

Arthur A. Mirin

Refereed Publications and Invited Presentations

- 1) S. Z. Burstein and A. A. Mirin, "Third Order Difference Methods for Hyperbolic Equations," *J. Comput. Physics* 5, No. 3 (1970), 547.
- 2) S. Z. Burstein and A. A. Mirin, "Difference Methods for Hyperbolic Equations Using Space and Time Split Difference Operators of Third Order Accuracy," *Second Int'l. Conf. on Numerical Methods in Fluid Dynamics*, Berkeley (1970), Springer-Verlag, Berlin, 44. (UCRL-72806)
- 3) D. V. Anderson, G. A. Benford, M. Brettschneider, J. Killeen, W. A. Newcomb, A. A. Mirin and M. E. Rensink, "Theoretical Study of E-Layer and Plasma Behavior in Astron," *Fourth Int'l. Conf. on Plasma Physics and Controlled Nuclear Fusion Research*, Madison (1971), IAEA, Vienna, 137. (UCRL-72881)
- 4) A. H. Futch, J. P. Holdren, J. Killeen and A. A. Mirin, "Multi-Species Fokker-Planck Calculations for D-T and D-He3 Mirror Reactors," *Plasma Physics* 14 (1972), 211. (UCRL-73226)
- 5) S. Z. Burstein and A. A. Mirin, "Time-Dependent Calculations for Transonic Flow," *Third Int'l. Conf. on Numerical Methods in Fluid Dynamics*, Paris (1972), Springer-Verlag, Berlin, 48.
- 6) R. F. Post, T. K. Fowler, J. Killeen and A. A. Mirin, "A Concept for a High Power Density Mirror Fusion Reactor," *Phys. Rev. Lett.* 31, No. 5 (1973), 280. (UCRL-74790)
- 7) M. Brettschneider, J. Killeen and A. A. Mirin, "Numerical Simulation of Relativistic Electrons Confined in an Axisymmetric Mirror Field," *J. Comput. Physics* 11, No. 3 (1973), 360. (UCRL-72616)
- 8) J. A. Byers, J. P. Holdren, J. Killeen, A. B. Langdon, A. A. Mirin, M. E. Rensink and C. G. Tull, "Computer Simulation of Pulse Trapping and Pulse Stacking of Relativistic Electrons in Astron," *Phys. Fluids* 17, No. 11 (1974), 2061. (UCRL-75061)
- 9) A. A. Mirin and S. Z. Burstein, "Difference Methods for Transonic Flows about Airfoils," *Fourth Int'l. Conf. on Numerical Methods in Fluid Dynamics*, Boulder (1974), Springer-Verlag, Berlin, 277.

- 10) M. E. Rensink, T. K. Fowler, R. P. Freis, J. Killeen, A. A. Mirin, R. W. Moir, L. D. Pearlstein, R. F. Post, C. G. Tull, L. Hall, B. McNamara, D. Fuss and C. A. Wilgus, "Theoretical Studies of Plasma Confinement in Magnetic Mirrors