within the Context of a Dual Readout Calorimeter for CMS*, Letter of Intent to the US-CMS Program (Oct. 7, 2013), kirkmc.d.princeton.edu/papers/cms_loi_100413.pdf
630. *FY13 MAP Technology Development: Target and Absorbers Summary* (Oct. 31, 2013), kirkmc.d.princeton.edu/mumu/target/fy13_targetry_12_report.pdf
631. *Daya Bay Reactor Antineutrino Experiment*, DoE Grant Renewal Proposal (Dec. 19, 2013), kirkmc.d.princeton.edu/hilite/Template_2013/Renewal_Driver.pdf
632. *Front End – Target Options*, MUPAC (FNAL, Jan. 7, 2014),
kirkmc.d.princeton.edu/mumu/target/targettrans99.pdf
633. *Target System R&D*, MAP DoE Review (FNAL, Feb. 19, 2014),
kirkmc.d.princeton.edu/mumu/target/targettrans100.pdf
634. *Target System Concept for a Muon Collider/Neutrino Factory*, MAP Spring Meeting (FNAL, May 30, 2014), kirkmc.d.princeton.edu/mumu/target/targettrans101.pdf
635. *Target System Concept Specification*, for the Muon Accelerator Program (June 2, 2014), kirkmc.d.princeton.edu/mumu/target/target_concept_140602.pdf

636. (with S. White *et al.*) *Proof of Concept for Endcap Dedicated Timing Detector*, submitted to the USCMS Upgrade Program (Aug. 8, 2014),
kirkmc.d.princeton.edu/LHC/White/US_CMS_Timing_Upgr&D_Proposal_CY2015.pdf
637. (with H.G. Kirk and N. Simos) *High-Power Targetry in Support of the Intensity Frontier*, submitted to the DoE Accelerator R&D Panel (Sept. 2, 2014),
kirkmc.d.princeton.edu/mumu/target/hkirk/ARD_Panel.pdf
638. (with X. Ding and H.G. Kirk) *Carbon Target Design and Optimization for an Intense Muon Source*, Muon Accelerator Program Winter Meeting (SLAC, Dec. 4, 2014),
CarbonTargetDesignandOptimizationforanIntenseMuonSource
639. *Solid Target Options for an Intense Muon Source*, Muon Accelerator Program Winter Meeting (SLAC, Dec. 5, 2014), <http://www.kirkmc.d.princeton.edu/mumu/target/targettrans107.pdf>
640. (with M. Antonello *et al.*) *A Proposal for a Three Detector Short-Baseline Neutrino Oscillation Program in the Fermilab Booster Neutrino Beam*, (Jan. 8, 2015),
kirkmc.d.princeton.edu/SBN/SBN_PAC_Proposal_v4.pdf
641. (with R. Acciarri *et al.*) *DUNE Conceptual Design Report Vol. 2: The Physics Program for DUNE at LBNF* (Dec. 22, 2015),
kirkmc.d.princeton.edu/examples/neutrinos/dune_1512.06148.pdf
642. (with R. Acciarri *et al.*) *Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE) Conceptual Design Report Vol. 1: The LBNF and DUNE Projects* (Jan. 22, 2016),
kirkmc.d.princeton.edu/examples/detectors/lbnf_cdr1_1601.05471.pdf
643. (with R. Acciarri *et al.*) *Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE) Conceptual Design Report Vol. 2: The Physics Program for DUNE at LBNF* (Jan. 25, 2016),
kirkmc.d.princeton.edu/examples/detectors/lbnf_cdr2_1512.06148.pdf
644. (with R. Acciarri *et al.*) *Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE) Conceptual Design Report Vol. 4: The DUNE Detectors at LBNF* (Jan. 13, 2016),
kirkmc.d.princeton.edu/examples/detectors/lbnf_cdr4_1601.02984.pdf
645. *Fast Timing with Avalanche Photodiodes*, FY2018 Princeton Grant Renewal Proposal to the DoE (Sept. 12, 2017), kirkmc.d.princeton.edu/hilite/apdtiming_091217.pdf
646. (with S. Goswami *et al.*) *nuSTORM at CERN: Executive Summary*, (Dec. 19, 2018),
http://kirkmc.d.princeton.edu/examples/neutrinos/nuSTORM_Executive_Summary.pdf
http://kirkmc.d.princeton.edu/examples/neutrinos/nuSTORM_Executive_Summary_addendum.pdf
647. (with F.P. An *et al.*) *Legacy of the Daya Bay Reactor Neutrino Experiment*, Letter of Interest submitted to Snowmass21 (Aug. 31, 2020),
http://kirkmc.d.princeton.edu/examples/neutrinos/dayabay_snowmass21.pdf

648. (with S. Bhadra *et al.*) *Neutrinos from stored muons; nuSTORM*, Letter of Interest submitted to Snowmass21 (Aug. 31, 2020),
http://kirkmcd.princeton.edu/examples/neutrinos/nustorm_snowmass21.pdf
649. (with J. Schieck *et al.*) *Issues and Mitigations for Advanced Muon Ionization Cooling*, Letter of Interest submitted to Snowmass21 (Aug. 31, 2020),
http://kirkmcd.princeton.edu/examples/accel/snowmass21_muon_collider_c.pdf
650. (with J. Schieck *et al.*) *A Proton-Based Muon Source for a Collider at CERN*, Letter of Interest submitted to Snowmass21 (Aug. 31, 2020),
http://kirkmcd.princeton.edu/examples/accel/snowmass21_muon_collider_p.pdf
651. (with H. Abramowicz *et al.*) *International Large Detector Interim Design Report 2020*, KEK Preprint 2019-57 (2020),
http://kirkmcd.princeton.edu/examples/detectors/ild_design_20.pdf

Technical Notes

652. *Extension into Three Dimensions of the Classical Problem of Apollonius*, (1963), kirkmcd.princeton.edu/papers/apollonius_63.pdf
653. *A Solution to the Problem of Apollonius*, (May 19, 1964), kirkmcd.princeton.edu/papers/apollonius_051964.pdf
654. *Polarization Precession*, CALT-68-236 (Jan. 14, 1970), kirkmcd.princeton.edu/papers/mcdonald_calt-68-236.pdf
655. *Parametrization of the Low Energy Cross Sections for γ He³ \rightarrow p d* (July 7, 1970), kirkmcd.princeton.edu/papers/mcdonald_070770.pdf
656. *Photodisintegration of He³ by Polarized Gamma Beams* (Aug. 7, 1970), kirkmcd.princeton.edu/papers/mcdonald_080770.pdf
657. *Properties of Final State Polarization in the Reaction γ n \rightarrow p π^-* , CTSL-50 (Aug. 17, 1970), kirkmcd.princeton.edu/papers/mcdonald_ctsl-50.pdf
658. *Notes on the Use of the 360/44 Programming System Monitor* (Oct. 23, 1970), kirkmcd.princeton.edu/papers/mcdonald_102370.pdf
659. (with D.R. Edginton) *A Version of the KIOWA Histogramming Program for the 360/44*, CTSL-54 (Feb. 12, 1971), kirkmcd.princeton.edu/papers/mcdonald_ctsl-54.pdf
660. *Proposal to Study the Reaction $d + p \rightarrow He^3 + \gamma$ at $T_d = 460$ MeV* (May 26, 1971), kirkmcd.princeton.edu/papers/mcdonald_052671.pdf
661. *Effect of Multiple Coulomb Scattering on Spark Chamber Track Reconstruction*, CTSL-55 (June 30, 1971), kirkmcd.princeton.edu/papers/mcdonald_ctsl-55.pdf
662. *The Relation between Electrodisintegration and Photodisintegration of Helium-3*, CTSL-56 (July 14, 1971), kirkmcd.princeton.edu/papers/mcdonald_ctsl-56.pdf
663. (with C.A. Heusch *et al.*) *Photodisintegration Studies of He³*, CALT-68-319 (Aug. 1970), kirkmcd.princeton.edu/papers/mcdonald_calt-68-319.pdf
664. *Properties of the Maximum Likelihood Method*, CTSL-57 (Aug. 5, 1971), kirkmcd.princeton.edu/papers/mcdonald_ctsl-57.pdf
665. *Photodisintegration of Helium-3 at Energies Between 200 and 600 MeV*, Ph.D. Thesis, Caltech (June 1972), kirkmcd.princeton.edu/papers/mcdonald_thesis.pdf
666. (with K.J. Anderson *et al.*) *Dimuon Production with a Large Acceptance Spectrometer*, (June 15, 1975), kirkmcd.princeton.edu/papers/mcdonald_061575.pdf

667. (with J.G. Branson *et al.*) *Dimuon Production by 150 GeV/c π^+ and Protons with a Large-Acceptance Detector*, (Aug. 1975), kirkmcd.princeton.edu/papers/mcdonald_0875.pdf
668. (with K.J. Anderson *et al.*) *Mu-Pair Production by 150 GeV/c Hadrons*, (Sept. 1975), kirkmcd.princeton.edu/papers/mcdonald_0975.pdf
669. (with K.J. Anderson *et al.*) *Mu-Pair Production by π^+ , π^- and Protons in the Chicago-Cyclotron Spectrometer*, (June 10, 1976), kirkmcd.princeton.edu/papers/mcdonald_061076.pdf
670. (with J.G. Branson *et al.*) *Limits on the Hadronic Production of Charmed Particles Set by the CP-II Collaboration*, (June 1978), kirkmcd.princeton.edu/papers/mcdonald_0678.pdf
671. (with I.-H. Chiang *et al.*) *Search for Narrow States Produced in the Reaction $\pi^- p \rightarrow n + \text{neutrals}$ at 13 GeV/c*, BNL-27915 (1980), kirkmcd.princeton.edu/papers/chiang_bnl_27915.pdf
672. (with A.H. Walenta) *Calorimetry in a Multiplate Ion Chamber Operated with Gas Gain*, (Apr. 20 1981), kirkmcd.princeton.edu/papers/mcdonald_042081.pdf
673. *Comments on Laser-Linac Synchronization* (Aug. 5, 1986), kirkmcd.princeton.edu/atf/synchronization_080586.pdf
674. *Radiation from a Superluminal Source*, DOE/ER/3072-42 (Nov. 1986).
675. *Short Bibliography on Photocathode Guns* (Jan. 24, 1987), kirkmcd.princeton.edu/atf/gunbiblio.pdf
676. *Possible Photocathode for the RF Gun* (Feb. 18, 1987), kirkmcd.princeton.edu/papers/mcdonald_021887.pdf
677. *Notes on the Los Alamos Gun Performance* (Mar. 4, 1987), kirkmcd.princeton.edu/atf/los_alamos_gun.pdf
678. *Emittance Growth Near the Cathode* (Apr. 16, 1987), kirkmcd.princeton.edu/atf/emit.pdf
679. *Modeling the RF Gun with PARMELA* (May 21, 1987), kirkmcd.princeton.edu/atf/gun_model.pdf
680. *Simulation of the 2856 MHz RF Gun with PARMELA* (May 26, 1987), kirkmcd.princeton.edu/atf/gun_simulation.pdf
681. *Simulation of a Four-Cavity RF Gun* (June 4, 1987), kirkmcd.princeton.edu/atf/four_cavity_gun.pdf
682. *Studies of a Four-Cavity RF Gun (Continued)* (June 18, 1987), kirkmcd.princeton.edu/atf/four_cavity_studies.pdf

683. *Probing the ZWW and γ WW Couplings at $M_Z \leq \sqrt{s} < 2 M_W$* (draft, July 15, 1987), kirkmcd.princeton.edu/papers/zwwgww.pdf
684. *Pi-Mode RF Gun* (Aug. 20, 1987), kirkmcd.princeton.edu/atf/pi_mode_gun.pdf
685. *Can a Solenoid Magnet Contain the Transverse Emittance Growth in the RF Gun?* (Aug. 27, 1987), kirkmcd.princeton.edu/atf/solenoid_containment.pdf
686. *The Linac Front End* (Aug. 27, 1987), kirkmcd.princeton.edu/atf/frontend.pdf
687. *The Effect of the Vector Potential on Phase Space in the RF Gun* (Sep. 4, 1987), kirkmcd.princeton.edu/atf/vector.pdf
688. *Pi Mode RF Gun, II* (Sep. 4, 1987), kirkmcd.princeton.edu/atf/pi_mode_gun2.pdf
689. *Modifications to PARMELA* (June 3, 1988), kirkmcd.princeton.edu/atf/parmelamanual.pdf
690. *Carlsten's Proposal for Magnetic Confinement of Space-Charge Effects* (Oct. 10, 1988), kirkmcd.princeton.edu/atf/carlsten.pdf
691. (with M. Ardebili) *Third-Order Transport Studies of the ATF Beamline* (Oct. 13, 1988), kirkmcd.princeton.edu/atf/kickerline.pdf
692. *Transverse Kicks in Linacs* (Nov. 16, 1988), kirkmcd.princeton.edu/atf/kick.pdf
693. *Behavior of a TM_{120} Transverse RF Kicker* (Nov. 16, 1988), kirkmcd.princeton.edu/atf/rfkicker_111688.pdf
694. (with P. Russell) *Calculation of ATF Waist in Linac* (Nov. 18, 1988), kirkmcd.princeton.edu/atf/atfwaist_111888.pdf
695. (with M. Ardebili) *Diagnostic Beamline Including the RF Kicker* (Jan. 2, 1989), kirkmcd.princeton.edu/atf/kickerline.pdf
696. *Notes on CCD Cameras for Beam Monitoring* (Jan. 22, 1989?), kirkmcd.princeton.edu/atf/ccdmemo.pdf
697. *A CCD Camera System for x-y Beam Diagnostics* (Jan. 23, 1989?), kirkmcd.princeton.edu/atf/ccdcamera.pdf
698. *Transition Radiation as a Beam Diagnostic* (Jan. 24, 1989), kirkmcd.princeton.edu/atf/trans_rad_012489.pdf
699. (with D.P. Russell) *Possible Lens Combinations for the CCD Camera System* (Feb. 7, 1989?), kirkmcd.princeton.edu/atf/lenscombo.pdf
700. *A Nitrogen Laser for Photocathode Tests* (Mar. 3, 1990?), kirkmcd.princeton.edu/atf/nitrogen.pdf

701. *Possible Photocathode for the RF Gun* (July 20, 1990),
kirkmc.d.princeton.edu/atf/atfcath.pdf

The following notes are related to the Synchrotron-Čerenkov Experiment:

702. *Effects of Transition Radiation and Scintillation on the Synchrotron-Čerenkov Experiment* (December 27, 1985),
kirkmc.d.princeton.edu/papers/mcdonald_851227.pdf
703. *The Čerenkov counter and Fast Electronics* (February 13, 1986),
kirkmc.d.princeton.edu/papers/mcdonald_860213.pdf

The following notes are related to *B*-Physics at Hadron Colliders:

704. *A Vertex-Fitting Algorithm for the BCD* (Jan. 1, 1989),
kirkmc.d.princeton.edu/papers/vertexfit.pdf
705. *Acceptance for Reconstructing Several Different B-Decays* (Sep. 4, 1989),
kirkmc.d.princeton.edu/bphys/brecon_090489.pdf
706. (with C. Lu) *A Brief Survey of the Gas Mixtures Used in Straw Tubes* (Sep. 15, 1989), kirkmc.d.princeton.edu/papers/survey.pdf
707. (with H. Castro *et al.*) *The Bottom Collider Detector* (Oct. 1989),
kirkmc.d.princeton.edu/bphys/bshort_1089.pdf
708. (with J.G. Heinrich) *Mini-BCD: Geometric Acceptances*, (Feb. 1, 1990),
kirkmc.d.princeton.edu/papers/minibcd_2190.pdf
709. (with C. Lu *et al.*) *Prototype Study of the Straw Tube Proportional Chamber*, (Feb. 15, 1990), kirkmc.d.princeton.edu/papers/lureport_21590.pdf
710. (with L.D. Gladney *et al.*) *Initial Experience with the Intel i860 Microprocessor*, U. Penn preprint UPR-0184E (March 12, 1990), kirkmc.d.princeton.edu/papers/I860STAT.pdf
711. *Estimates of Sensitivity to CP-Violation in B Decays in Experiments at Hadron Colliders* (Mar. 23, 1990), kirkmc.d.princeton.edu/papers/hepap_32390.pdf
712. *Sketch of the Straw-Tube Tracking System for BCD at the SSC* (Mar. 23, 1990),
kirkmc.d.princeton.edu/papers/strawnote_32390.pdf
713. (with J.G. Heinrich) $B \rightarrow J/\psi K_S^0 X$ (Mar. 24, 1990),
kirkmc.d.princeton.edu/papers/mcdonald_032490.pdf
714. *A Catalog of 2-Body Nonleptonic B-Meson Decay Modes* (Apr. 5, 1990),
kirkmc.d.princeton.edu/bphys/bdecays_040590.pdf
715. *Choosing Radiators for the BCD RICH Counters* (May 20, 1990),
kirkmc.d.princeton.edu/bphys/rich_052090.pdf
716. *A Primer on CP Violation in the B^0 - \bar{B}^0 System* (May 25, 1990),
kirkmc.d.princeton.edu/examples/cp_primer.pdf
717. (with C. Lu) *Drift-Chamber Timing Studies with a N_2 Laser*, DOE/ER/3072-60 (June 10, 1990).
718. *The Merits of a K^\pm Tag for the BCD* (June 15, 1990),
kirkmc.d.princeton.edu/papers/kaon_tag.pdf
719. (with J.G. Heinrich) *B-Physics Options at TEV I*, DOE/ER/3072-61 (Aug. 10, 1990), kirkmc.d.princeton.edu/papers/mcdonald_081090.pdf

720. (with C. Lu *et al.*) *Investigations of Single Electron's Behavior in a Proportional Drift Tube*, DOE/ER/3072-60 (Aug. 30, 1990), kirkmc.d.princeton.edu/papers/lureport_83090.pdf
721. *Alternative Analyses of CP-Violating Asymmetries* (Jan. 29, 1991), kirkmc.d.princeton.edu/bphys/analysis_012991.pdf
722. *The BCD Approach to CP Violation at TEV I* (Feb. 7, 1991), kirkmc.d.princeton.edu/bphys/cdfcp_020791.pdf
723. (with J.G. Heinrich) *Is a Vertex Detector Needed for Tagging B-Events?* (Apr. 18, 1991), kirkmc.d.princeton.edu/bphys/tagging_041891.pdf
724. (with G. Bowden *et al.*) *Report of the Tracking Subgroup*, review of the SSC SDC (May 14, 1992), kirkmc.d.princeton.edu/papers/tracking_51492.pdf
725. (with J.G. Heinrich) *Peripheral Production of Fermion Pairs in Heavy-Ion Collisions* (May 19, 1991), kirkmc.d.princeton.edu/papers/heavyion_051991.pdf
726. (with W.S. Anderson *et al.*) *Investigations on the Timing Performance of Some Gas Mixtures with Single-Photoelectrons*, (May 30, 1991).
727. (with J.G. Heinrich *et al.*) *The Central Region of a Full-Acceptance Detector*, Princeton/HEP/92-06 (Aug. 7, 1992), kirkmc.d.princeton.edu/papers/mcdonald_centralfad_080792.pdf
728. *Beampipes for Forward Collider Detectors*, Princeton/HEP/92-05 (Aug. 7, 1992), kirkmc.d.princeton.edu/accel/beampipe.pdf
729. (with O.R. Long *et al.*) *Monte Carlo Simulation of $B^0 \rightarrow \pi^+\pi^-$ from p - p Interactions at $\sqrt{s} = 40$ TeV*, Princeton/HEP/92-07 (Aug. 13, 1992), kirkmc.d.princeton.edu/papers/mcdonald_081392.pdf
730. *Comparison of BCD and COBEX Strategies for B-Physics at Hadron Colliders*, Princeton/HEP/92-11 (Nov. 13, 1992), kirkmc.d.princeton.edu/bphys/comparison_111392.pdf
731. (with N.S. Lockyer) *Towards a Dedicated B-Physics Experiment at a Hadron Collider*, Princeton/HEP/93-02 (June 11, 1993), kirkmc.d.princeton.edu/bphys/main_rev.pdf
732. (with N.S. Lockyer) *A Bottom Collider Detector for the SSC*, Princeton/HEP/93-05 (Oct. 11, 1993), kirkmc.d.princeton.edu/bphys/sscnote_101193.pdf
733. (with C. Lu) *A Time-of Flight Detector Based on Radiation Detected by a CsI Photocathodes*, Princeton/HEP/93-07 (Nov. 18, 1993), kirkmc.d.princeton.edu/bphys/tofpaper_102593.pdf
734. (with Z. Cheng *et al.*) *Hadron Identification for B Physics*, Princeton/HEP/94-01 (March 22, 1994), kirkmc.d.princeton.edu/papers/mcdonald_hep-94-01.pdf

735. (with Z. Cheng and C. Lu) *A Time-of-Flight System with Full Coverage for an e^+e^- B Factory Based on Čerenkov Light Viewed by Microchannel-Plate Photomultipliers*, Princeton/HEP/94-07 (May 6, 1994).
736. (with C. Lu and D.R. Marlow) *First Tests of the Timing Resolution of Microchannel-Plate Photomultipliers Viewing Čerenkov Radiation*, Princeton/HEP/94-11 (June 18, 1994), kirkmcd.princeton.edu/mumu/mcptest.pdf

The following notes are related to SLAC experiment E-144:

737. *An Experimental Study of Nonlinear Thomson Scattering* (Apr. 23, 1987),
kirkmcd.princeton.edu/papers/mcdonald_042387.pdf
738. *Will ‘Ordinary’ Electron-Laser Interactions Preclude Observation of Nonlinear Strong-Field Effects?* (Sep. 8, 1989), kirkmcd.princeton.edu/accel/ponderomotive.pdf
739. *The Field in the FFTB Permanent Dump Magnets* (Jan. 25, 1992),
kirkmcd.princeton.edu/papers/mcdonald_012592.pdf
740. *New Accelerator Physics at New Accelerators* (June 15, 1992),
kirkmcd.princeton.edu/papers/mcdonald_061592.pdf
741. *Notes on My Visit to U. Tennessee* (Oct. 27, 1992),
kirkmcd.princeton.edu/papers/mcdonald_102792.pdf
742. *Silicon Calorimetry in E-144* (Dec. 3, 1992),
kirkmcd.princeton.edu/papers/mcdonald_120392.pdf
743. *Proposed Configuration of Silicon Calorimeters in E-144* (Dec. 28, 1992),
kirkmcd.princeton.edu/papers/mcdonald_122892.pdf
744. (with V. Balasubramanian) *E-144: Rate Estimate for Bremsstrahlung Positron Production* (Feb. 15, 1993), kirkmcd.princeton.edu/papers/mcdonald_021593.pdf
745. *QED at Critical Field Strength (SLAC Experiment 144)* (Feb. 19, 1993),
kirkmcd.princeton.edu/papers/mcdonald_021993.pdf
746. *E-144: Rate Estimate for Optical Synchrotron Radiation* (Mar. 1, 1993),
kirkmcd.princeton.edu/papers/mcdonald_030193.pdf
747. (with C. Bula) *E-144: Proposed Synchrotron Radiation Diagnostic* (Apr. 27, 1993),
kirkmcd.princeton.edu/papers/mcdonald_042793.pdf
748. *E-144: Angular Distribution of Synchrotron Radiation* (June 16, 1993),
kirkmcd.princeton.edu/papers/mcdonald_061693.pdf
749. *General Features of the E-144 CCD Spectrometer* (Nov. 26, 1993),
kirkmcd.princeton.edu/papers/mcdonald_112693.pdf
750. (with J. Brodie) *Sketch of the X-Ray Spectrometer for the BNL Nonlinear Compton Scattering Experiment* (Dec. 14, 1993), kirkmcd.princeton.edu/papers/mcdonald_121493.pdf
751. *Features of the E-144 CCD Spectrometer, II* (Dec. 22, 1993),
kirkmcd.princeton.edu/papers/mcdonald_122293.pdf

752. (with E. Prebys) *Features of the E-144 CCD Spectrometer, III: Shielding against Synchrotron Radiation* (June 18, 1994), kirkmcd.princeton.edu/papers/mcdonald_061894.pdf
753. (with E. Prebys) *Features of the E-144 CCD Spectrometer, IV: γ -Line Configuration for September 1994* (July 5, 1994), kirkmcd.princeton.edu/papers/mcdonald_070594.pdf
754. (with E. Prebys) *Features of the E-144 CCD Spectrometer, V: Tests of the γ -Line Jan. 1995* (Nov. 21, 1994), kirkmcd.princeton.edu/papers/mcdonald_112194.pdf
755. *γ -Beam Options for Positron Production at IP2* (Apr. 19, 1995), kirkmcd.princeton.edu/papers/mcdonald_041995.pdf
756. *Features of the E-144 CCD Spectrometer, VI: γ -Line Configuration for Dec. 1995* (July 1, 1995), kirkmcd.princeton.edu/papers/mcdonald_071195.pdf
757. *SLAC Experiment 144: QED at Critical Field Strength* (Apr. 8, 1996), kirkmcd.princeton.edu/e144/e144trans_040596.pdf
758. *Comparison of Methods of Reconstruction of Nonlinear Compton Scattering via ECAL Data* (Jan. 3, 1997), kirkmcd.princeton.edu/papers/ecal_recon_010397.pdf
759. (with C. Bula) *Weizsäcker-Williams Approximation to Trident Production in Electron-Photon Collisions* (Feb. 28, 1997), kirkmcd.princeton.edu/examples/trident.pdf
760. *Analytic Approximation to the Constrained Solution for η^2 as a Function of Monitors N1, N2 and N3* (Feb. 26, 1997), kirkmcd.princeton.edu/papers/constraint.pdf
761. *Positron Production by Laser Light*, colloquium at MIT (Apr. 24, 1997), kirkmcd.princeton.edu/e144/e144trans_030197.pdf
762. (with K. Berry *et al.*) *Strong-Field QED (SLAC Experiment E-144)* (May 26, 1998), kirkmcd.princeton.edu/e144/e144trans052298.pdf
763. *Positron Production by Laser Light*, seminar at U. Maryland (Sep. 30, 1997), kirkmcd.princeton.edu/e144/e144trans_080997.pdf

The following notes are related to particle acceleration:

764. *Gaussian Laser Beams and Particle Acceleration* (May 26, 1996),
kirkmcd.princeton.edu/accel/gaussian.pdf
765. *Positron Production in a Plasma Wakefield Accelerator* (Oct. 29, 1996),
kirkmcd.princeton.edu/accel/positron.pdf
766. (with Max Zolotarev) *Energy Balance in an Electrostatic Accelerator* (Feb. 1, 1998),
kirkmcd.princeton.edu/examples/staticaccel.pdf
767. (with M. Zolotarev and S. Chattopadhyay) *A Maxwellian Perspective on Particle Acceleration* (Feb. 24, 1998), kirkmcd.princeton.edu/examples/vacuумaccel.pdf
768. (with K. Shmakov) *Classical “Dressing” of a Free Electron in a Plane Electromagnetic Wave* (Feb. 29, 1998), kirkmcd.princeton.edu/accel/dressing.pdf
769. *A Maxwellian Perspective on Particle Acceleration* (Mar. 31, 1998),
kirkmcd.princeton.edu/accel/maxtrans.pdf
770. *A Maxwellian Perspective on Particle Acceleration* (Apr. 19, 1998),
kirkmcd.princeton.edu/accel/maxtrans2.pdf

The following notes related to the SLAC BABAR experiment:

771. *Maximum Likelihood Analysis of CP-Violating Asymmetries* Princeton/HEP/92-04 (Sept. 4, 1992), kirkmc.d.princeton.edu/tndc/likelihood.pdf
772. *Six Ways to Measure CP-Violating Phases in B Decays*, Princeton/HEP/92-09 (Sept. 20, 1992), kirkmc.d.princeton.edu/tndc/sixways.pdf
773. *Should the Drift Chamber Inner Wall be Load Bearing?*, Princeton/BABAR/TNDC-96-20 (Feb. 7, 1996), kirkmc.d.princeton.edu/tndc/innertube.pdf
774. *Resources at Princeton U. Relevant to BABAR Drift Chamber Construction* (Feb. 13, 1996), kirkmc.d.princeton.edu/tndc/dctrans1.pdf
775. *Remarks on Configuration, Assembly and Stringing of the BABAR Drift Chamber* (Feb. 22, 1996), kirkmc.d.princeton.edu/tndc/dctrans2.pdf
776. *Natural Layout of Carbon Fiber on Cones and Bicones*, Princeton/BABAR/TNDC-96-21 (Feb. 28, 1996), kirkmc.d.princeton.edu/tndc/cflayout.pdf
777. *Endplates under Pure Tension or Compression*, Princeton/BABAR/TNDC-96-22 (Feb. 28, 1996), kirkmc.d.princeton.edu/tndc/puretension.pdf
778. *An Analysis of Gas Flow in the BABAR Drift Chamber*, Princeton/BABAR/TNDC-96-23 (Mar. 5, 1996), kirkmc.d.princeton.edu/tndc/gasflow.pdf
779. *Options for the BABAR Drift Chamber Front Endplate*, Princeton/BABAR/TNDC-96-24 (Mar. 23, 1996), kirkmc.d.princeton.edu/tndc/frontplate.pdf
780. (with C. Lu) *Finite Element Analysis of Shaped Front Endplates for the BABAR Drift Chamber*, Princeton/BABAR/TNDC-96-25 (Mar. 22, 1996), kirkmc.d.princeton.edu/tndc/fea.pdf
781. *Survey of Mechanical Options for the BABAR Drift Chamber*, (Mar. 25, 1996), kirkmc.d.princeton.edu/tndc/dctrans3.pdf
782. (with C. Lu) *First Look at Al/Au and Au/W Wire*, Princeton/BABAR/TNDC-96-27 (Apr. 11, 1996), kirkmc.d.princeton.edu/tndc/tndc-96-27.pdf
783. *Deep Hole Drilling for the Rear Endplate*, Princeton/BABAR/TNDC-96-28 (Apr. 13, 1996), kirkmc.d.princeton.edu/tndc/drilling.pdf
784. (with C. Lu and W.R. Sands) *The Endplate/Support-Tube Joints*, Princeton/BABAR/TNDC-96-33 (Apr. 14, 1996), kirkmc.d.princeton.edu/tndc/joint.pdf
785. (with C. Lu) *Second Look at the Al/Au Wire*, Princeton/BABAR/TNDC-96-34 (Apr. 15, 1996), kirkmc.d.princeton.edu/tndc/wires2.pdf

786. (with C. Lu) *Effect of a Step in the Front Endplate*, Princeton/BABAR/TNDC-96-35 (Apr. 19, 1996), kirkmcd.princeton.edu/tndc/platestep.pdf
787. *Minor Adjustments in HEX2 Wire Positions*, Princeton/BABAR/TNDC-96-36 (Apr. 22, 1996), kirkmcd.princeton.edu/tndc/tndc-96-36.pdf
788. (with R. Wixted) *A Preamp-ADC Interface Amplifier for the BABAR Drift Chamber*, Princeton/BABAR/TNDC-96-37 (Apr. 23, 1996), kirkmcd.princeton.edu/tndc/bbaramp.pdf
789. (with E.J. Prebys) *The Effect of the Drift Chamber Outer Cylinder On the DIRC Resolution*, Princeton/BABAR/TNDC-96-38 (Apr. 24, 1996), kirkmcd.princeton.edu/tndc/dirc.pdf
790. (with M.R. Convery) *A Device for Quick and Reliable Measurement of Wire Tension*, Princeton/BABAR/TNDC-96-39 (Apr. 29, 1996), kirkmcd.princeton.edu/tndc/tension.pdf
791. *CP Violation in the B-Meson System*, Princeton/BABAR/TNDC-96-43 (May 1, 1996), kirkmcd.princeton.edu/tndc/cpphysics.pdf
792. (with C. Lu, W.R. Sands and A.J.S. Smith) *Visit with Dan Peterson of Cornell*, Princeton/BABAR/TNDC-96-40 (May 2, 1996), kirkmcd.princeton.edu/tndc/peterson.pdf
793. *Analytic Stress Calculations for a Stepped Front Endplate* (May 9, 1996), kirkmcd.princeton.edu/tndc/dctrans4.pdf
794. *Analytic Stress Analysis of a Stepped Endplate*, Princeton/BABAR/TNDC-96-41 (May 20, 1996), kirkmcd.princeton.edu/tndc/stresscalc.pdf
795. *Overtensioning of Wires as an Alternative to Prestressing the Drift Chamber Endplate*, Princeton/BABAR/TNDC-96-42 (May 21, 1996, revised Sept. 23, 1996), kirkmcd.princeton.edu/tndc/overtense.pdf
796. *Deadtime When Using a FIFO Buffer*, Princeton/BABAR/TNDC-96-44 (June 10, 1996), kirkmcd.princeton.edu/tndc/fifo.pdf
797. *Wire Procurement and Quality Control for the BABAR Drift Chamber* (June 24, 1996), kirkmcd.princeton.edu/tndc/wiretrans1.pdf
798. *Drift Chamber R&D* (June 24, 1996), kirkmcd.princeton.edu/tndc/rndtrans.pdf
799. (with A.J.S. Smith) *Proposal for a Drift Chamber Prototype III*, Princeton/BABAR/TNDC-96-45 (July 2, 1996), kirkmcd.princeton.edu/tndc/proto3.pdf
800. (with C. Lu) *Drift Chamber Wire Quality Control: Preliminary Test Results*, Princeton/BABAR/TNDC-96-46 (Aug. 22, 1996), kirkmcd.princeton.edu/tndc/wiretense.pdf
801. *Procurement of Gold-Plated Aluminum Wire for the BABAR Drift Chamber*, Princeton/BABAR/TNDC-96-47 (Sept. 19, 1996), kirkmcd.princeton.edu/tndc/wirespec.pdf

802. *Analytic Stress Analysis of Endplates Coupled by Inner and Outer Cylinders*, Princeton/BABAR/TNDC-96-48 (Sept. 25, 1996), kirkmc.d.princeton.edu/tndc/wholechamber.pdf
803. (with C. Lu) *Wire Procurement and Quality Control for the BABAR Drift Chamber* (Oct. 20, 1996), kirkmc.d.princeton.edu/tndc/wiretrans2.pdf
804. (with C. Lu) *Finite Element Analysis of Endplates Coupled by Inner and Outer Cylinders*, Princeton/BABAR/TNDC-96-49 (Nov. 5, 1996), kirkmc.d.princeton.edu/tndc/feachamber.pdf
805. (with R. Klemmer and C. Lu) *Plots of Drift Chamber Wire Creep*, Princeton/BABAR/TNDC-96-50 (Nov. 18, 1996), kirkmc.d.princeton.edu/tndc/creep0.pdf
806. (with W.R. Sands) *Results from the Brenner Test Plate*, Princeton/BABAR/TNDC-96-51 (Nov. 22, 1996), kirkmc.d.princeton.edu/tndc/testplate.pdf
807. (with C. Lu) *Update on Wire Quality Control*, Princeton/BABAR/TNDC-96-52 (Dec. 10, 1996), kirkmc.d.princeton.edu/tndc/wirereport.pdf
808. (with C. Lu and A.J.S. Smith) *Choice of Drift Chamber Sense Wire*, Princeton/BABAR/TNDC-96-53 (Dec. 16, 1996), kirkmc.d.princeton.edu/tndc/wirechoice.pdf
809. (with W.R. Sands) *CMM Results from the Drift Chamber Endplates*, Princeton/BABAR/TNDC-97-54 (Jan. 8, 1997), kirkmc.d.princeton.edu/tndc/tndc-97-54.pdf
810. (with R. Klemmer, C. Lu and W.R. Sands) *Plots of Drift Chamber Wire Creep*, Princeton/BABAR/TNDC-97-55 (Jan. 9, 1997), kirkmc.d.princeton.edu/tndc/creep2.pdf
811. (with C. Lu) *The Effect of Annealing on Creep of Aluminum Wire*, Princeton/BABAR/TNDC-97-56 (Feb. 7, 1997), kirkmc.d.princeton.edu/tndc/creep3.pdf
812. (with R. Klemmer, C. Lu and W.R. Sands) *Updated Plots of Drift Chamber Wire Creep*, Princeton/BABAR/TNDC-97-57 (Apr. 7, 1997), kirkmc.d.princeton.edu/tndc/creep4.pdf
813. (with C. Lu and A.J.S. Smith) *Princeton Magnet Coils: Test Results*, Princeton/BABAR/TNDC-97-58 (May 30, 1997), kirkmc.d.princeton.edu/tndc/tndc-97-58.pdf

The following notes are related to Muon Colliders:

814. *Compression of Beam Energy Via Off-Axis Traversal of an RF Cavity*, Princeton/ $\mu\mu$ /97-1 (Jan. 20, 1997), kirkmc.d.princeton.edu/mumu/cavity_012097.pdf
kirkmc.d.princeton.edu/mumu/cavitytrans.pdf
815. *Radiation Dose from Neutrino Decay at a Muon Collider*, Princeton/ $\mu\mu$ /97-2 (Mar. 7, 1998), kirkmc.d.princeton.edu/mumu/dose.pdf
816. (with C. Lu) *Low-Melting-Temperature Metals for Possible Use as Primary Targets at a Muon Collider Source*, Princeton/ $\mu\mu$ /97-3 (June 12, 1998),
kirkmc.d.princeton.edu/mumu/liquid_051397.pdf
817. (with E.J. Prebys) *Accuracy of Measurements in the Muon-Collider Cooling Experiment*, Princeton/ $\mu\mu$ /97-4 (July 18, 1997), kirkmc.d.princeton.edu/mumu/accuracy.pdf
kirkmc.d.princeton.edu/mumu/accuracytrans.pdf
818. (with E.J. Prebys) *Bunch-Timing Measurement in the Muon Cooling Experiment Via Rectangular $TE_{0,1,n}$ RF Cavities*, Princeton/ $\mu\mu$ /97-5 (July 18, 1997),
kirkmc.d.princeton.edu/mumu/timing_071397.pdf
kirkmc.d.princeton.edu/mumu/timingtrans.pdf
819. (with E.J. Prebys) *Bunch-Timing Measurement in the Muon Cooling Experiment Via a Rectangular $TM_{2,1,0}$ RF Cavity*, Princeton/ $\mu\mu$ /97-6 (July 18, 1997),
kirkmc.d.princeton.edu/mumu/deflection.pdf
820. (with E.J. Prebys) *Bunch-Timing Measurement in the Muon Cooling Experiment Via a Square $TM_{1,1,0}$ or a Circular $TM_{0,1,0}$ RF Accelerating Cavity*, Princeton/ $\mu\mu$ /97-7 (July 24, 1997), kirkmc.d.princeton.edu/mumu/timing_072497.pdf
kirkmc.d.princeton.edu/mumu/timingtrans2.pdf
821. (with C. Lu and E.J. Prebys) *A Detector Scenario for the Muon-Collider Cooling Experiment* (July 28, 1997), kirkmc.d.princeton.edu/mumu/scenariotrans_072697.pdf
(Oct. 21, 1997), kirkmc.d.princeton.edu/mumu/scenariotrans2.pdf
(Apr. 21, 1998), kirkmc.d.princeton.edu/mumu/scenariotrans3.pdf
822. (with C. Lu and E.J. Prebys) *Time Projection Chambers for the Muon-Collider Cooling Experiment* (May 5, 1998), kirkmc.d.princeton.edu/mumu/tpctrans.pdf
823. (with C. Lu *et al.*) *A Detector Scenario for the Muon Cooling Experiment*, Princeton/ $\mu\mu$ /97-8 (May 15, 1998), kirkmc.d.princeton.edu/mumu/coolingexpt.pdf
824. (with S.E. Vahsen) *Precision Timing via Čerenkov Radiation*, Princeton/ $\mu\mu$ /98-11 (July 23, 1998), kirkmc.d.princeton.edu/mumu/timing.pdf
825. (with C. Lu and E.J. Prebys) *Specifications for the Low-Pressure TPC for the Muon Cooling Experiment*, Princeton/ $\mu\mu$ /98-13 (July 26, 1998),
kirkmc.d.princeton.edu/mumu/tpcspec.pdf

826. (with H. Guler *et al.*) *Update on Time Projection Chambers for the Muon-Collider Cooling Experiment* (Sep. 1, 1998), kirkmc.d.princeton.edu/mumu/tpctrans2.pdf
827. (with C. Lu and S.E. Vahsen) *Precision Timing via Čerenkov Radiation, II* (Oct. 9, 1998), kirkmc.d.princeton.edu/mumu/timingtrans3.pdf
828. *Comments on Ionization Cooling*, Princeton/ $\mu\mu$ /98-17 (Nov. 5, 1998; updated Feb. 5, 2000), kirkmc.d.princeton.edu/mumu/cooling_020500.pdf
829. *Physics Opportunities at a Muon Collider*, Princeton/ $\mu\mu$ /99-18 (Jan. 6, 1999).
830. (with C. Lu and S.E. Vahsen) *Precision Timing via Cherenkov Radiation, II*, Princeton/ $\mu\mu$ /99-15 (Feb. 1999), kirkmc.d.princeton.edu/mumu/timing3.pdf
831. *An Emittance Diagnostic Channel for R&D on the Front End of a Muon Collider/Neutrino Factory*, Princeton/ $\mu\mu$ /99-20 (Aug. 6, 1999), kirkmc.d.princeton.edu/mumu/diagnostic.pdf
832. *Update on Longitudinal Diffusion* (Nov. 12, 1999), kirkmc.d.princeton.edu/mumu/mucooltrans.pdf
833. *Thoughts on Emittance Diagnostics for a Neutrino Factory Cooling Test* (Dec. 14, 1999), kirkmc.d.princeton.edu/mumu/tpctrans3.pdf
834. *A Simple First Phase of an Ionization Cooling R&D Program*, Princeton/ $\mu\mu$ /00-21 (Feb. 10, 2000), kirkmc.d.princeton.edu/mumu/cool1_122899.pdf
835. (with H.G. Kirk and X.J. Wang) *X-Ray Rates in Scintillating Fibers Placed Near the BNL ATF RF Gun*, Princeton/ $\mu\mu$ /01-22 (June 12, 2001), kirkmc.d.princeton.edu/mumu/atf_fiber_test.ps
836. *X-Ray Rates in Scintillating Fibers near High-Gradient RF Cavities at BNL and FNAL* (July 16, 2001), kirkmc.d.princeton.edu/mumu/fibertrans_071601.pdf

The following notes are related to Neutrino Factories:

837. *Expression of Interest in R&D towards a Neutrino Factory Based on a Muon Storage Ring* (Nov. 6, 1999), <http://arxiv.org/abs/physics/9911009>
838. (with N. Holtkamp *et al.*) *A Feasibility Study of a Neutrino Source Based on a Muon Storage Ring* (Mar. 31, 2000),
http://www.fnal.gov/projects/muon Collider/nu-factory/fermi_study_after_april1st/
839. (with C. Albright *et al.*) *Physics at a Neutrino Factory* (Aug. 31, 2000),
<http://arxiv.org/abs/hep-ex/0008064>
840. (with S. Ozaki *et al.*) *Feasibility Study II of a Muon-Based Neutrino Source* (June 14, 2001), <http://www.cap.bnl.gov/mumu/studyii/FS2-report.html>
841. (with A.M. Sessler) *Group M1 Response to the Snowmass2001 Charge* (July, 2001),
<http://www.cap.bnl.gov/mumu/pubs/snowmass01/M1response.pdf>
842. (with A.M. Sessler) *Report from the Snowmass 2001 Working Group M1: Muon Based Accelerators* (Aug. 7, 2001),
<http://www.cap.bnl.gov/mumu/pubs/snowmass01/snowmass-m1.pdf>
843. (with R. Raja *et al.*) *The Program in Neutrino Physics: Super Beams, Cold Muon Beams, Neutrino Factory and the Muon Collider* (Sep. 5, 2001),
<http://arxiv.org/abs/hep-ex/0108041>
844. *A Strategy for Accelerator-Based Neutrino Physics in the USA* (Apr. 29, 2002),
kirkmcd.princeton.edu/nufact/0204037.pdf
<http://arxiv.org/abs/hep-ex/0204037>
845. (with J. Alessi *et al.*) *AGS Super Neutrino Beam Facility Accelerator and Target System Design*, BNL-71228-2003-IR (Apr. 15, 2003),
http://raparia.sns.bnl.gov/nwg_ad/agsupg.pdf
846. (with C. Albright *et al.*) *Neutrino Factory and Beta Beam Experiments and Development* BNL-72369-2004, FNAL-TM-2259, LBNL-55478 (Nov. 22, 2004),
<http://www.cap.bnl.gov/mumu/study2a/REPORT/NF-BB-WG.pdf>

The following notes are related to high-power target systems for neutrino and muon beams, including the BNL E951 and CERN MERIT experiments:

847. *Low-Melting-Temperature Metals for Possible Use as Primary Targets at a Muon Collider Source*, Princeton/ $\mu\mu$ /97-3 (July 3, 1997), kirkmc.d.princeton.edu/mumu/liquid.pdf
848. (with C. Lu) *Flowing Tungsten Powder for Possible Use as the Primary Target at a Muon Collider Source*, Princeton/ $\mu\mu$ /98-10 (Mar. 15, 1998), kirkmc.d.princeton.edu/mumu/powder.pdf
849. *Targetry Issues at a Muon Collider* (Apr. 21, 1998), kirkmc.d.princeton.edu/mumu/targettrans1.pdf
850. *Sketch of a Muon Collider Targetry R&D Program at BNL* (June 23, 1998), kirkmc.d.princeton.edu/mumu/targettrans4.pdf
851. *Muon Collider Tests in the FEB U-Line* (Aug. 28, 1998), kirkmc.d.princeton.edu/mumu/target/febtrans.pdf
852. (with K. Brown *et al.*) *First Results from the FEB U-Line Spot-Size Study*, Princeton/ $\mu\mu$ /98-16 (Nov. 19, 1998), kirkmc.d.princeton.edu/mumu/uline.pdf
853. *Zone Refined Beryllium and Al-Be Alloys* (Mar. 18, 1999), kirkmc.d.princeton.edu/mumu/albemettrans.pdf
854. (with H. Kirk *et al.*) *RF Cavity Options for the Targetry R&D Program*, Princeton/ $\mu\mu$ /00-23 (May 2, 2000), kirkmc.d.princeton.edu/mumu/target/rf_041800.pdf
855. *Cooling of a Target by Helium Gas*, Princeton/ $\mu\mu$ /00-25 (Oct. 10, 2000), kirkmc.d.princeton.edu/mumu/target/thermal.pdf
856. *Damping of Radial Pinch Effects*, Princeton/ $\mu\mu$ /00-28 (Oct. 31, 2000), kirkmc.d.princeton.edu/mumu/target/radialpinch.pdf
857. *Optics for E951 Target Tests in the A3 Beamline*, Princeton/ $\mu\mu$ /00-28 (Nov. 20, 2000), kirkmc.d.princeton.edu/mumu/target/a3optics.pdf
858. *Magnetohydrodynamics of a Continuous Mercury Jet Coaxially Entering a Solenoid*, Princeton/ $\mu\mu$ /00-29 (Nov. 24, 2000), kirkmc.d.princeton.edu/mumu/target/continuousjet.pdf
859. *Magnetohydrodynamics of a Pulsed Mercury Jet Entering a Solenoid at an Angle*, Princeton/ $\mu\mu$ /00-30 (Dec. 1, 2000), kirkmc.d.princeton.edu/mumu/target/pulsedjet.pdf
860. *The FMIT Liquid Lithium Target* (Feb. 20, 2002), kirkmc.d.princeton.edu/mumu/target/fmit_022002.pdf

861. (with J. Gallardo *et al.*) *First order perturbative calculation of a conducting liquid jet in a solenoid*, MUC0242 (Apr. 12, 2002), <http://kirkmcd.princeton.edu/mumu/muc/muc0242.pdf>
862. (with J. Minervini *et al.*) *Feasibility Study of a Pulsed Solenoid for BNL-E951 Targetry Program* (Draft, Apr. 19, 2002), http://kirkmcd.princeton.edu/papers/mcdonald_e951_020419.pdf
863. *Survey of Proton Beams for Targetry Studies* (Nov. 4, 2002), kirkmcd.princeton.edu/mumu/target/beam_survey.pdf
864. (with E. de Haas) *Centrifugal Pump for a 20-m/s, 1-cm-Diameter Mercury Jet*, (June 1, 2003), kirkmcd.princeton.edu/mumu/target/mercury_pump.pdf
865. *Options for Tilting of the Magnetic Axis and the Mercury Jet in the CERN Target Experiment* (Sep 9, 2004), kirkmcd.princeton.edu/mumu/target/magnet_tilt.pdf
866. *Requirements for the Cryogenic System for the 15-T Pulsed Solenoid Magnet* (Sep 13, 2004), kirkmcd.princeton.edu/mumu/target/magnet_cryo_options.pdf
867. *Vena Contracta* (Feb. 16, 2005), kirkmcd.princeton.edu/mumu/target/pump/vena_contracta.pdf
868. *Silicon PIN Diodes as Particle Flux Monitors for the MERIT Experiment* (May 31, 2006), physics.princeton.edu/~mcdonald/mumu/target/pin_diodes.pdf
869. *MERIT Systems Tests at MIT* (Mar. 9, 2007), kirkmcd.princeton.edu/mumu/target/ktm/MIT.pdf
870. *From MERIT to a Muon Collider (Front End)* (Apr. 22, 2008), kirkmcd.princeton.edu/mumu/target/targettrans61.pdf
871. *Geometry of Viewing of Mercury Drops* (Dec. 3, 2008), kirkmcd.princeton.edu/mumu/target/heejin_120308.pdf
872. *Horizontal Beam Size as Determined by a Beam Scan* (Sep. 9, 2009), kirkmcd.princeton.edu/mumu/target/beamscan.pdf
873. *A Geometry for a Rotating Solid Target for a Neutrino Factory* (Nov. 3, 2009), kirkmcd.princeton.edu/mumu/target/targettrans70.pdf
874. *The Capture Solenoid as a Pseudo-Emittance-Reducing Element* (Nov. 18, 2009), kirkmcd.princeton.edu/mumu/target/targettrans71.pdf
875. (with R.C. Fernow *et al.*) *30-T-on-Target Neutrino Factory/Muon Collider Front End* (Dec. 18, 2009), kirkmcd.princeton.edu/mumu/target/Gallardo/front-end-paper.pdf
876. *The Capture Solenoid as an Emittance-Reducing Element* (Jan. 14, 2010), kirkmcd.princeton.edu/mumu/target/targettrans72.pdf

877. *Analytic Forms for an Adiabatic Tapered Solenoid* (Jan. 26, 2010),
kirkmcd.princeton.edu/mumu/target/taper.pdf
878. *Charge Collection in the MERIT Diamond Detectors* (Feb. 18, 2010),
kirkmcd.princeton.edu/mumu/target/diamond.pdf
879. *Sketch of Future Activities: Muon Accelerator Program, Technology Development, Targets and Absorbers* (Mar. 12, 2010), kirkmcd.princeton.edu/mumu/target/targettrans73.pdf
880. *How to Increase the π/μ Yield by a Factor of 2.5* (April 27, 2010),
kirkmcd.princeton.edu/mumu/target/pion_yield.pdf
881. *Materials for the Target System Internal Shield* (June 29, 2010),
kirkmcd.princeton.edu/mumu/target/targettrans74.pdf
882. (with H.G. Kirk) *The Muon Collider/Neutrino Factory Target R&D Plan* (Sep. 28, 2010), kirkmcd.princeton.edu/mumu/target/Target_R&D_Plan_v2.pdf
883. (with H.G. Kirk) *The Target System Baseline* (Feb. 4, 2011),
kirkmcd.princeton.edu/mumu/target/target_baseline_v3.pdf
884. *Limits for Radiation Damage to and Thermal Loads on Magnet Conductors* (Feb. 8, 2011), kirkmcd.princeton.edu/mumu/target/targettrans79.pdf
885. *Comments on Emittance Calculations* (Apr. 8, 2011),
kirkmcd.princeton.edu/mumu/target/emittrans1.pdf
886. (with Y. Zhan *et al.*) *The Effects of Geometric Configuration on Curved Pipe Flow for Muon Collider Project* (May 4, 2011),
kirkmcd.princeton.edu/mumu/target/Yan/zhan_poster_050411.pdf
887. *Mechanical Issues for the Target System* (June 14, 2011),
kirkmcd.princeton.edu/mumu/target/targettrans81.pdf
888. (with H.G. Kirk) *The Muon Collider Target System* (July 28, 2011),
kirkmcd.princeton.edu/mumu/target/hkirk/target_ICFA_hgk_ktm.pdf
889. *Modeling Pion Production at 3 GeV* (Sept. 13, 2013),
kirkmcd.princeton.edu/mumu/target/targettrans98.pdf
890. (with H.K. Sayed *et al.*) *Optimized Capture-Solenoid Field for a Muon Accelerator Front End* (Mar. 26, 2014), kirkmcd.princeton.edu/mumu/target/Sayed/140129/SolTaper-140129_k9.pdf
891. (with J. Back and N. Souchlas) *Power Deposition in Graphite Targets of Various Radii* (July 10, 2014), kirkmcd.princeton.edu/mumu/target/targettrans102.pdf
892. (with N. Souchlas and X. Ding) *Target Studies July 11-17, 2014*,
kirkmcd.princeton.edu/mumu/target/targettrans103.pdf

893. *Error Estimation in Fitting of Ellipses*, (July 17, 2014),
kirkmcd.princeton.edu/mumu/target/ellipse.pdf
894. (with N. Souchlas and X. Ding) *Target Studies July 18-23, 2014*,
kirkmcd.princeton.edu/mumu/target/targettrans104.pdf
895. (with N. Souchlas) *Shielding of the Final Focus Quads* (Aug. 1, 2014),
kirkmcd.princeton.edu/mumu/target/targettrans105.pdf
896. (with X. Ding *et al.*) *Particle Production of Graphite Target (20to2T5m4PDL) from Focused Proton Beam (KE of 6.75 GeV) with Different Emittance* (Aug. 8, 2014),
kirkmcd.princeton.edu/mumu/target/Ding/ding_140807.pdf
897. *Should the JINST Target Report Include an Updated Mercury Target Configuration?*
(Feb. 27, 2015), <http://www.kirkmcd.princeton.edu/mumu/target/targettrans108.pdf>
898. *Finalizing the C- and Hg-Target Configurations for 6.75-GeV Proton Beams* (Mar. 3, 2015), <http://www.kirkmcd.princeton.edu/mumu/target/targettrans109.pdf>
899. *The Bethe-Heitler Process as a Source of Muons* (Apr. 15, 2015),
<http://www.kirkmcd.princeton.edu/mumu/target/betheheitler.pdf>

The following notes are related to large liquid-argon time-projection chambers:

900. *Bibliography on Cryogenic Liquid and Solid Detectors*, Princeton/ $\mu\mu$ /00-27 (Nov. 3, 2000).
901. *LANNDD Sketchbook* (Jan. 16, 2001),
kirkmcd.princeton.edu/nufact/neutrino6.pdf
902. (with D.B. Cline *et al.*) *LANNDD – A Massive Liquid Argon Detector for Proton Decay, Supernova and Solar Neutrino Studies, and A Neutrino Factory Detector* (May 24, 2001), <http://xxx.lanl.gov/abs/astro-ph/0105442>
903. *Cryostats for a Liquid Argon “Near Detector” in a Neutrino Beam*, (Mar. 31, 2003),
kirkmcd.princeton.edu/lar/cryostat.pdf
904. (with D. Finley *et al.*) *A Large Liquid Argon Time Projection Chamber for Long-Baseline, Off-Axis Neutrino Oscillation Physics*, (July 27, 2005),
kirkmcd.princeton.edu/nufact/LArTPC.pdf
905. *Vibration of Wires in Liquid Argon Due to Fluid Flow* (Apr. 5, 2006),
kirkmcd.princeton.edu/nufact/wire_vibration_040506.pdf
906. *Ar³⁹ Decays and Background Rates on Long Wires in a Large Liquid Argon Detector* (May 12, 2006), kirkmcd.princeton.edu/nufact/ar_decay_051206.pdf
907. *Occupancy of a Large Liquid Argon TPC due to Cosmic Rays* (June 4, 2006),
kirkmcd.princeton.edu/nufact/cosmics_061106.pdf
908. *A Large Underground Liquid Argon Detector without a Cryostat?* (June 28, 2006),
kirkmcd.princeton.edu/nufact/roomtemp_062806.pdf

The following notes are related to long-baseline neutrino experiments with “superbeams”:

909. (with G. Barenboim *et al.*) *Detector R&D for future Neutrino Experiments with the NuMI Beamline* (Oct. 21, 2002), kirkmc.d.princeton.edu/nufact/para/detectrd.pdf
<http://www.arxiv.org/abs/hep-ex/0304017>
910. (with M.V. Diwan *et al.*) *Report of the BNL Neutrino Working Group. Very Long Baseline Neutrino Oscillation Experiments for Precise Measurements of Oscillation Parameters and Search for $\nu_\mu \rightarrow \nu_e$ Appearance and CP Violation* (Oct. 28, 2002),
<http://nwg.phy.bnl.gov/papers/nwg-wp/wpaper.pdf>
<http://arXiv.org/abs/hep-ex/0211001>
911. (with M.V. Diwan *et al.*) *Very Long Baseline Neutrino Oscillation Experiments for Precise Measurements of Mixing Parameters and CP Violating Effects* (Mar. 10, 2003), <http://arxiv.org/abs/hep-ph/0303081>
912. (with V. Barger *et al.*) *Long Baseline Neutrino Experiment Study* (June 4, 2007),
<http://arxiv.org/abs/0705.4396>
913. *High Power Targets for Project X – and Beyond* (Nov. 13, 2007),
kirkmc.d.princeton.edu/mumu/target/targettrans57.pdf
914. *Strategies for Liquid Argon Detectors at DUSEL* (June 18, 2009),
kirkmc.d.princeton.edu/DUSEL/KTM/DUSEL_strategy.pdf
915. *Lorentz Angle of Electrons Drifting in Liquid Argon in a Magnetic Field* (June 20, 2009), kirkmc.d.princeton.edu/DUSEL/KTM/lorentz.pdf
916. *Magnetizing a Large Liquid Argon Detector* (Mar. 18, 2010),
kirkmc.d.princeton.edu/nufact/magnetic_detector.pdf
917. (with B. Baller *et al.*) *Why a Liquid Argon Detector is the correct technology choice for LBNE* (Dec. 26, 2011), kirkmc.d.princeton.edu/papers/lbne5336_122611.pdf
918. (with C. Adams *et al.*) *Scientific Opportunities with the Long-Baseline Neutrino Experiment* (Oct. 1, 2013), <http://arxiv.org/abs/1307.7335>
919. (with A. de Gouvêa *et al.*) *Neutrinos* (Oct. 16, 2013), <http://arxiv.org/abs/1310.4340>
920. (with B. Abi *et al.*) *The Single-Phase ProtoDUNE Technical Design Report* (July 31, 2017), <https://arxiv.org/abs/1706.07081>

The following notes are related to SLAC experiment E166:

921. *Soft-Bend Magnets for SLAC E-166*, (Mar. 25, 2003),
kirkmc.d.princeton.edu/e166/softbend.pdf
922. *A Combined-Function Magnet for SLAC E-166 Positron Polarimeter*, (Apr. 20, 2003),
kirkmc.d.princeton.edu/e166/focusing_magnet.pdf
923. *Use of a Transmission Polarimeter for a Nonmonochromatic Photon Beam* (Oct. 3, 2008), kirkmc.d.princeton.edu/e166/polarimetry.pdf
924. *How Circularly Polarized is the Forward Radiation from a Helical Undulator?* (Oct. 10, 2008), kirkmc.d.princeton.edu/e166/undulator_pol.pdf

The following notes are related to the Daya Bay Reactor Antineutrino Experiment:

925. (with C. Lu) *Comments on RPCs for the Daya Bay Reactor Neutrino Experiment* (Aug 1, 2006), kirkmc.d.princeton.edu/dayabay/rpc_comments.pdf
926. *Measurement of $\sin^2 2\theta_{13}$ via Inverse β -Decay of $\bar{\nu}_e$ from Multiple Nuclear Reactors*, (Aug. 30, 2006), kirkmc.d.princeton.edu/dayabay/measurement.pdf
927. *On the Calibration of the Antineutrino Detectors*, (Sept. 30, 2006), kirkmc.d.princeton.edu/dayabay/calibration.pdf
928. *On the Efficiency Requirement for the Muon System*, (Oct. 5, 2006), kirkmc.d.princeton.edu/dayabay/efficiency.pdf
929. *Filling, Commissioning and Deployment of the Antineutrino Detectors*, (Oct. 14, 2006), kirkmc.d.princeton.edu/dayabay/deployment.pdf
930. (with C. Lu) *Tests of Anomet Aluminum Reflectors in Ultrapure Water* (Jan 5, 2007), kirkmc.d.princeton.edu/dayabay/Lu/Aluminum_in_Water.pdf
931. (with C. Lu) *Princeton Detector R&D for the Daya Bay Experiment* (Jan. 14, 2007), kirkmc.d.princeton.edu/dayabay/Lu/PrincetonRPCR&D-01142007.pdf
932. (with V. Ghazikhanian) *μ -Metal Wire Magnetic Shields for Large PMTs* (Feb 24, 2007), kirkmc.d.princeton.edu/dayabay/shield.pdf
933. *Coatings for the Antineutrino Detectors* (Feb 25, 2007), kirkmc.d.princeton.edu/dayabay/coating.pdf
934. (with W. Sands and C. Lu) *IHEP RPC Bakelite Resistivity in-Situ Test Results and Strip Plane Considerations* (Mar 27, 2007), kirkmc.d.princeton.edu/dayabay/Lu/IHEPBakeTest.pdf
935. (with C. Lu and W. Sands) *Test of the Pulse Height and Time Jitter for the IHEP Full-Size RPCs with 8-m-Long Readout Strip Planes* (Apr 28, 2007), kirkmc.d.princeton.edu/dayabay/Lu/PHandTspectrum.pdf
936. (with C. Lu) *The Daya Bay RPC Gas System* (Apr 29, 2007), kirkmc.d.princeton.edu/dayabay/gastrans1.pdf
937. (with C. Lu) *RPC Readout Topologies to Minimize the Accidental Trigger Rate* (July 5, 2007), kirkmc.d.princeton.edu/dayabay/accidentals.pdf
938. (with C. Lu) *Daya Bay RPC Gas System: Design Report & Budget Estimate* (July 28, 2007), kirkmc.d.princeton.edu/dayabay/Lu/GasSystemReport.pdf
939. *Muon System PMT Cable Routing* (July 28, 2007), kirkmc.d.princeton.edu/dayabay/pmt_cable_routing.pdf

940. (with C. Lu and W. Sands) *RPC Assembly* (July 28, 2007), kirkmc.d.princeton.edu/dayabay/rpc_assembly.pdf
941. (with H. Tanaka) *Magnetic Fields Near the Welds of the MiniBooNE PMT Frames* (Aug. 6, 2007), kirkmc.d.princeton.edu/dayabay/magnetic_welds.pdf
942. *Flange Options for the Antineutrino Detectors* (Aug. 8, 2007), kirkmc.d.princeton.edu/dayabay/flanges.pdf
943. (with C. Lu) *Effects of Humidity on Resistive Plate Chambers* (Dec. 10, 2007), kirkmc.d.princeton.edu/dayabay/Lu/HumidityTest-12102007.pdf
944. (with C. Lu) *Baseline RPC Gas Mixture for the Daya Bay Reactor Neutrino Experiment* (Mar. 7, 2008), kirkmc.d.princeton.edu/dayabay/Lu/Baseline_RPC_Gas_Mixture.pdf
945. *Comments on PMT Mounts* (Mar. 11, 2008), kirkmc.d.princeton.edu/dayabay/pmt_mounts.pdf
946. (with C. Lu) *Loose Ends in the Daya Bay RPC Gas System Design* (Mar. 25, 2008), kirkmc.d.princeton.edu/dayabay/Lu/gas_system_loose_ends3.pdf
947. (with C. Lu) *Monitor of Isobutane Content in the RPC Gas Mixture* (Oct. 22, 2008), kirkmc.d.princeton.edu/dayabay/Lu/DetectionIsobutane.pdf
948. (with C. Lu) *RPC Module Signal and HV Connections* (Oct. 27, 2008), kirkmc.d.princeton.edu/dayabay/rpc_connections.pdf
949. (with C. Lu *et al.*) *Daya Bay RPC Gas Prototype System Users Manual* (Dec. 2, 2008), kirkmc.d.princeton.edu/dayabay/Lu/DayaBayGasPrototypeSystemUserManual-B.pdf
950. (with C. Lu) *RPC Flammable Gas Monitor Based on Gas Chromatography* (Apr. 15, 2009), kirkmc.d.princeton.edu/dayabay/rpc_gas_safety_A.pdf
951. (with C. Lu) *RPC Gas System Installation* (June 11, 2009), kirkmc.d.princeton.edu/dayabay/Lu/GasInstallation_06112009.pdf
952. (with C. Lu) *Daya Bay RPC Gas Safety System – Gas Cabinet Test Report* (Oct. 11, 2009), kirkmc.d.princeton.edu/dayabay/Lu/GasCabinetTest.pdf
953. (with C. Lu *et al.*) *Daya Bay RPC Gas System Users Manual* (May 2, 2010), kirkmc.d.princeton.edu/dayabay/Lu/DayaBayGasSystemUserManual.pdf
954. (with C. Lu *et al.*) *Aging Study of RPCs for the SiD Hcal and Muon System* (June 8, 2010), kirkmc.d.princeton.edu/examples/detectors/lu_arxiv_1006.1061.pdf
955. *Reconstruction of Energy and Position in the Antineutrino Detectors* (July 11, 2011), kirkmc.d.princeton.edu/dayabay/ad_recon.pdf
956. *Effective Center and Obliquity Factor of R5912 Photomultiplier Tubes* (July 11, 2011), kirkmc.d.princeton.edu/dayabay/pmt_center.pdf

957. (with C. Lu and A.J.S. Smith) *Microscope Study of BESIII-type RPC Aging Phenomena* (Sep. 8, 2011), kirkmc.d.princeton.edu/dayabay/Lu/MicroscopeStudyOfAging.pdf
958. (with C. Lu) *Daya Bay RPC Gas System Installation and Commissioning* (Jan. 2, 2012), kirkmc.d.princeton.edu/dayabay/Lu/RPC_gas_system_commissioning-2011.pdf
959. Seminar: *Observation of Mixing Angle θ_{13} in the Daya Bay Reactor Antineutrino Experiment* (June 1, 2012), http://www.kirkmc.d.princeton.edu/dayabay/mcdonald_031412.pdf
960. *Comments on “Study of decoherence effects in neutrino oscillations at Daya Bay”* (May 20, 2016), kirkmc.d.princeton.edu/dayabay/decoh_prl_comments_v6.pdf
961. *(Non)decoherence in the Daya Bay Reactor Antineutrino Experiment* (May 20, 2016), kirkmc.d.princeton.edu/dayabay/decoherence.pdf

The following notes are related to the μ BooNE Experiment:

962. *What Do We (I?) Know About Efficiency And Backgrounds in ν_e Appearance Studies with a Large Liquid Argon Detector?* (Oct. 16, 2008),
kirkmc.d.princeton.edu/microBooNE/KTM/efficiency.pdf
963. *Petition by Princeton University to join the μ BooNE Experiment* (Oct. 24, 2008),
kirkmc.d.princeton.edu/microBooNE/KTM/princeton_microboone_102408.pdf
964. (with Q. He) *Comments on μ BooNE DAQ Challenges* (Nov. 19, 2008),
kirkmc.d.princeton.edu/microBooNE/KTM/daq_comments.pdf
965. *Comments on μ BooNE Readout Parameters* (Jan. 9, 2009),
kirkmc.d.princeton.edu/microBooNE/KTM/bnl_meeting_010709.pdf
966. *Electron Diffusion in Liquid Argon* (Jan. 16, 2009),
kirkmc.d.princeton.edu/microBooNE/KTM/diffusion_constant.pdf
967. *Options for the Supernova Trigger* (Jan. 16, 2009),
kirkmc.d.princeton.edu/microBooNE/KTM/supernova_trigger.pdf
968. *Measuring the Efficiency of the Accelerator-Neutrino Trigger* (Jan. 27, 2009),
kirkmc.d.princeton.edu/microBooNE/KTM/trigger_efficiency.pdf
969. (with Q. He) *Electron Drift Velocity in the μ BooNE TPC* (Mar. 20, 2009),
kirkmc.d.princeton.edu/microBooNE/KTM/DriftV.pdf
970. (with Q. He) *Muon Rate in the μ BooNE TPC* (May 14, 2009),
kirkmc.d.princeton.edu/microBooNE/KTM/MuonRate.pdf

The following notes are related to fast timing with avalanche photodiodes:

- 971. (with C. Lu) *Gain & Noise Comparison for Mini-Circuits, Wenteq and U. Penn Amplifier* (Aug. 20, 2013), kirkmc.d.princeton.edu/LHC/Lu/ComparisonOfAmplifiers.pptx
- 972. (with C. Lu) *Gain & Noise Comparison for Mini-Circuits, Wenteq and U. Penn Amplifier* (Aug. 20, 2013), kirkmc.d.princeton.edu/LHC/Lu/s-n_issue_of_mesh_apd.pdf
- 973. *S/N Issue of Mesh APD* (Mar. 2, 2016),
kirkmc.d.princeton.edu/LHC/KTM/APD_mounting_scheme_ktm.pdf
- 974. *Failure of a 2nd RMD APD on a Penn Preamp Board* (Mar. 13, 2017),
kirkmc.d.princeton.edu/LHC/KTM/apd_failure_170313.pdf
- 975. (with B. Harrop and M. Newcomer) *G10 Carrier Board for RMD 8 × 8 mm² APDs*
(Mar. 22, 2017), kirkmc.d.princeton.edu/LHC/KTM/carrier_v6.pdf

The following notes are related to JUNO neutrino experiment

976. (with A.B. Balantekin *et al.*) *Neutrino mass hierarchy determination and other physics potential of medium-baseline reactor neutrino oscillation experiments* (Oct. 1, 2013), kirkmc.d.princeton.edu/examples/neutrinos/balantekin_1307.7419.pdf
977. *Pixelated Muon Veto System* (Jan. 12, 2015),
kirkmc.d.princeton.edu/JUNO/KTM/pixel_veto_150112.pdf
978. *A Dynamitron or Rhodotron for the JUNO Positron Calibration* (Feb. 19, 2015),
kirkmc.d.princeton.edu/JUNO/KTM/positron_021915.pdf

Pedagogic Notes

979. *Floating Wire Simulation of the Trajectory of a Charged Particle in a Magnetic Field* (Sept. 1, 1969), kirkmcd.princeton.edu/examples/wireorbit.pdf
980. *Polarization Precession* (Jan. 14, 1970), kirkmcd.princeton.edu/examples/polprecess.pdf
981. *Neutral Pion Decay* (Sept. 15, 1976), kirkmcd.princeton.edu/examples/piondecay.pdf
982. *Electric Potential of a Resistive Bead* (Mar. 1, 1979), kirkmcd.princeton.edu/examples/resistive_bead.pdf
983. *Liénard-Wiechert Potentials and Fields via Lorentz Transformations* (April 7, 1979), kirkmcd.princeton.edu/examples/lw_potentials.pdf
984. *Gauging Away Polarization States of Waves* (April 14, 1979), kirkmcd.princeton.edu/examples/pol.pdf
985. *Electron Trajectories in a Vacuum Coaxial Cable* (April 17, 1979), kirkmcd.princeton.edu/examples/e_in_coax.pdf
986. *Electromagnetism and Newton's 3rd Law* (April 20, 1979), kirkmcd.princeton.edu/examples/page.pdf
987. *Radiated Power Distribution in the Far Zone of a Moving System* (April 24, 1979), kirkmcd.princeton.edu/examples/moving_far.pdf
988. *Wave Amplification in a Magnetic Medium* (May 1, 1979), kirkmcd.princeton.edu/examples/magnetic_waves.pdf
989. *The Force on an Antenna Array* (May 1, 1979), kirkmcd.princeton.edu/examples/antenna_force.pdf
990. *Self-Induced Transparency* (May 3, 1979), kirkmcd.princeton.edu/examples/self_induced_transparaency.pdf
991. *Čerenkov Radiation in a Dielectric Waveguide* (Sept. 30, 1979), kirkmcd.princeton.edu/examples/dielectricwaveguide.pdf
992. *The Shape of Tokamak Coils* (May 17, 1980), kirkmcd.princeton.edu/examples/toroid.pdf
993. *Greek Temple Seismograph* (Sep. 1, 1980), kirkmcd.princeton.edu/examples/seisomograph.pdf
994. *Spinning Basketballs* (Nov. 21, 1980), kirkmcd.princeton.edu/examples/basketball.pdf
995. *The Golfer's Nemesis* (Nov. 23, 1980), kirkmcd.princeton.edu/examples/golf.pdf
996. *Off the Rim* (Nov. 25, 1980), kirkmcd.princeton.edu/examples/rim.pdf

997. *Transverse Waves on an Inelastic Vertical String* (Nov. 30, 1980),
kirkmcd.princeton.edu/examples/vertical_string.pdf
998. *Transverse Waves on an Inelastic Rotating String* (Dec. 1, 1980),
kirkmcd.princeton.edu/examples/rotating_string.pdf
999. *Spin-Orbit Coupling in the Earth-Moon System* (Nov. 2, 1982),
kirkmcd.princeton.edu/examples/spin_orbit.pdf
1000. *The Amp Clamp* (April 19, 1983), kirkmcd.princeton.edu/examples/ampclamp.pdf
1001. *The Guard Ring of a Streamer Chamber* (Oct. 1, 1983),
kirkmcd.princeton.edu/examples/streamer.pdf
1002. (with J. Belcher) *Feynman Cylinder Paradox* (1983),
kirkmcd.princeton.edu/examples/feynman_cylinder.pdf
1003. *Čerenkov Radiation by a Neutron and by an Electric Dipole* (Apr. 15, 1984),
kirkmcd.princeton.edu/examples/cerenkov_n.pdf
1004. *A Naïve Estimate of the Coupling Constant in Yukawa Theory* (Apr. 17, 1984),
kirkmcd.princeton.edu/examples/yukawa.pdf
1005. *Stress and Momentum in a Capacitor That Moves with Constant Velocity* (Apr. 21, 1984), kirkmcd.princeton.edu/examples/cap_stress.pdf
1006. *The Grating Accelerator* (Sep. 14, 1984), kirkmcd.princeton.edu/examples/grating.pdf
1007. *The Laser Driven Vacuum Photodiode* (Sep. 26, 1986),
kirkmcd.princeton.edu/examples/vacdiode.pdf
1008. (with H. Mitter) *The Helical Wiggler* (Oct. 12, 1986),
kirkmcd.princeton.edu/examples/helical.pdf
1009. *Radiation from a Superluminal Source* (Nov. 26, 1986),
kirkmcd.princeton.edu/examples/superluminal.pdf
1010. *An RF Cavity in Which Transverse Fields Grow Linearly with Radius* (Mar. 24, 1988), kirkmcd.princeton.edu/examples/rfgun.pdf
1011. *The Tennis Racquet Theorem* (Dec. 1, 1988), kirkmcd.princeton.edu/examples/racquet.pdf
1012. (with C. Farina and A. Tort) *Right and Wrong Use of the Lenz Vector for Non-Newtonian Potentials* (May 23, 1989),
kirkmcd.princeton.edu/examples/lenz.pdf
1013. *Motion of a Leaky Tank Car* (Dec. 4, 1989), kirkmcd.princeton.edu/examples/tankcar.pdf
1014. *Circular Orbits Inside the Sphere of Death* (Nov. 8, 1993),
kirkmcd.princeton.edu/examples/sphereofdeath.pdf

1015. *Levitating Beachballs* (Dec. 6, 1994), kirkmcd.princeton.edu/examples/beachball.pdf
1016. *Single-Bubble Sonoluminescence* (Feb. 2, 1995), kirkmcd.princeton.edu/examples/sonobubble.pdf
1017. *Electromagnetic Field Momentum* (Aug. 30, 1995),
kirkmcd.princeton.edu/examples/fieldmomentum.pdf
1018. *Can an Electron Be at Rest?* (Aug. 30, 1995),
kirkmcd.princeton.edu/examples/electronatrest.pdf
1019. *The Motion of a Point Charge Near an Electric Dipole* (Mar. 19, 1996),
kirkmcd.princeton.edu/examples/dipole.pdf
1020. (with Mark Convery) *Noncontact Measurement of the Tension of a Wire* (Apr. 14, 1996), kirkmcd.princeton.edu/examples/pluck.pdf
1021. *Meson Theory of Hyperdeutrons* (Apr. 22, 1996),
kirkmcd.princeton.edu/examples/hyperdeuteron.pdf
1022. *Distortionless Transmission Line* (Nov. 11, 1996),
kirkmcd.princeton.edu/examples/distortionless.pdf
1023. *The Rolling Motion of a Half-Full Beer Can* (Nov. 14, 1996),
kirkmcd.princeton.edu/examples/beercan.pdf
1024. *The Electromagnetic Fields Outside a Wire That Carries a Linearly Rising Current* (Nov. 28, 1996), kirkmcd.princeton.edu/examples/wirefields.pdf
1025. *Group Velocity* (Dec. 4, 1996), kirkmcd.princeton.edu/examples/groupvelocity.pdf
1026. *Vector Gravity* (Dec. 4, 1996), kirkmcd.princeton.edu/examples/vectorgravity.pdf
1027. *The Relation between Expressions for Time-Dependent Electromagnetic Fields given by Jefimenko and by Panofsky and Phillips* (Dec. 5, 1996),
kirkmcd.princeton.edu/examples/jefimenko.pdf
1028. *The Fields Outside a Solenoid with a Time-Dependent Current* (Dec. 6, 1996),
kirkmcd.princeton.edu/examples/solenoid.pdf
1029. *Pitching Pennies into a Magnet* (Jan. 15, 1997), kirkmcd.princeton.edu/examples/pennies.pdf
1030. *Notes on Synchrotron Radiation* (Feb. 11, 1997), kirkmcd.princeton.edu/examples/synchrad.pdf
1031. *The Radiofrequency Quadrupole* (Feb. 27, 1997), kirkmcd.princeton.edu/examples/rfq.pdf
1032. *The Fractal Dimension of a Ball of Aluminum Foil* (Mar. 6, 1997),
kirkmcd.princeton.edu/examples/fractal.pdf
1033. *The Greek Eccentricity* (Mar. 14, 1997), kirkmcd.princeton.edu/examples/eccentricity.pdf

1034. *The Levitron* (Apr. 4, 1997), kirkmcd.princeton.edu/examples/levitron.pdf
1035. *Physics in the Laundromat* (Aug. 5, 1997), physics.princeton.edu/~mcdonald/examples/washer.pdf
1036. *A Relativistic Electron Can't Extract Net Energy from a 'Long' Laser Pulse* (Aug. 22, 1997), kirkmcd.princeton.edu/accel/gaussian2.pdf
1037. *Limits on the Applicability of Classical Electromagnetic Fields as Inferred from the Radiation Reaction* (Jan. 29, 1998), kirkmcd.princeton.edu/examples/radreact.pdf
1038. (with D. Marlow) *The Rare Decay $K_L \rightarrow \pi^0 \nu \bar{\nu}$* (April 16, 1998), kirkmcd.princeton.edu/examples/rarekdecay.pdf
1039. *The Fields in a Box with Resistive Walls* (April 16, 1998), kirkmcd.princeton.edu/examples/cube.pdf
1040. *Survivability of a Target for an Intense Proton Beam* (April 17, 1998), kirkmcd.princeton.edu/examples/target_041798.pdf
1041. (with C. Lu) *The Charge Distribution on the Cathode of a Straw Tube Chamber* (Oct. 1, 1998), kirkmcd.princeton.edu/examples/straw.pdf
1042. *Laser Tweezers* (Nov. 13, 1998), kirkmcd.princeton.edu/examples/tweezers.pdf
1043. *Canonical Angular Momentum of a Solenoid Field* (Nov. 13, 1998), kirkmcd.princeton.edu/examples/canon.pdf
1044. *The Transverse Momentum of an Electron in a Wave* (Nov. 15, 1998), physics.princeton.edu/~mcdonald/examples/transmom2.pdf
1045. *Magnetars* (Nov. 29, 1998), kirkmcd.princeton.edu/examples/magnetars.pdf
1046. *A Mechanical Model That Exhibits a Gravitational Critical Radius* (Dec. 2, 1998), kirkmcd.princeton.edu/examples/hyperboloid.pdf
1047. *Images of Electric and Magnetic Dipole Antennas in a Conducting Plane* (Dec. 5, 1998), kirkmcd.princeton.edu/examples/image_antenna.pdf
1048. (with Max Zolotarev) *Diffraction as a Consequence of Faraday's Law* (Jan. 11, 1999), kirkmcd.princeton.edu/examples/diffraction.pdf
1049. *If a Pig Had Wings...* (Feb. 11, 1999), kirkmcd.princeton.edu/examples/pigs_can_fly.pdf
1050. (with Max Zolotarev) *Measurement of Pulsewidth via Correlations in Intensity Fluctuations* (Mar. 23, 1999), kirkmcd.princeton.edu/examples/pulsewidth.pdf
1051. *Slow Light* (Apr. 3, 1999), kirkmcd.princeton.edu/examples/slowlight.pdf
1052. *Penrose Decoherence* (Apr. 28, 1999), kirkmcd.princeton.edu/examples/penrose.pdf

1053. (with K.-J. Kim, G. Stupakov and M.S. Zolotarev) *A Bounded Source Can't Emit a Unipolar Electromagnetic Pulse* (May. 1, 1999), kirkmcd.princeton.edu/examples/unipolar.pdf
1054. (with Max Zolotarev) *Classical Radiation Processes in the Weizsäcker-Williams Approximation* (Aug. 25, 1999), kirkmcd.princeton.edu/examples/weizsacker.pdf
1055. *Long Rod with Uniform Magnetization Transverse to its Axis* (Nov. 3, 1999), kirkmcd.princeton.edu/examples/magrod.pdf
1056. (with Max Zolotarev) *Time-Reversed Diffraction* (Nov. 11, 1999), kirkmcd.princeton.edu/examples/laserfocus.pdf
1057. (with Dan Marlow) *A Phased Antenna Array* (Nov. 11, 1999), kirkmcd.princeton.edu/examples/endfire.pdf
1058. *An Off-Center "Coaxial" Cable* (Nov. 21, 1999), kirkmcd.princeton.edu/examples/coaxprob_112199.pdf
1059. *Gaussian Laser Beams with Radial Polarization* (Mar. 14, 2000), kirkmcd.princeton.edu/examples/axicon.pdf
1060. *Resistance of a Disk* (March 31, 2000), kirkmcd.princeton.edu/examples/resistivedisk.pdf
1061. (with D. Strozzi) *Polarization Dependence of Emissivity* (Apr. 3, 2000), kirkmcd.princeton.edu/examples/emissivity.pdf
1062. *Bessel Beams* (Jun. 17, 2000), kirkmcd.princeton.edu/examples/bessel.pdf
1063. *Radial Viscous Flow between Two Parallel Annular Plates* (Jun. 23, 2000), kirkmcd.princeton.edu/examples/radialflow.pdf
1064. *Negative Group Velocity* (July 30, 2000), kirkmcd.princeton.edu/examples/negativegroupvelocity.pdf
1065. *Free Precession* (August 10, 2000), kirkmcd.princeton.edu/examples/freeprecession.pdf
1066. *Motion on a Torus* (Oct. 21, 2000), kirkmcd.princeton.edu/examples/torus.pdf
1067. *The Maximal Energy Attainable in a Betatron* (Nov. 10, 2000), kirkmcd.princeton.edu/examples/betatron.pdf
1068. *Electron Bubbles in Liquid Helium* (Nov. 12, 2000), kirkmcd.princeton.edu/examples/hebubble.pdf
1069. *Some Mechanics of Toys* (Nov. 29, 2000), kirkmcd.princeton.edu/examples/sometoys.pdf
1070. *A Flapping Toy* (Nov. 30, 2000), kirkmcd.princeton.edu/examples/flapper.pdf
1071. *A Josephson Junction* (Dec. 5, 2000), kirkmcd.princeton.edu/examples/josephson.pdf

1072. *Comments on Energy Flow in a Negative-Group-Velocity Wave* (Feb. 4, 2001), kirkmc.d.princeton.edu/examples/energyflow.pdf
1073. (with G.O. Schaefer) *To Construct a Square with Edges on Any Four Points* (Feb. 11, 2001), kirkmc.d.princeton.edu/examples/4point.pdf
1074. (with A.J. McDonald) *The Rolling Motion of a Disk on a Horizontal Plane* (Mar. 28, 2001), physics.princeton.edu/~mcdonald/examples/rolling.pdf
1075. *Self Trapping of Optical Beams* (Apr. 15, 2001), kirkmc.d.princeton.edu/examples/selffocusing.pdf
1076. *Uncertainties in the Measurement of the Momentum and Position of an Electron* (Sept. 20, 2001), kirkmc.d.princeton.edu/examples/measurement.pdf
1077. (with A.J. McDonald) *Small Oscillations of a Suspended Hoop* (Oct. 1, 2001), kirkmc.d.princeton.edu/examples/twister.pdf
1078. *Dipole in Shell* (Oct. 2, 2001), kirkmc.d.princeton.edu/examples/dipoleinshell.pdf
1079. *A Conducting Checkerboard* (Oct. 4, 2001), kirkmc.d.princeton.edu/examples/checkerboard.pdf
1080. *Vertical Oscillations of a Hanging Cable* (Oct. 7, 2001), kirkmc.d.princeton.edu/examples/cable.pdf
1081. (with N.C. Schaefer) *3 × 3 Magic Squares with Duplicate Digits Allowed* (Oct. 13, 2001), kirkmc.d.princeton.edu/examples/magicsquare.pdf
1082. *A Leaky Capacitor* (Oct. 17, 2001), kirkmc.d.princeton.edu/examples/leakycap.pdf
1083. *An Off-Axis Neutrino Beam* (Nov. 6, 2001), kirkmc.d.princeton.edu/examples/offaxisbeam.pdf
1084. (with R.H. Austin) *Diamagnetic Levitation* (Nov. 15, 2001), kirkmc.d.princeton.edu/examples/diamagnetic.pdf
1085. *A Slingshot Orbit* (Nov. 18, 2001), kirkmc.d.princeton.edu/examples/slingshot4.pdf
1086. *Why Doesn't a Steady Current Radiate?* (Dec. 1, 2001), kirkmc.d.princeton.edu/examples/steadycurrent.pdf
1087. (with C.G. Tully) *Maximum Energy of Circular Colliders* (Dec. 10, 2001), kirkmc.d.princeton.edu/examples/lep.pdf
1088. *Accessing Phases of CKM Matrix Elements Via the Decay $B_d^0 \rightarrow \pi^+\pi^-$* (Dec. 18, 2001), kirkmc.d.princeton.edu/examples/ckm.pdf
1089. *Maximal Gravity at the Surface of an Asteroid* (Feb. 18, 2002), kirkmc.d.princeton.edu/examples/maximal_gravity.pdf

1090. *Conducting Sphere That Rotates in a Uniform Magnetic Field* (Mar. 13, 2002), physics.princeton.edu/~mcdonald/examples/rotatingsphere.pdf
1091. *Magnetic Force on a Permeable Wire* (Mar. 17, 2002), physics.princeton.edu/~mcdonald/examples/permeable_wire.pdf
1092. *Methods of Calculating Forces on Rigid, Linear Magnetic Media* (Mar. 18, 2002), kirkmcd.princeton.edu/examples/magnetic_force.pdf
1093. *“Hidden” Momentum in a Coaxial Cable* (Mar. 27, 2002), kirkmcd.princeton.edu/examples/hidden.pdf
1094. *Electromagnetic Field Energy* (Apr. 3, 2002), kirkmcd.princeton.edu/examples/fieldenergy.pdf
1095. *Green’s Function for a Conducting Plane with a Hemispherical Boss* (Apr. 23, 2002), kirkmcd.princeton.edu/examples/boss.pdf
1096. *A Capacitor Paradox* (Jul. 10, 2002), kirkmcd.princeton.edu/examples/twocaps.pdf
1097. *An Electrostatic Wave* (Jul. 28, 2002), kirkmcd.princeton.edu/examples/bernstein.pdf
1098. *Magnetostatic Spin Waves* (Sept. 15, 2002), kirkmcd.princeton.edu/examples/spinwave.pdf
1099. *Two Conducting Spheres at the Same Potential* (Sept. 19, 2002), kirkmcd.princeton.edu/examples/twospheres.pdf
1100. *Conducting Ellipsoid and Circular Disk* (Sept. 21, 2002), kirkmcd.princeton.edu/examples/ellipsoid.pdf
1101. *Conducting Spherical Shell with a Circular Orifice* (Sept. 21, 2002), kirkmcd.princeton.edu/examples/sphere_hole.pdf
1102. (with C. Lu) *Electric Potential of Particle Detectors with Rectangular Cross-Section* (Oct. 9, 2002), kirkmcd.princeton.edu/examples/iarocci.pdf
1103. *Gaussian Laser Beams via Oblate Spheroidal Waves* (Oct. 19, 2002), kirkmcd.princeton.edu/examples/oblate_wave.pdf
1104. *Volume and Surface Area of an N -Sphere* (Feb. 4, 2003), kirkmcd.princeton.edu/examples/nsphere.pdf
1105. *Capacitance of a Thin Conducting Cylinder and of Conducting Spheroids* (Feb. 25, 2003), kirkmcd.princeton.edu/examples/thindisc.pdf
1106. *A Magnetic Linear Accelerator* (Mar. 3, 2003), kirkmcd.princeton.edu/examples/lin_accel.pdf
1107. *Notes on Electrostatic Wire Grids* (Mar. 5, 2003), kirkmcd.princeton.edu/examples/grids.pdf

1108. *Dielectric Cylinder That Rotates in a Uniform Magnetic Field* (Mar. 12, 2003),
physics.princeton.edu/~mcdonald/examples/rotatingcylinder.pdf
1109. *Electromagnetic Fields of a Rotating Shell of Charge* (Apr. 3, 2003),
kirkmcd.princeton.edu/examples/rotatingshell.pdf
1110. *The Barnett Experiment with a Rotating Solenoid Magnet* (Apr. 6, 2003),
kirkmcd.princeton.edu/examples/barnett.pdf
1111. (with H. Matzner) *Isotropic Radiators* (Apr. 8, 2003),
kirkmcd.princeton.edu/examples/isorad.pdf
1112. *A Parallelogram Loop Antenna* (May 28, 2003),
kirkmcd.princeton.edu/examples/loopantenna.pdf
1113. (with M.S. Zolotarev) *Hertzian Dipole Radiation via the Weizsäcker-Williams Method* (Aug. 4, 2003), kirkmcd.princeton.edu/examples/hertzian.pdf
1114. (with L.J. Wang) *Bunching of Photons When Two Beams Pass Through a Beam Splitter* (Aug. 17, 2003), kirkmcd.princeton.edu/examples/bunching.pdf
1115. *Magnetic Field in a Time-Dependent Capacitor* (Oct. 30, 2003),
kirkmcd.princeton.edu/examples/displacement.pdf
1116. *A Neutrino Horn Based on a Solenoid Lens* (Dec. 1, 2003),
kirkmcd.princeton.edu/examples/solenoid_lens.pdf
<http://arxiv.org/abs/physics/0312022>
1117. *Small Fractal Antennas* (Dec. 22, 2003),
kirkmcd.princeton.edu/examples/fractal_antenna.pdf
1118. *Radial Dependence of Radiation from a Bounded Source* (Jan. 25, 2004),
kirkmcd.princeton.edu/examples/bounded.pdf
1119. *How to Fry an IGCT in 1 μ s or Less* (Apr. 17, 2004),
kirkmcd.princeton.edu/examples/igct.pdf
1120. *Radiation in the Near Zone of a Hertzian Dipole* (Apr. 22, 2004),
kirkmcd.princeton.edu/examples/nearzone.pdf
1121. (with F.J. Castro Paredes) *A Paradox Concerning the Energy of A Dipole in a Uniform External Field* (May 3, 2004), kirkmcd.princeton.edu/examples/dipoleparadox.pdf
1122. *Radiation in the Near Zone of a Small Loop Antenna* (June 7, 2004),
kirkmcd.princeton.edu/examples/smallloop.pdf
1123. *Radiation in the Near Zone of a Short, Center-Fed Biconical Antenna* (June 14, 2004), kirkmcd.princeton.edu/examples/bicone.pdf

1124. *Radiation in the Near Zone of a Center-Fed Linear Antenna* (June 21, 2004), kirkmcd.princeton.edu/examples/linearantenna.pdf
1125. *Scattering of a Plane Wave by a Small Conducting Sphere* (July 13, 2004), kirkmcd.princeton.edu/examples/small_sphere.pdf
1126. (with D.J. Jefferies) *Can an Antenna Be Cut Into Pieces (Without Affecting Its Radiation)?* (Nov 10, 2004), kirkmcd.princeton.edu/examples/cutantenna.pdf
1127. *Radiation by an AC Voltage Source* (Jan. 9, 2005), kirkmcd.princeton.edu/examples/acsource.pdf
1128. *Vena Contracta* (Feb. 16, 2005), kirkmcd.princeton.edu/examples/vena_contracta.pdf
1129. (with J.D. Olsen) *Classical Lifetime of a Bohr Atom* (Mar. 7, 2005), kirkmcd.princeton.edu/examples/orbitdecay.pdf
1130. *Accuracy of Measurements of a CP-Violating Asymmetry* (Mar. 25, 2005), kirkmcd.princeton.edu/examples/cpasym.pdf
1131. *Density-Matrix Description of the EPR “Paradox”* (Mar. 31, 2005), kirkmcd.princeton.edu/examples/density.pdf
1132. (with J.D. Olsen) *Pentaquarks* (Apr. 8, 2005), kirkmcd.princeton.edu/examples/pentaquark.pdf
1133. *Impedance Matching of Transmission Lines* (July 20, 2005), kirkmcd.princeton.edu/examples/impedance_matching.pdf
1134. *Can a “Hidden-Variable” Quantum Theory Evade the “No-Cloning” Theorem?* (Oct. 6, 2005), kirkmcd.princeton.edu/examples/evasion.pdf
1135. (with Z.M. Hasan) *Quantum Limit to the Radiation Damping of a Charged Oscillator* (Dec. 23, 2005), kirkmcd.princeton.edu/examples/damping.pdf
1136. *Onoochin’s Paradox* (Jan. 1, 2006), kirkmcd.princeton.edu/examples/onoochin.pdf
1137. *The Radiation Reaction Force and the Radiation Resistance of Small Antennas* (Jan. 21, 2006), kirkmcd.princeton.edu/examples/resistance.pdf
1138. *Some Properties of Sourceless Wave Packets* (Feb. 10, 2006), kirkmcd.princeton.edu/examples/3dpacket.pdf
1139. *Currents in a Conducting Sheet with a Hole* (Feb. 22, 2006), kirkmcd.princeton.edu/examples/panofsky_7-3.pdf
1140. *Four Expressions for Electromagnetic Field Momentum* (Apr. 10, 2006), kirkmcd.princeton.edu/examples/pem_forms.pdf

1141. *McKenna's Paradox: Charged Particle Exiting the Side of A Solenoid Magnet* (Apr. 12, 2006), kirkmcd.princeton.edu/examples/mckenna.pdf
1142. *Momentum in a DC Circuit* (May 26, 2006), kirkmcd.princeton.edu/examples/loop.pdf
1143. *Cullwick's Paradox: Charged Particle on the Axis of a Toroidal Magnet* (June 4, 2006), kirkmcd.princeton.edu/examples/cullwick.pdf
1144. *Electromagnetic Momentum of a Capacitor in a Uniform Magnetic Field* (June 18, 2006), kirkmcd.princeton.edu/examples/cap_momentum.pdf
1145. "Crossed-Field" and "EH" Antennas Including Radiation from the Feed Lines and from the Earth's Surface (July 4, 2006), kirkmcd.princeton.edu/examples/crossedfield.pdf
1146. *The Fields of a Short, Linear Dipole Antenna If There Were No Displacement Current* (July 5, 2006), kirkmcd.princeton.edu/examples/no_displacement.pdf
1147. *Hexagonal Pencil Rolling on an Inclined Plane* (Nov. 14, 2006), kirkmcd.princeton.edu/examples/pencil.pdf
1148. (with J.L. Junquera) *Galilean Transformation of Wave Velocity* (Jan. 14, 2007), kirkmcd.princeton.edu/examples/wave_velocity.pdf
1149. *Stabilization of Insect Flight via Sensors of Coriolis Force* (Feb. 17, 2007), kirkmcd.princeton.edu/examples/stabilization.pdf
1150. *Permeable Shell in a Uniform External Field* (Feb. 24, 2007), kirkmcd.princeton.edu/examples/magshield.pdf
1151. *Where Does the Power Become AC in an AC Power Source?* (Feb. 27, 2007), kirkmcd.princeton.edu/examples/acpower.pdf
1152. *The Fields of a Pulsed, Small Dipole Antenna* (Mar. 16, 2007), kirkmcd.princeton.edu/examples/pulsed_dipole.pdf
1153. (with H. Jostlein) *Path Length of Muons Traversing an Arbitrary Volume* (Mar. 24, 2007), kirkmcd.princeton.edu/examples/muonpath.pdf
1154. (with S. Palestini) *Space Charge in Ionization Detectors* (Mar. 25, 2007), kirkmcd.princeton.edu/examples/spacecharge.pdf
1155. *Flow of Energy and Momentum in a Coaxial Cable* (Mar. 31, 2007), kirkmcd.princeton.edu/examples/coax_momentum.pdf
1156. *Torque Analyses of a Sliding Ladder* (May 6, 2007), kirkmcd.princeton.edu/examples/ladder.pdf
1157. *Electric Guitar Pickups* (May 6, 2007), kirkmcd.princeton.edu/examples/guitar.pdf

1158. *Voltage Across the Terminals of a Receiving Antenna* (June 25, 2007),
kirkmcd.princeton.edu/examples/receiver.pdf
1159. *Currents in a Center-Fed Linear Dipole Antenna* (June 27, 2007),
kirkmcd.princeton.edu/examples/transmitter.pdf
1160. *Tokyo Drift* (Oct. 7, 2007), kirkmcd.princeton.edu/examples/tokyo_drift.pdf
1161. *Energy, Momentum and Stress in a Belt Drive* (Oct. 20, 2007),
kirkmcd.princeton.edu/examples/belt_drive.pdf
1162. *Energy Flow in a Moving Bimetallic Strip* (Oct. 28, 2007),
kirkmcd.princeton.edu/examples/bimetallic.pdf
1163. “Hidden” Momentum in a Sound Wave? (Oct. 31, 2007),
kirkmcd.princeton.edu/examples/hidden_sound.pdf
1164. *Relativity of Steady Energy Flow* (Nov. 3, 2007), kirkmcd.princeton.edu/examples/1dgas.pdf
1165. *Radiation from Hertzian Dipoles in a Uniaxial Anisotropic Medium* (Nov. 16, 2007),
kirkmcd.princeton.edu/examples/anisotropic.pdf
1166. *Thermodynamics of a Tire Pump* (Nov. 29, 2007),
kirkmcd.princeton.edu/examples/tireppump.pdf
1167. *Flow of Energy from a Localized Source in a Uniform Anisotropic Medium* (Dec. 8, 2007), kirkmcd.princeton.edu/examples/biaxial.pdf
1168. *Electron Trajectories in a Hall Thruster* (Feb. 27, 2008),
kirkmcd.princeton.edu/examples/thruster.pdf
1169. *The Velocity Factor of an Insulated Two-Wire Transmission Line* (Mar. 6, 2008),
kirkmcd.princeton.edu/examples/velocity_factor.pdf
1170. *What Does an AC Voltmeter Measure?* (Mar. 16, 2008),
kirkmcd.princeton.edu/examples/voltage.pdf
1171. *Static-Voltage Gauge* (Mar. 25, 2008), kirkmcd.princeton.edu/examples/static_gauge.pdf
1172. *The Helmholtz Decomposition and the Coulomb Gauge* (Apr. 17, 2008),
kirkmcd.princeton.edu/examples/helmholtz.pdf
1173. (with J. Castro) *Magnetic Field at the Origin of a Grounded, Conducting Sphere Circled by a Moving Charge Q* (June 26, 2008),
kirkmcd.princeton.edu/examples/rotatingcharge.pdf
1174. *The Wilson-Wilson Experiment* (July 30, 2008), kirkmcd.princeton.edu/examples/wilson.pdf
1175. *Electrodynamics of Rotating Systems* (Aug. 6, 2008),
kirkmcd.princeton.edu/examples/rotatingEM.pdf

1176. *Unipolar Induction via a Rotating Magnetized Cylinder* (Aug. 17, 2008), kirkmcd.princeton.edu/examples/magcylinder.pdf
1177. *Faraday Rotation* (Aug. 28, 2008), kirkmcd.princeton.edu/examples/faradayrotation.pdf
1178. (with C.T. Ridgely) *Charged, Counter-Rotating Disks on a Rotating Platform* (Sept. 11, 2008), kirkmcd.princeton.edu/examples/counterrotation.pdf
1179. *Radiation of Turnstile Antennas Above a Conducting Ground Plane* (Sep. 18, 2008), kirkmcd.princeton.edu/examples/turnstile.pdf
1180. *Can Dipole Antennas Above a Ground Plane Emit Circularly Polarized Radiation?* (Sep. 19, 2008), kirkmcd.princeton.edu/examples/groundplane.pdf
1181. *Air Hockey Bowling* (Oct. 17, 2008), kirkmcd.princeton.edu/examples/air_hockey_bowling.pdf
1182. *Darwin Energy Paradoxes* (Oct. 29, 2008), kirkmcd.princeton.edu/examples/darwin.pdf
1183. *Classical Diamagnetism and the Satellite Paradox* (Nov. 12, 2008), kirkmcd.princeton.edu/examples/satellite_paradox.pdf
1184. *Electromagnetic Fields of a Small Helical Toroidal Antenna* (Dec. 8, 2008), kirkmcd.princeton.edu/examples/cwhta.pdf
1185. *Low-Frequency Electromagnetic Waves on a Twisted-Pair Transmission Line* (Dec. 24, 2008), kirkmcd.princeton.edu/examples/twisted_pair.pdf
1186. *Charging a Capacitor via a Transient RLC Circuit* (Mar. 6, 2009), kirkmcd.princeton.edu/examples/seriesrlc.pdf
1187. *Orbital and Spin Angular Momentum of Electromagnetic Fields* (Mar. 12, 2009), kirkmcd.princeton.edu/examples/spin.pdf
1188. *“Hidden” Momentum of a Steady Current Distribution in a System at “Rest”* (Apr. 21, 2009), kirkmcd.princeton.edu/examples/current.pdf
1189. (with M. Moriconi) *Energy Flow in a Waveguide below Cutoff* (May 20, 2009), kirkmcd.princeton.edu/examples/cutoff.pdf
1190. *Reactance of Small Antennas* (June 3, 2009), kirkmcd.princeton.edu/examples/cap_antenna.pdf
1191. *Total and Frustrated Reflection of a Gaussian Optical Beam*, (July 7, 2009), kirkmcd.princeton.edu/examples/internal.pdf
1192. *Second-Order Paraxial Gaussian Beam*, (July 8, 2009), kirkmcd.princeton.edu/examples/davis_psi2.pdf
1193. *Charged, Conducting, Rotating Sphere*, (July 22, 2009), kirkmcd.princeton.edu/examples/chargedsphere.pdf

1194. *Electric Field of a Uniform Charge Density*, (July 27, 2009),
kirkmcd.princeton.edu/examples/uniformcharge.pdf
1195. *Lorentz Invariance of the Number of Photons in a Rectangular Cavity*, (July 28, 2009), kirkmcd.princeton.edu/examples/uoveromega.pdf
1196. *How Much of Magnetic Energy Is Kinetic Energy?*, (Sep. 12, 2009),
kirkmcd.princeton.edu/examples/kinetic.pdf
1197. *Is Bernoulli's Equation Relativistically Invariant?*, (Sep. 13, 2009),
kirkmcd.princeton.edu/examples/bernoulli.pdf
1198. *Reflection of a Gaussian Optical Beam by a Flat Mirror*, (Oct. 5, 2009),
kirkmcd.princeton.edu/examples/mirror.pdf
1199. *Radiation Pressure of a Monochromatic Plane Wave on a Flat Mirror*, (Oct. 10, 2009), kirkmcd.princeton.edu/examples/pressure.pdf
1200. *Kinetic Energy of Conduction Electrons in the Drude Model*, (Oct. 10, 2009),
kirkmcd.princeton.edu/examples/drude.pdf
1201. *Maxwell's Objection to Lorenz' Retarded Potentials*, (Oct. 26, 2009),
kirkmcd.princeton.edu/examples/maxwell.pdf
1202. *Dielectric (and Magnetic) Image Methods*, (Nov. 21, 2009),
kirkmcd.princeton.edu/examples/image.pdf
1203. *Power Received by a Small Antenna*, (Dec. 1, 2009),
kirkmcd.princeton.edu/examples/power.pdf
1204. *Radiation from the Open End of a Coaxial Cable*, (Dec. 2, 2009),
kirkmcd.princeton.edu/examples/coax_rad.pdf
1205. (with C.G. Tully) *Spinning Lasso*, (Dec. 11, 2009),
kirkmcd.princeton.edu/examples/lasso.pdf
1206. *Accelerating Through a Resonance on a "Washboard" Road*, (Dec. 13, 2009),
kirkmcd.princeton.edu/examples/washboard.pdf
1207. *Image Method for an Electric Charge above a Topological Insulator with a Quantum Hall Surface* (Jan. 14, 2010),
kirkmcd.princeton.edu/examples/image_monopole.pdf
1208. *An Antenna Reciprocity Theorem* (Apr. 3, 2010),
kirkmcd.princeton.edu/examples/reciprocity.pdf
1209. *Can Sheared Surfaces Emit Light?* (Apr. 9, 2010),
kirkmcd.princeton.edu/examples/sheared.pdf

1210. *Doubly Negative Metamaterials* (Apr. 14, 2010),
kirkmcd.princeton.edu/examples/metamaterials.pdf
1211. *Lewin's Circuit Paradox* (May 7, 2010), kirkmcd.princeton.edu/examples/lewin.pdf
1212. *Analysis of TEM Waves in a Coaxial Cable via the Scalar Potential* (May 12, 2010),
kirkmcd.princeton.edu/examples/coax_potential.pdf
1213. *Is There a Maximum Z for an Atom?* (June 2, 2010),
kirkmcd.princeton.edu/examples/atom.pdf
1214. *Does the Moon Always Fall Towards the Sun?* (June 9, 2010),
kirkmcd.princeton.edu/examples/moonfall.pdf
1215. *Blondel's Experiment* (June 11, 2010), kirkmcd.princeton.edu/examples/blondel.pdf
1216. *Displacement Current of a Uniformly Moving Charge* (June 15, 2010),
kirkmcd.princeton.edu/examples/dedt.pdf
1217. *FitzGerald's Calculation of the Radiation of an Oscillating Magnetic Dipole* (June 20, 2010), kirkmcd.princeton.edu/examples/fitzgerald.pdf
1218. *Decomposition of Electromagnetic Fields into Electromagnetic Plane Waves* (July 11, 2010), kirkmcd.princeton.edu/examples/virtual.pdf
1219. *On the Definition of Radiation by a System of Charges* (Sept. 6, 2010),
kirkmcd.princeton.edu/examples/radiation.pdf
1220. *Radiation by a Time-Dependent Current Loop* (Sept. 26, 2010),
kirkmcd.princeton.edu/examples/currentloop.pdf
1221. *Čerenkov Radiation from a Short Path* (Oct. 5, 2010),
kirkmcd.princeton.edu/examples/cerenkov.pdf
1222. *Reactance of a Sinusoidally Driven Antenna* (Nov. 15, 2010),
kirkmcd.princeton.edu/examples/reactance.pdf
1223. *Charge Density in a Current-Carrying Wire* (Dec. 23, 2010),
kirkmcd.princeton.edu/examples/wire.pdf
1224. *Potentials for a Rectangular Electromagnetic Cavity* (Mar. 4, 2011),
kirkmcd.princeton.edu/examples/cavity.pdf
1225. *Poincaré Potential for a Finite Solenoid* (Mar. 8, 2011),
kirkmcd.princeton.edu/examples/solpot.pdf
1226. (with J. Gallardo) *Potentials for a Cylindrical Electromagnetic Cavity* (Mar. 9, 2011), kirkmcd.princeton.edu/examples/cylindrical.pdf

1227. *Expansion of an Axially Symmetric, Static Magnetic Field in Terms of Its Axial Field* (Mar. 10, 2011), kirkmcd.princeton.edu/examples/axial.pdf
1228. *Static Magnetic Field as Determined by Its Value on a Surface* (Mar. 17, 2011), kirkmcd.princeton.edu/examples/surface.pdf
1229. *Hamiltonian with z as the Independent Variable* (Mar. 19, 2011), kirkmcd.princeton.edu/examples/hamiltonian.pdf
1230. *Emittance Growth from Weak Relativistic Effects* (Mar. 21, 2011), kirkmcd.princeton.edu/examples/growth.pdf
1231. *Spin and Orbital Angular Momentum of the Fields of a Turnstile Antenna* (Apr. 9, 2011), kirkmcd.princeton.edu/examples/spin_turnstile.pdf
1232. *Magnetic Forces Can Do Work* (Apr. 10, 2011), kirkmcd.princeton.edu/examples/disk.pdf
1233. *Ball-Bearing Motor* (May 17, 2011), kirkmcd.princeton.edu/examples/motor.pdf
1234. *The Equivalence Principle and Roundtrip Times for Light* (May 25, 2011), kirkmcd.princeton.edu/examples/accel.pdf
1235. *An Ill-Posed Problem in Rigid-Body Dynamics* (June 11, 2011), kirkmcd.princeton.edu/examples/illposed.pdf
1236. *Excitation of a Rectangular Electromagnetic Cavity by a Passing, Relativistic Particle* (June 29, 2011), kirkmcd.princeton.edu/examples/excitation.pdf
1237. *Electromagnetic Plane Wave Expansion of Transition Radiation* (July 14, 2011), kirkmcd.princeton.edu/examples/transition.pdf
1238. *Power Consumption in a Pulsed Copper Magnet* (July 16, 2011), kirkmcd.princeton.edu/examples/pulsed.pdf
1239. *Information Channel Capacity* (July 23, 2011), kirkmcd.princeton.edu/examples/shannon.pdf
1240. *Force-Free Magnetic Fields aka Eigenfunctions of the Curl Operator* (Aug. 10, 2011), kirkmcd.princeton.edu/examples/forcefree.pdf
1241. *Wire Polarizers* (Sep. 21, 2011), kirkmcd.princeton.edu/examples/polarizer.pdf
1242. *Scattering of a Plane Electromagnetic Wave by a Small Conducting Cylinder* (Oct. 4, 2011), kirkmcd.princeton.edu/examples/small_cylinder.pdf
1243. *Box Toss* (Oct. 17, 2011), kirkmcd.princeton.edu/examples/box_toss.pdf
1244. *Wagon in the Rain* (Oct. 22, 2011), kirkmcd.princeton.edu/examples/wagon.pdf
1245. *Perfectly Conducting Cylinder in an External, Static Magnetic Field* (Oct. 29, 2011), kirkmcd.princeton.edu/examples/perfect_cylinder.pdf

1246. *Small Oscillations of a Mass That Slides inside a Cylinder Which Rotates about a Horizontal Axis* (Nov. 1, 2011), kirkmcd.princeton.edu/examples/sliding.pdf
1247. *Resistive Cylinder Moving in an External, Static Magnetic Field* (Nov. 2, 2011), kirkmcd.princeton.edu/examples/resistive_cylinder.pdf
1248. *Slingshot Ride* (Nov. 13, 2011), kirkmcd.princeton.edu/examples/slingshot Ride.pdf
1249. *Energy Flow in a Transformer* (Nov. 15, 2011), kirkmcd.princeton.edu/examples/transformer.pdf
1250. (with V. Hnizdo) *Fields and Moments of a Moving Electric Dipole* (Nov. 29, 2011), kirkmcd.princeton.edu/examples/movingdipole.pdf
1251. *What is the Role of the Arms of a Linear Broadcast Antenna?* (Dec. 19, 2011), kirkmcd.princeton.edu/examples/arms.pdf
1252. *A Gentler Loop-the-Loop* (Jan. 7, 2012), kirkmcd.princeton.edu/examples/looptheloop.pdf
1253. (with Z.M. Tan) *Symmetries of Electromagnetic Fields Associated with a Plane Conducting Screen* (Jan. 14, 2012), kirkmcd.princeton.edu/examples/emsymmetry.pdf
1254. (with Z.M. Tan) *Babinet's Principle for Electromagnetic Fields* (Jan. 19, 2012), kirkmcd.princeton.edu/examples/babinet.pdf
1255. *Sommerfeld's Diffraction Problem* (Jan. 22, 2012), kirkmcd.princeton.edu/examples/sommerfeld.pdf
1256. *Motion of a Pair of Oppositely Charged Spheres* (Feb. 3, 2012), kirkmcd.princeton.edu/examples/charged_balls.pdf
1257. *Circuit Q and Field Energy* (Apr. 1, 2012), kirkmcd.princeton.edu/examples/q_rlc.pdf
1258. *Magnetic Damping* (Apr. 14, 2012), kirkmcd.princeton.edu/examples/eddy.pdf
1259. *Mansuripur's Paradox* (May 2, 2012), kirkmcd.princeton.edu/examples/mansuripur.pdf
1260. *Maxwellian Vacuum Polarization* (June 2, 2012), kirkmcd.princeton.edu/examples/polarization.pdf
1261. *Abraham, Minkowski and "Hidden" Mechanical Momentum* (June 6, 2012), kirkmcd.princeton.edu/examples/abraham.pdf
1262. *"Hidden" Momentum in an Oscillating Tube of Water?* (June 24, 2012), kirkmcd.princeton.edu/examples/utube.pdf
1263. *"Hidden" Momentum in a Link of a Moving Chain?* (June 28, 2012), kirkmcd.princeton.edu/examples/link.pdf
1264. *"Hidden" Momentum in a Set of Circulating Rockets?* (June 29, 2012), kirkmcd.princeton.edu/examples/rockets.pdf

1265. “Hidden” Momentum in a Current Loop (June 30, 2012), kirkmcd.princeton.edu/examples/penfield.pdf
1266. “Hidden” Momentum in a River? (July 5, 2012), kirkmcd.princeton.edu/examples/river.pdf
1267. “Hidden” Momentum in a Plane Electromagnetic Wave? (July 7, 2012), kirkmcd.princeton.edu/examples/planewave.pdf
1268. “Hidden” Momentum in an Oscillating Spring? (July 8, 2012), kirkmcd.princeton.edu/examples/spring.pdf
1269. On the Definition of “Hidden” Momentum (July 9, 2012), kirkmcd.princeton.edu/examples/hiddendef.pdf
1270. “Hidden” Momentum in a Spinning Sphere? (Aug. 16, 2012), kirkmcd.princeton.edu/examples/spinningsphere.pdf
1271. “Hidden” Momentum in a Linked Pair of Gyrostats? (Aug. 17, 2012), kirkmcd.princeton.edu/examples/gyrostat.pdf
1272. Potentials of a Hertzian Dipole in the Gibbs Gauge (Aug. 23, 2012), kirkmcd.princeton.edu/examples/gibbs.pdf
1273. Center of Mass of a Relativistic Rolling Hoop (Sept. 7, 2012), kirkmcd.princeton.edu/examples/hoop.pdf
1274. Voltage Drop, Potential Difference and \mathcal{EMF} (Sept. 18, 2012), kirkmcd.princeton.edu/examples/volt.pdf
1275. Rocket Car (Oct. 1, 2012), kirkmcd.princeton.edu/examples/rocketcar.pdf
1276. The Pin and the Pendulum (Oct. 30, 2012), kirkmcd.princeton.edu/examples/pin.pdf
1277. Unipolar Induction via a Rotating Magnetized Sphere (Nov. 13, 2012), kirkmcd.princeton.edu/examples/magsphere.pdf
1278. Electric Field Distribution in a Reverse-Biased p - n Junction (Nov. 17, 2012), kirkmcd.princeton.edu/examples/diode.pdf
1279. Ladder + Rope (Nov. 21, 2012), kirkmcd.princeton.edu/examples/ladder_rope.pdf
1280. Skiing on a Cosine Hill (Nov. 25, 2012), kirkmcd.princeton.edu/examples/cosine_hill.pdf
1281. Rolling Off a Log with Friction (Nov. 26, 2012), kirkmcd.princeton.edu/examples/log.pdf
1282. Stability of Transverse Oscillations in a Betatron (Nov. 26, 2012), kirkmcd.princeton.edu/examples/betatron_osc.pdf
1283. Oscillating Fluid in a U-Tube (Nov. 28, 2012), kirkmcd.princeton.edu/examples/utube_osc.pdf

1284. *Bernoulli's Equation for a Rotating Fluid* (Nov. 29, 2012),
kirkmcd.princeton.edu/examples/bernoulli_rot.pdf
1285. *From Fick's Law to the Mean Free Path* (Dec. 5, 2012),
kirkmcd.princeton.edu/examples/fick.pdf
1286. *Intensity, Brightness and Étendue of an Aperture Lamp* (Dec. 8, 2012),
kirkmcd.princeton.edu/examples/lamp.pdf
1287. *A Reflecting Polarizer as a Quantum Watchdog* (Dec. 23, 2012),
kirkmcd.princeton.edu/examples/watchdog.pdf
1288. *Does Transmission of Light through a Window Involve Physics at the Planck Scale?*
(Feb. 4, 2013), kirkmcd.princeton.edu/examples/bekenstein.pdf
1289. *Are Christoffel Symbols Needed to Analyze Transient Phenomena in Faraday's
Dynamo?* (Feb. 12, 2013), kirkmcd.princeton.edu/examples/dynamo.pdf
1290. *Spherical Capacitor with Anisotropic Permeability* (Feb. 13, 2013),
kirkmcd.princeton.edu/examples/spherical_cap2.pdf
1291. *Maximum Power from DC Current and Voltage Sources* (Feb. 18, 2013),
kirkmcd.princeton.edu/examples/maxpow.pdf
1292. *Momentum of a Charged Particle Orbiting a Magnetic Dipole* (Feb. 25, 2013),
kirkmcd.princeton.edu/examples/dipole_orbit.pdf
1293. *Power in a Variable Capacitor* (Feb. 26, 2013),
kirkmcd.princeton.edu/examples/variable_cap.pdf
1294. *Entropy Generation in the Merging of Two Ideal Gases* (Feb. 27, 2013),
kirkmcd.princeton.edu/examples/equilibrate.pdf
1295. *Self Inductance of a Solenoid with a Permanent-Magnet Core* (Mar. 3, 2013),
kirkmcd.princeton.edu/examples/magsol.pdf
1296. *Poynting's Theorem with Magnetic Monopoles* (Mar. 23, 2013),
kirkmcd.princeton.edu/examples/poynting.pdf
1297. *What is i^i ?* (Mar. 30, 2013), kirkmcd.princeton.edu/examples/ittoi.pdf
1298. *"Hidden Momentum" in an Unbalanced Tire?* (April 20, 2013),
kirkmcd.princeton.edu/examples/tire.pdf
1299. *Relativistic Harmonic Oscillator* (April 28, 2013),
kirkmcd.princeton.edu/examples/harmonic.pdf
1300. *An Electric Bottle: Charged Particle Orbiting a Charged Needle* (May 1, 2013),
kirkmcd.princeton.edu/examples/bottle.pdf

1301. *Biot-Savart vs. Einstein-Laub Force Law* (May 21, 2013),
kirkmcd.princeton.edu/examples/laub.pdf
1302. *729 Variants of Poynting's Theorem* (May 21, 2013),
kirkmcd.princeton.edu/examples/variants.pdf
1303. *Angular Momentum in Circular Waveguides* (June 29, 2013),
kirkmcd.princeton.edu/examples/circular.pdf
1304. *A Simplified View of the Higgs/Yukawa Mechanism* (July 17, 2013),
kirkmcd.princeton.edu/examples/higgs.pdf
1305. *Do Neutrino Oscillations Conserve Energy?* (July 21, 2013),
kirkmcd.princeton.edu/examples/neutrino_osc.pdf
kirkmcd.princeton.edu/examples/neutrino_trans1.pdf
1306. *"Hidden" Momentum in a Leaping Beaded Chain?* (Aug. 19, 2013),
kirkmcd.princeton.edu/examples/chain.pdf
1307. *Can Salmon Swim up a Waterfall after Leaping into It?* (Sept. 17, 2013),
kirkmcd.princeton.edu/examples/salmon.pdf
1308. *Rain and Relativity* (Oct. 10, 2013), kirkmcd.princeton.edu/examples/rain.pdf
1309. *Spin of the Λ Hyperon via the Adair Method* (Oct. 13, 2013),
kirkmcd.princeton.edu/examples/adair.pdf
1310. *Canoe \pm Rock* (Nov. 9, 2013), kirkmcd.princeton.edu/examples/canoe.pdf
1311. *Classical Aspects of the Aharonov-Bohm Effect* (Nov. 29, 2013),
kirkmcd.princeton.edu/examples/aharonov.pdf
1312. *Wedgfall* (Dec. 6, 2013), kirkmcd.princeton.edu/examples/wedgfall.pdf
1313. *Wireless Power Transmission* (Dec. 27, 2013), kirkmcd.princeton.edu/examples/wireless.pdf
1314. *Does Destructive Interference Destroy Energy?* (Jan. 7, 2014),
kirkmcd.princeton.edu/examples/destructive.pdf
1315. *Conversions of \mathbf{D} and \mathbf{H} between SI and Gaussian Units* (Apr. 12, 2014),
kirkmcd.princeton.edu/examples/dandh.pdf
1316. *J.J. Thomson and "Hidden" Momentum* (Apr. 30, 2014),
kirkmcd.princeton.edu/examples/thomson.pdf
1317. *Force between Two Comoving Electric Charges* (May 24, 2014),
kirkmcd.princeton.edu/examples/comoving.pdf
1318. *Maxwell and Special Relativity* (May 26, 2014),
kirkmcd.princeton.edu/examples/maxwell_rel.pdf

1319. *Hydraulic Brake* (June 26, 2014), kirkmcd.princeton.edu/examples/brake.pdf
1320. *Jefimenko's Wedge Circuit* (July 8, 2014), kirkmcd.princeton.edu/examples/wedge.pdf
1321. *Electric and Magnetic Hoses* (July 16, 2014), kirkmcd.princeton.edu/examples/hose.pdf
1322. *Backtracking of Charged Particles in a Magnetic Field* (Aug. 6, 2014),
kirkmcd.princeton.edu/examples/track.pdf
1323. *Leaky Syringe* (Aug. 10, 2014), kirkmcd.princeton.edu/examples/syringe.pdf
1324. (with V. Onoochin) *Fields of a Uniformly Accelerated Charge* (Aug. 19, 2014),
kirkmcd.princeton.edu/examples/schott.pdf
1325. *Expanding Spherical Shell of Charge* (Aug. 22, 2014),
kirkmcd.princeton.edu/examples/shell.pdf
1326. *Electrodynamics in 1 and 2 Spatial Dimensions* (Sept. 23, 2014),
kirkmcd.princeton.edu/examples/2dem.pdf
1327. *Pipe in a River* (Sept. 24, 2014), kirkmcd.princeton.edu/examples/pipe.pdf
1328. *Cylinder Rolling on Another Rolling Cylinder* (Oct. 2, 2014),
kirkmcd.princeton.edu/examples/2cylinders.pdf
1329. *Waves on a Mismatched Transmission Line* (Oct. 4, 2014),
kirkmcd.princeton.edu/examples/2cylinders.pdf
1330. *Rolling Water Pipe* (Oct. 10, 2014), kirkmcd.princeton.edu/examples/rolling_pipe.pdf
1331. *Cylinder Rolling inside Another Rolling Cylinder* (Oct. 23, 2014),
kirkmcd.princeton.edu/examples/2cylinders_in.pdf
1332. *Forces on Magnetic Dipoles* (Oct. 26, 2014),
kirkmcd.princeton.edu/examples/neutron.pdf
1333. *Heat Flow from a Point Source at the End of a Bar* (Nov. 18, 2014),
kirkmcd.princeton.edu/examples/heatflow.pdf
1334. *Yo-Yo Variants* (Nov. 25, 2014), kirkmcd.princeton.edu/examples/yoyo.pdf
1335. *Index of Refraction of a Moving Medium* (Dec. 17, 2014),
kirkmcd.princeton.edu/examples/index.pdf
1336. *Electromagnetic Field Angular Momentum of a Charge at Rest in a Uniform Magnetic Field* (Dec. 21, 2014), kirkmcd.princeton.edu/examples/lfield.pdf
1337. *Pulses and $1/f$ Noise* (Jan. 24, 2015), kirkmcd.princeton.edu/examples/pulse.pdf

1338. *Bibliography on the Abraham-Minkowski Debate* (Feb. 17, 2015),
kirkmcd.princeton.edu/examples/ambib.pdf
1339. (with H.-K. Yang) *Formal Expressions for the Electromagnetic Potentials in Any Gauge* (Feb. 25, 2015), kirkmcd.princeton.edu/examples/gauge.pdf
1340. *Pressure in Fluid Flow Past a Sphere* (Mar. 19, 2015),
kirkmcd.princeton.edu/examples/sphereflow.pdf
1341. “*Hidden Momentum in a Magnetized Toroid* (Mar. 29, 2015),
kirkmcd.princeton.edu/examples/toroid_cap.pdf
1342. *Potentials for a Hertzian Oscillating Dipole* (Apr. 6, 2015),
kirkmcd.princeton.edu/examples/hertzian_potentials.pdf
1343. “*Hidden Momentum in a Charged, Rotating Cylinder* (Apr. 6, 2015),
kirkmcd.princeton.edu/examples/rotatingdisk.pdf
1344. *Birkeland, Darboux and Poincaré: Motion of an Electric Charge in the Field of a Magnetic Pole* (Apr. 15, 2015), kirkmcd.princeton.edu/examples/birkeland.pdf
1345. “*Hidden Momentum in an e^+e^- Pair* (Apr. 30, 2015),
kirkmcd.princeton.edu/examples/e+e-.pdf
1346. *Laplace and the Speed of Gravity* (May 5, 2015),
kirkmcd.princeton.edu/examples/laplace.pdf
1347. *Electromagnetic Angular Momentum of a Rotating Cylindrical Shell of Charge* (May 26, 2015), kirkmcd.princeton.edu/examples/rotatingfield.pdf
1348. *Comay’s Paradox: Do Magnetic Charges Conserve Energy?* (June 1, 2015),
kirkmcd.princeton.edu/examples/comay.pdf
1349. *A Damped Oscillator as a Hamiltonian System* (June 9, 2015),
kirkmcd.princeton.edu/examples/damped.pdf
1350. *Dineutrons* (June 22, 2015), kirkmcd.princeton.edu/examples/dineutron.pdf
1351. *Tuval’s Electromagnetic Spaceship* (Nov. 30, 2015),
kirkmcd.princeton.edu/examples/tuval.pdf
1352. *Why Doesn’t a Picture Hang Straight?* (Dec. 9, 2015),
kirkmcd.princeton.edu/examples/picture.pdf
1353. *Electromagnetic Fields inside a Perfect Conductor* (Dec. 24, 2015),
kirkmcd.princeton.edu/examples/perfect.pdf
1354. *Capacitor-Driven Railgun: Magnetic Fields Doing Work* (Dec. 28, 2015),
kirkmcd.princeton.edu/examples/railgun.pdf

1355. *Can Magnetic Field Lines Break and Reconnect?* (Dec. 29, 2015),
kirkmcd.princeton.edu/examples/reconnect.pdf
1356. *Ampère's Hairpin Spaceship* (Jan. 16, 2016),
kirkmcd.princeton.edu/examples/hairpin.pdf
1357. *Electromagnetic Helicopter?* (Jan. 25, 2016),
kirkmcd.princeton.edu/examples/helicopter.pdf
1358. *Hydrogen-Atom Wavefunctions as Radiationless Modes* (Mar. 11, 2016),
kirkmcd.princeton.edu/examples/radiationless.pdf
1359. *Rotating Water Bucket with Lid* (Mar. 12, 2016),
kirkmcd.princeton.edu/examples/bucket.pdf
1360. *Force between Two Uniformly Magnetized Spheres* (Mar. 23, 2016),
kirkmcd.princeton.edu/examples/twomagspheres.pdf
1361. *Slab Rolling on a Rolling Cylinder* (Mar. 28, 2016),
kirkmcd.princeton.edu/examples/slaboncylinder.pdf
1362. *Gravitational Acceleration of a Moving Object at the Earth's Surface* (Apr. 4, 2016),
kirkmcd.princeton.edu/examples/gravity_moving.pdf
1363. *Charging of an Insulator in a Liquid Argon Detector* (May 26, 2016),
kirkmcd.princeton.edu/examples/insulator.pdf
1364. *Does Space Charge or the Dielectric Constant Affect Induced Charge in a Liquid Argon Detector?* (June 4, 2016), kirkmcd.princeton.edu/examples/induced.pdf
1365. (with U. Akhouri) *Past Experiments Exclude Light Majorana Neutrino States* (Aug. 11, 2016), kirkmcd.princeton.edu/examples/majorana.pdf
1366. *Does Charged-Pion Decay Violate Conservation of Angular Momentum?* (Sept. 6, 2016), kirkmcd.princeton.edu/examples/pidecay.pdf
1367. *The Brown-Twiss Radio-Wave Interferometer* (Oct. 8, 2016),
kirkmcd.princeton.edu/examples/brown.pdf
1368. *Antigravity, Electron-Positron Storage Rings, and the $K^0\bar{K}^0$ System* (Oct. 28, 2016),
kirkmcd.princeton.edu/examples/antigravity.pdf
1369. *Electromagnetic Self-Force on a Hemispherical Cavity* (Nov. 27, 2016),
kirkmcd.princeton.edu/examples/hemisphere.pdf
1370. *Forces on Halves of a Uniformly Magnetized Sphere* (Dec. 23, 2016),
kirkmcd.princeton.edu/examples/spheremag.pdf

1371. *Can an Electric Current Density Be Replaced by an Equivalent Magnetization Density?* (Jan. 5, 2017), kirkmcd.princeton.edu/examples/jandm.pdf
1372. *Vector Potential of a Long Solenoid in the Poincaré Gauge* (Jan. 15, 2017), kirkmcd.princeton.edu/examples/poincare.pdf
1373. *Rotational Stability of a Diamagnetic Rod* (Jan. 18, 2017), kirkmcd.princeton.edu/examples/diamagnetic_rotation.pdf
1374. *Energy Conservation in a Pulley + Mass System* (Jan. 31, 2017), kirkmcd.princeton.edu/examples/pulley_mass.pdf
1375. *Radiative Energy Transfer with Filters and Stokes/Anti-Stokes Coatings* (Mar. 29, 2017), kirkmcd.princeton.edu/examples/filter.pdf
1376. *Little's Paradox* (Apr. 21, 2017), kirkmcd.princeton.edu/examples/little.pdf
1377. *On the History of the Radiation Reaction* (May 6, 2017), kirkmcd.princeton.edu/examples/selfforce.pdf
1378. *Field and Kinetic Energies of a Pair of Permanent Magnetic Dipoles* (May 21, 2017), kirkmcd.princeton.edu/examples/mag_energy.pdf
1379. *Can the Field Lines of a Permanent Magnet Be Tied in Knots?* (June 12, 2017), kirkmcd.princeton.edu/examples/knot.pdf
1380. *Slepian's Faster-Than-Light Wave* (June 23, 2017), kirkmcd.princeton.edu/examples/ftl.pdf
1381. *Rayleigh's Spinning Ring* (July 12, 2017), kirkmcd.princeton.edu/examples/ring.pdf
1382. *Nahin's Bobsled* (July 19, 2017), kirkmcd.princeton.edu/examples/bobsled.pdf
1383. *The Radiation Reaction during the Collapse of a Classical Electric Dipole* (Aug. 24, 2017), kirkmcd.princeton.edu/examples/collapse.pdf
1384. *Fields inside a Sphere and Shell of Uniform Polarization* (Oct. 31, 2017), kirkmcd.princeton.edu/examples/polsphere.pdf
1385. *A Sliding-Block Problem* (Nov. 7, 2017), kirkmcd.princeton.edu/examples/3blocks.pdf
1386. (with N.E. Tarshish) *An Atmospheric-Density Anomaly with a Magnetostatic Analog* (Nov. 14, 2017), kirkmcd.princeton.edu/examples/cloud.pdf
1387. *A Falling, Folded String* (Nov. 28, 2017), kirkmcd.princeton.edu/examples/string.pdf
1388. *Buquoy's Problem: Lifting a String from a Table* (Nov. 29, 2017), kirkmcd.princeton.edu/examples/string2.pdf
1389. *Pendulum in Orbit* (Dec. 1, 2017), kirkmcd.princeton.edu/examples/pendulum.pdf

1390. *Avril's Radiation Problem* (Jan. 4, 2018), kirkmcd.princeton.edu/examples/avril.pdf
1391. *Motion of a Cylinder Tied to a Slope by a String* (Jan. 12, 2018),
kirkmcd.princeton.edu/examples/unroll.pdf
1392. *Radiation Damping of a Refrigerator Magnet* (Jan. 20, 2018),
kirkmcd.princeton.edu/examples/frig.pdf
1393. *Helmholtz and the Velocity Gauge* (Mar. 31, 2018),
kirkmcd.princeton.edu/examples/velocity.pdf
1394. *What is the Stiffness of Spacetime?* (Apr. 13, 2018),
kirkmcd.princeton.edu/examples/stiffness.pdf
1395. (with J. Otto) *Leaky Bucket Suspended by a Spring* (May 7, 2018),
kirkmcd.princeton.edu/examples/bucket_osc.pdf
1396. (with J. Otto) *Torricelli's Law for Large Holes* (May 15, 2018),
kirkmcd.princeton.edu/examples/induced.pdf
1397. *Uncoiling on a Horizontal Surface* (June 2, 2018),
kirkmcd.princeton.edu/examples/uncoil.pdf
1398. *Gravitational Interaction between Fast-Moving Particles* (June 24, 2018),
kirkmcd.princeton.edu/examples/gravity_fast.pdf
1399. *Alternative Forms of the Poynting Vector* (July 13, 2018),
kirkmcd.princeton.edu/examples/poynting_alt.pdf
1400. *No Bootstrap Spaceships* (Aug. 9, 2018), kirkmcd.princeton.edu/examples/bootstrap.pdf
1401. *No Bootstrap Spaceships via Magnets in Electric Fields* (Aug. 16, 2018),
kirkmcd.princeton.edu/examples/redfern.pdf
1402. *Energy Balance while Charging a Capacitor* (Oct. 21, 2018),
kirkmcd.princeton.edu/examples/cap_charging.pdf
1403. *Fields in a Coaxial Cable with a DC Current* (Oct. 25, 2018),
kirkmcd.princeton.edu/examples/coax_field.pdf
1404. *The Electric Self Force on a Current Loop* (Jan. 8, 2019),
kirkmcd.princeton.edu/examples/loop_force.pdf
1405. *Marinov's Magnetic Puzzler* (Jan. 14, 2019), kirkmcd.princeton.edu/examples/marinov.pdf
1406. *McClymer's Electromagnetic Spaceship* (Feb. 23, 2019),
kirkmcd.princeton.edu/examples/mclymer.pdf
1407. *Hering's Flux-Linkage Paradox* (Feb. 25, 2019), kirkmcd.princeton.edu/examples/hering.pdf

1408. *Two Observers of Schrödinger's Cat* (Mar. 3, 2019),
kirkmcd.princeton.edu/examples/leggett.pdf
1409. *Snowball/Log Rolling down a Snowy Slope* (Mar. 12, 2019),
kirkmcd.princeton.edu/examples/snowball.pdf
1410. *The Relativity of Acceleration* (Apr. 3, 2019),
kirkmcd.princeton.edu/examples/rel_accel.pdf
1411. *Comments on Torque Analyses* (Apr. 28, 2019), kirkmcd.princeton.edu/examples/torque.pdf
1412. *Two-Dimensional Multipole Magnets* (June 11, 2019),
kirkmcd.princeton.edu/examples/multipole.pdf
1413. *Does Centrifugal Force Affect Conduction Electrons?* (June 25, 2019),
kirkmcd.princeton.edu/examples/tolman.pdf
1414. *Is Faraday's Disk Dynamo a Flux-Rule Exception?* (July 27, 2019),
kirkmcd.princeton.edu/examples/faradaydisk.pdf
1415. *A Misuse of Relativity in Circuit Analysis* (Oct. 23, 2019),
kirkmcd.princeton.edu/examples/misuse.pdf
1416. *The Clock Paradox and Accelerometers* (Jan. 11, 2020),
kirkmcd.princeton.edu/examples/clock.pdf
1417. *Engelhardt's Electromagnetic Spaceship* (Feb. 5, 2020),
kirkmcd.princeton.edu/examples/engelhardt.pdf
1418. *"Hidden" Momentum in a Compressed Rod?* (Feb. 11, 2020),
kirkmcd.princeton.edu/examples/rod.pdf
1419. *"Hidden" Momentum in an Isolated Brick?* (Feb. 14, 2020),
kirkmcd.princeton.edu/examples/brick.pdf
1420. *Force and Torque while Frying an Egg* (Feb. 27, 2020),
kirkmcd.princeton.edu/examples/egg.pdf
1421. *Another Circuit Paradox of Hering* (Mar. 7, 2020),
kirkmcd.princeton.edu/examples/hering_circuit.pdf
1422. *Could Electrons Be Black Holes?* (May 28, 2020),
kirkmcd.princeton.edu/examples/electron.pdf
1423. *Weber's Electrodynamics and the Hall Effect* (June 5, 2020),
kirkmcd.princeton.edu/examples/weber.pdf
1424. *Mertz' Paramagnetic Fluid Pump* (July 28, 2020),
kirkmcd.princeton.edu/examples/mertz.pdf

1425. *Graneau's Electromagnetic Submarine* (Aug. 1, 2020),
kirkmcd.princeton.edu/examples/graneau.pdf
1426. *Time Dilation of Moving Clocks as a Consequence of Length Contraction* (Sept. 30, 2020), kirkmcd.princeton.edu/examples/dilation.pdf
1427. *Feynman Diagrams by Wentzel (1938)* (Oct. 6, 2020),
kirkmcd.princeton.edu/examples/wentzel.pdf
1428. *Electric Flux of an Accelerated Charge* (Nov. 14, 2020),
kirkmcd.princeton.edu/examples/flux.pdf
1429. *Temperature and Special Relativity* (Dec. 2, 2020),
kirkmcd.princeton.edu/examples/temperature_rel.pdf
1430. (with V. Onoochin) $\nabla \times (\nabla \times \mathbf{E})$ in Spherical Coordinates (Dec. 21, 2020),
kirkmcd.princeton.edu/examples/curlcurl.pdf
1431. *Notes on the Dirac Equation* (Mar. 3, 2021), kirkmcd.princeton.edu/examples/dirac.pdf
1432. *Dumbbell in Orbit* (Apr. 9, 2021), kirkmcd.princeton.edu/examples/dumbell.pdf
1433. *Marinov's Paradoxical Motor* (Apr. 30, 2021),
kirkmcd.princeton.edu/examples/marinov2.pdf
1434. *The Hooper-Monstein Paradox* (May 3, 2021),
kirkmcd.princeton.edu/examples/monstein.pdf
1435. *Helmholtz' Vector Potentials* (May 8, 2021),
kirkmcd.princeton.edu/examples/helmholtz2.pdf
1436. (with C. Groner and T.M. Minter) *An Alternative Magnetic Field Based on Ampère's Force Law* (May 11, 2021), kirkmcd.princeton.edu/examples/minter.pdf
1437. *Classical Electromagnetic Fields of a Pair of Annihilating Charges* (June 11, 2021),
kirkmcd.princeton.edu/examples/annihilate.pdf
1438. with K.-H. Yang) *Comments on Gauge Invariance* (June 12, 2021),
kirkmcd.princeton.edu/examples/yang.pdf
1439. *Counterintuitive Performance of Land and Sea Yachts* (July 22, 2021),
kirkmcd.princeton.edu/examples/yacht.pdf
1440. *Helmholtz' Influence on The Mikado by Gilbert and Sullivan* (Aug. 25, 2021),
kirkmcd.princeton.edu/examples/mikado.pdf
1441. *Transition Radiation at a Metal-Vacuum Interface and at the Interface between Two Dielectrics* (Dec. 8, 2021), kirkmcd.princeton.edu/examples/transition_rad.pdf

1442. *A Rolling Cylinder Problem* (Jan. 18, 2022),
kirkmcd.princeton.edu/examples/rolling_onoochin.pdf
1443. *The Field Momentum of Two Time-Dependent Dipoles* (Feb. 4, 2022),
kirkmcd.princeton.edu/examples/narayan.pdf
1444. *A Misuse of “Maxwell Theory”* (Feb. 10, 2022),
kirkmcd.princeton.edu/examples/rindler.pdf
1445. *Potentials for an Electromagnetic Plane Wave* (Mar. 6, 2022),
kirkmcd.princeton.edu/examples/wavepot.pdf
1446. *Breakdown of a Misinterpretation of Noether’s Theorem* (Mar. 23, 2022),
kirkmcd.princeton.edu/examples/ajp_032322.pdf
1447. *Constant Acceleration and the Equivalence Principle* (May 10, 2022),
<http://kirkmcd.princeton.edu/examples/equivalence.pdf>

Course Notes, Problem Sets and Laboratory Manuals

Ph101: Introductory Physics I (1995-6)

1448. *Introduction to Ph101 Laboratory*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101labintro.pdf
1449. *Ph101 Lab 1: Precision Estimates*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab1_96.pdf
1450. *Ph101 Lab 2: Newton's First and Second Laws for Linear Motion*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab2_96.pdf
1451. *Ph101 Lab 3: Motion in Two Dimensions*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab3_96.pdf
1452. *Ph101 Lab 4: The Behavior of a Simple Pendulum and a Precision Measurement of g* , kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab4_96.pdf
1453. *Ph101 Lab 5: The Physics of Rotating Bodies*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab5_96.pdf
1454. *Ph101 Lab 6: The Physics of Springs*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab6_96.pdf
1455. *Ph101 Lab 7: Physics in Collision*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab7_96.pdf
1456. *Ph101 Lab 8: Friction in Fluids*,
kirkmc.d.princeton.edu/examples/ph101_1996/ph101lab8_96.pdf
- Editor, *Ph101 Lab Manual 2006-2007*,
kirkmc.d.princeton.edu/examples/ph101_2006/labs/ph101_lab_manual_2007.pdf

Ph104: General Physics II (2004):

1457. *Ph104 Laboratory Manual Introduction*,
kirkmc.d.princeton.edu/examples/ph104_2004/Lab_Manual_Frontmatter_04.pdf
1458. *Ph104 Lab 1: Exploring Electrostatics with an Electroscope*,
kirkmc.d.princeton.edu/examples/ph104_2004/ph104_exp01.pdf
1459. *Ph104 Lab 2: More Studies with an Electroscope*,
kirkmc.d.princeton.edu/examples/ph104_2004/ph104_exp02.pdf
1460. *Ph104 Lab 3: Resistors, Capacitors, DC Circuits, and RC Circuits*,
kirkmc.d.princeton.edu/examples/ph104_2004/ph104_exp03.pdf

1461. *Ph104 Lab 4: e/m of the Electron, Measurement of μ_0 ,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp04.pdf
1462. *Ph104 Lab 5: Make and Test a Motor,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp05.pdf
1463. *Ph104 Lab 6: Oscilloscope, Signal Generator and Filters,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp06.pdf
1464. *Ph104 Lab 7: RLC Circuits,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp07.pdf
1465. *Ph104 Lab 8: Geometrical Optics, Optical Instruments,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp08.pdf
1466. *Ph104 Lab 9: Physical Optics: Interference and Diffraction,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp09.pdf
1467. *Ph104 Lab 10: Diode Rectifier and Transistor AC Amplifier,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp10.pdf
1468. *Ph104 Lab 11: AM Radio,*
kirkmcd.princeton.edu/examples/ph104_2004/ph104_exp11.pdf

Physics 205: Mechanics

1469. *Ph205 Lecture 1: Review of the Principles of Elementary Mechanics,*
kirkmcd.princeton.edu/examples/Ph205/ph20511.pdf
1470. *Ph205 Lecture 2: Mechanics of a System of Particles,*
kirkmcd.princeton.edu/examples/Ph205/ph20512.pdf
1471. *Ph205 Lecture 3: Development of a General Method, Lagrange's Equations,*
kirkmcd.princeton.edu/examples/Ph205/ph20513.pdf
1472. *Ph205 Lecture 4: Examples of Lagrange's Method,*
kirkmcd.princeton.edu/examples/Ph205/ph20514.pdf
1473. *Ph205 Lecture 5: Calculus of Variations,*
kirkmcd.princeton.edu/examples/Ph205/ph20515.pdf
1474. *Ph205 Lecture 6: More About Lagrange's Equations,*
kirkmcd.princeton.edu/examples/Ph205/ph20516.pdf
1475. *Ph205 Lecture 7: Impulses,*
kirkmcd.princeton.edu/examples/Ph205/ph20517.pdf
1476. *Ph205 Lecture 8: Small Oscillations About Equilibrium,*
kirkmcd.princeton.edu/examples/Ph205/ph20518.pdf

1477. *Ph205 Lecture 8: Central Forces*,
kirkmcd.princeton.edu/examples/Ph205/ph20519.pdf
1478. *Ph205 Lecture 10: Central Forces, II*,
kirkmcd.princeton.edu/examples/Ph205/ph205110.pdf
1479. *Ph205 Lecture 11: Mechanical Similarity, Virial Theorem, Collisions*,
kirkmcd.princeton.edu/examples/Ph205/ph205111.pdf
1480. *Ph205 Lecture 12: Scattering*,
kirkmcd.princeton.edu/examples/Ph205/ph205112.pdf
1481. *Ph205 Lecture 13: More About Oscillations*,
kirkmcd.princeton.edu/examples/Ph205/ph205113.pdf
1482. *Ph205 Lecture 14: Coupled Oscillations*,
kirkmcd.princeton.edu/examples/Ph205/ph205114.pdf
1483. *Ph205 Lecture 15: Nonlinear Oscillations*,
kirkmcd.princeton.edu/examples/Ph205/ph205115.pdf
1484. *Ph205 Lecture 16: Accelerated Coordinate Systems*,
kirkmcd.princeton.edu/examples/Ph205/ph205116.pdf
1485. *Ph205 Lecture 17: Motion of a Rigid Body*,
kirkmcd.princeton.edu/examples/Ph205/ph205117.pdf
1486. *Ph205 Lecture 18: Motion of a Rigid Body with No External Torques*,
kirkmcd.princeton.edu/examples/Ph205/ph205118.pdf
1487. *Ph205 Lecture 19: Motion of a Spinning Top Including Gravity*,
kirkmcd.princeton.edu/examples/Ph205/ph205119.pdf
1488. *Ph205 Lecture 20: Rolling without Slipping, Hamiltonian Methods*,
kirkmcd.princeton.edu/examples/Ph205/ph205120.pdf
1489. *Ph205 Lecture 21: Wave Motion*,
kirkmcd.princeton.edu/examples/Ph205/ph205121.pdf
1490. *Ph205 Lecture 22: Standing Waves*,
kirkmcd.princeton.edu/examples/Ph205/ph205122.pdf
1491. *Ph205 Lecture 23: Traveling Waves*,
kirkmcd.princeton.edu/examples/Ph205/ph205123.pdf
1492. *Ph205 Lecture 24: Water Waves*,
kirkmcd.princeton.edu/examples/Ph205/ph205124.pdf
1493. *Ph205 Problem Set 1*, kirkmcd.princeton.edu/examples/Ph205/ph205set1.pdf

- 1494. *Ph205 Problem Set 2*, kirkmcd.princeton.edu/examples/Ph205/ph205set2.pdf
- 1495. *Ph205 Problem Set 3*, kirkmcd.princeton.edu/examples/Ph205/ph205set3.pdf
- 1496. *Ph205 Problem Set 4*, kirkmcd.princeton.edu/examples/Ph205/ph205set4.pdf
- 1497. *Ph205 Problem Set 5*, kirkmcd.princeton.edu/examples/Ph205/ph205set5.pdf
- 1498. *Ph205 Problem Set 6*, kirkmcd.princeton.edu/examples/Ph205/ph205set6.pdf
- 1499. *Ph205 Problem Set 7*, kirkmcd.princeton.edu/examples/Ph205/ph205set7.pdf
- 1500. *Ph205 Problem Set 8*, kirkmcd.princeton.edu/examples/Ph205/ph205set8.pdf
- 1501. *Ph205 Problem Set 9*, kirkmcd.princeton.edu/examples/Ph205/ph205set9.pdf
- 1502. *Ph205 Problem Set 10*, kirkmcd.princeton.edu/examples/Ph205/ph205set10.pdf
- 1503. *Ph205 Problem Set 11*, kirkmcd.princeton.edu/examples/Ph205/ph205set11.pdf
- 1504. *Ph205 Problem Set 12*, kirkmcd.princeton.edu/examples/Ph205/ph205set12.pdf
- 1505. *Ph205 Final exam 1981*, kirkmcd.princeton.edu/examples/Ph205/ph205final81.pdf
- 1506. *Ph205 Final exam 1983*, kirkmcd.princeton.edu/examples/Ph205/ph205final83.pdf
- 1507. *Ph205 Final exam 1989*, kirkmcd.princeton.edu/examples/Ph205/ph205final89.pdf

Ph304: Advanced Electromagnetism

- 1508. *Ph304 Problem Set 1*, kirkmcd.princeton.edu/examples/ph304set1.pdf
- 1509. *Ph304 Problem Set 2*, kirkmcd.princeton.edu/examples/ph304set2.pdf
- 1510. *Ph304 Problem Set 3*, kirkmcd.princeton.edu/examples/ph304set3.pdf
- 1511. *Ph304 Problem Set 4*, kirkmcd.princeton.edu/examples/ph304set4.pdf
- 1512. *Ph304 Problem Set 5*, kirkmcd.princeton.edu/examples/ph304set6.pdf
- 1513. *Ph304 Problem Set 6*, kirkmcd.princeton.edu/examples/ph304set7.pdf
- 1514. *Ph304 Problem Set 7*, kirkmcd.princeton.edu/examples/ph304set8.pdf
- 1515. *Ph304 Problem Set 8*, kirkmcd.princeton.edu/examples/ph304set9.pdf
- 1516. *Ph304 Problem Set 9*, kirkmcd.princeton.edu/examples/ph304set10.pdf
- 1517. *Ph304 Problem Set 10*, kirkmcd.princeton.edu/examples/ph304set11.pdf
- 1518. *Ph304 Problem Set 11*, kirkmcd.princeton.edu/examples/ph304set12.pdf

1519. *Ph304 Problem Set 12*, kirkmcd.princeton.edu/examples/ph304set1.pdf
1520. *Ph304 Midterm Exam* (2002), kirkmcd.princeton.edu/examples/ph304midterm02.pdf
1521. *Ph304 Midterm Exam* (2003), kirkmcd.princeton.edu/examples/ph304midterm03.pdf
1522. *Ph304 Final Exam* (2002), kirkmcd.princeton.edu/examples/ph304final02.pdf
1523. *Ph304 Final Exam* (2003), kirkmcd.princeton.edu/examples/ph304final03.pdf

Ph308: Quantum Mechanics

1524. *Notes on Fermi's Golden Rule* (Oct. 6, 2013),
kirkmcd.princeton.edu/examples/golden_rule_101613.pdf

Ph406: Nuclear and Elementary Particle Physics

1525. *Ph406 Problem Set 1* (Feb. 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set1.pdf
1526. *Ph406 Problem Set 2* (Feb. 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set2.pdf
1527. *Ph406 Problem Set 3* (Feb. 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set3.pdf
1528. *Ph406 Problem Set 4* (Mar. 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set4.pdf
1529. *Ph406 Problem Set 5* (Mar. 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set5.pdf
1530. *Ph406 Problem Set 6* (Mar. 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set6.pdf
1531. *Ph406 Problem Set 7* (April 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set7.pdf
1532. *Ph406 Problem Set 8* (April 1992 and 1993),
kirkmcd.princeton.edu/examples/ph406/ph406_set8.pdf
kirkmcd.princeton.edu/examples/ph406/ph406_set8_93.pdf
1533. *Ph406 Problem Set 9* (April 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set9.pdf
1534. *Ph406 Problem Set 10* (March 1993), kirkmcd.princeton.edu/examples/ph406/ph406_set10.pdf
1535. *Ph406 Final Exam* (May 1992), kirkmcd.princeton.edu/examples/ph405ph406_final.pdf
kirkmcd.princeton.edu/examples/ph405ph406_final_sol.pdf
1536. *Ph406 Problem Set 1* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set1_2014_sol.pdf
1537. *Ph406 Problem Set 2* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set2_2014_sol.pdf
1538. *Ph406 Problem Set 3* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set3_2014_sol.pdf
1539. *Ph406 Problem Set 4* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set4_2014_sol.pdf

1540. *Ph406 Problem Set 5* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set5_2014_sol.pdf
1541. *Ph406 Problem Set 6* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set6_2014_sol.pdf
1542. *Ph406 Problem Set 7* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set7_2014_sol.pdf
1543. *Ph406 Problem Set 8* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set8_2014_sol.pdf
1544. *Ph406 Problem Set 9* (2014),
kirkmcd.princeton.edu/examples/ph406/ph406_set9_2014_sol.pdf
1545. *Ph406 Problem Set 10* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set10_2014_sol.pdf
1546. *Ph406 Problem Set 11* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set11_2014_sol.pdf
1547. *Ph406 Problem Set 12* (2014), kirkmcd.princeton.edu/examples/ph406/ph406_set12_2014_sol.pdf

Ph410: Physics of Quantum Computation

1548. *Problem Sets (2005-2006)*,
kirkmcd.princeton.edu/examples/ph410problems.pdf
1549. *Reflections of a (Skeptical) Experimental High-Energy Physicist after Teaching a Course on Quantum Computation* (Feb. 24, 2006),
kirkmcd.princeton.edu/examples/QMtrans1.pdf

Ph501: Electricity and Magnetism

1550. *Ph501 Lecture 1: Overview of Maxwell's Equations; Electrostatics*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture1.pdf
1551. *Ph501 Lecture 2: Conductors and Dielectrics*,
kirkmcd.princeton.edu/examples/ph501ph501lecture2.pdf
1552. *Ph501 Lecture 3: Electrostatic Energy, Maxwell Stress Tensor*,
kirkmcd.princeton.edu/examples/ph501ph501lecture3.pdf
1553. *Ph501 Lecture 4: Potential Theory: Image Methods, 2-D Problems with Rectangular Boundaries*, kirkmcd.princeton.edu/examples/ph501/ph501lecture4.pdf
1554. *Ph501 Lecture 5: Potential Theory: 2-D Problems with Cylindrical and Spherical Boundaries*, kirkmcd.princeton.edu/examples/ph501/ph501lecture5.pdf
1555. *Ph501 Lecture 6: Potential Theory: 3-D Problems with Cylindrical Boundaries; Conducting Needles, Spheroids, Disks; Use of Conjugate Functions*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture6.pdf
1556. *Ph501 Lecture 7: Steady Currents; Magnetostatics*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture7.pdf

1557. *Ph501 Lecture 8: Sources of the Magnetic field; Magnetic Materials*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture8.pdf
1558. *Ph501 Lecture 9: Faraday's Law*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture9.pdf
1559. *Ph501 Lecture 10: Electromagnetic Energy, Momentum and Angular Momentum; Inductance*, kirkmcd.princeton.edu/examples/ph501/ph501lecture10.pdf
1560. *Ph501 Lecture 11: Introduction to Electromagnetic Waves*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture11.pdf
1561. *Ph501 Lecture 12: Plane Waves in Dielectric Media*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture12.pdf
1562. *Ph501 Lecture 13: Plane Waves in Conducting Media*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture13.pdf
1563. *Ph501 Lecture 14: Waves in Boxes and Pipes*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture14.pdf
1564. *Ph501 Lecture 15: Sources of the Waves – The Retarded Potentials*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture15.pdf
1565. *Ph501 Lecture 16: Multipole Radiation; Antennas; Scattering*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture16.pdf
1566. *Ph501 Lecture 17: Optics and Diffraction; Gaussian Laser Beams*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture17.pdf
1567. *Ph501 Lecture 18: Special Relativity; The 4-Potential of a Moving Charge*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture18.pdf
1568. *Ph501 Lecture 19: Other Force Fields; Significance of Gauge Invariance; Fields of a Moving Charge*, kirkmcd.princeton.edu/examples/ph501ph501lecture19.pdf
1569. *Ph501 Lecture 20: Relativistic Radiation Effects: Bremsstrahlung, Synchrotron Radiation*, kirkmcd.princeton.edu/examples/ph501/ph501lecture20.pdf
1570. *Ph501 Lecture 21: Relativistic Radiation Effects: Čerenkov Radiation, Transition Radiation*, kirkmcd.princeton.edu/examples/ph501/ph501lecture21.pdf
1571. *Ph501 Lecture 22: Electromagnetic Mass; Radiation Reaction*,
kirkmcd.princeton.edu/examples/ph501ph501lecture22.pdf
1572. *Ph501 Lecture 23: Interaction of Radiation with Matter – Microscopic View*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture23.pdf

1573. *Ph501 Lecture 24: Mechanics and Electromagnetism*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture24.pdf
1574. *Ph501 Lecture 25: Lasers from a Classical Perspective*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture25.pdf
1575. *Ph501 Lecture 26: Solitons*,
kirkmcd.princeton.edu/examples/ph501/ph501lecture26.pdf
1576. *Ph501 Problem Set 1*, kirkmcd.princeton.edu/examples/ph501set1.pdf
1577. *Ph501 Problem Set 2*, kirkmcd.princeton.edu/examples/ph501set2.pdf
1578. *Ph501 Problem Set 3*, kirkmcd.princeton.edu/examples/ph501set3.pdf
1579. *Ph501 Problem Set 4*, kirkmcd.princeton.edu/examples/ph501set4.pdf
1580. *Ph501 Problem Set 5*, kirkmcd.princeton.edu/examples/ph501set5.pdf
1581. *Ph501 Problem Set 6*, kirkmcd.princeton.edu/examples/ph501set6.pdf
1582. *Ph501 Problem Set 7*, kirkmcd.princeton.edu/examples/ph501set7.pdf
1583. *Ph501 Problem Set 8*, kirkmcd.princeton.edu/examples/ph501set8.pdf
1584. *Ph501 Problem Set 9*, kirkmcd.princeton.edu/examples/ph501set9.pdf
1585. *Ph501 Problem Set 10*, kirkmcd.princeton.edu/examples/ph501set10.pdf
1586. *Ph501 Problem Set 11*, kirkmcd.princeton.edu/examples/ph501set11.pdf
1587. *Ph501 Problem Set 12*, kirkmcd.princeton.edu/examples/ph501set12.pdf
1588. *Ph501 Midterm Exam (October 2000)*, kirkmcd.princeton.edu/examples/ph501midterm_102300.pdf

Physics 529: Elementary Particle Physics

These lectures, written in the 1980's, give a sense of how the Standard Model came to be.

1589. *Ph529 Lecture 1: Why High Energy?*
kirkmcd.princeton.edu/examples/ph529/ph529l1.pdf
1590. *Ph529 Lecture 2: History: The Strong Interaction*
kirkmcd.princeton.edu/examples/ph529/ph529l2.pdf
1591. *Ph529 Lecture 3: History: Electromagnetic and Weak Interactions*
kirkmcd.princeton.edu/examples/ph529/ph529l3.pdf
1592. *Ph529 Lecture 4: Detecting Elementary Particles*
kirkmcd.princeton.edu/examples/ph529/ph529l4.pdf

1593. *Ph529 Lecture 5: The Electromagnetic Structure of Matter*
kirkmcd.princeton.edu/examples/ph529/ph52915.pdf
1594. *Ph529 Lecture 6: Elastic Scatterin fo Electrons and Hadrons*
kirkmcd.princeton.edu/examples/ph529/ph52916.pdf
1595. *Ph529 Lecture 7: Elastic Scatterin fo Electrons and Hadrons, II*
kirkmcd.princeton.edu/examples/ph529/ph52917.pdf
1596. *Ph529 Lecture 8: Inetastic Electron Scattering*
kirkmcd.princeton.edu/examples/ph529/ph52918.pdf
1597. *Ph529 Lecture 9: Invariance Principles and Conservation Laws*
kirkmcd.princeton.edu/examples/ph529/ph52919.pdf
1598. *Ph529 Lecture 10: Charge Conjugation, Isospin, etc.*
kirkmcd.princeton.edu/examples/ph529/ph529110.pdf
1599. *Ph529 Lecture 11: 3-Body Decays, Partial-Wave Analysis*
kirkmcd.princeton.edu/examples/ph529/ph529111.pdf
1600. *Ph529 Lecture 12: Phenomenology of the Strong Interaction at High Energies*
kirkmcd.princeton.edu/examples/ph529/ph529112.pdf
1601. *Ph529 Lecture 13: The Quark Model*
kirkmcd.princeton.edu/examples/ph529/ph529113.pdf
1602. *Ph529 Lecture 14: The Quark Model, II*
kirkmcd.princeton.edu/examples/ph529/ph529114.pdf
1603. *Ph529 Lecture 15: Heavy Quark States*
kirkmcd.princeton.edu/examples/ph529/ph529115.pdf
1604. *Ph529 Lecture 16: The Weak Interaction*
kirkmcd.princeton.edu/examples/ph529/ph529116.pdf
1605. *Ph529 Lecture 17: Weak Interactions, II*
kirkmcd.princeton.edu/examples/ph529/ph529117.pdf
1606. *Ph529 Lecture 18: CP Violation*
kirkmcd.princeton.edu/examples/ph529/ph529118.pdf
1607. *Ph529 Lecture 19: Neutrino Interactions*
kirkmcd.princeton.edu/examples/ph529/ph529119.pdf
1608. *Ph529 Lecture 20: The Need for a Better Theory*
kirkmcd.princeton.edu/examples/ph529/ph529120.pdf

1609. *Ph529 Lecture 21: The Glashow-Weinberg-Salam Model*
kirkmc.d.princeton.edu/examples/ph529/ph529121.pdf
1610. *Ph529 Lecture 22: Test of the Glashow-Salam-Weinberg Model*
kirkmc.d.princeton.edu/examples/ph529/ph529122.pdf
1611. *Ph529 Lecture 23: Quantum Chromodynamics*
kirkmc.d.princeton.edu/examples/ph529/ph52923.pdf
1612. *Ph529 Lecture 24: Speculations*
kirkmc.d.princeton.edu/examples/ph529/ph529124.pdf

Short Course on Astroparticle Physics (1988)

- 1613. *Lecture 1. Techniques of Astroparticle Physics*,
kirkmcd.princeton.edu/papers/schladming1.pdf
- 1614. *Lecture 2. Gamma-Ray Protons and Photons*,
kirkmcd.princeton.edu/papers/schladming2.pdf
- 1615. *Lecture 3. Solar and Supernova Neutrinos*,
kirkmcd.princeton.edu/papers/schladming3.pdf
- 1616. *Lecture 4. Detectors for the Rest of the Universe*,
kirkmcd.princeton.edu/papers/schladming4.pdf

Short Courses on Accelerator Physics

- 1617. *A Short Course on Targetry for a Neutrino Factory and Muon Collider* (June 4, 2003)
kirkmcd.princeton.edu/mumu/target/targettrans38.pdf
- 1618. *A Short Course on Targetry for Neutrino Superbeams, Neutrino Factories and Muon Colliders* (NuFACT06 Summer Institute, Aug 21, 2006),
kirkmcd.princeton.edu/mumu/target/targettrans53.pdf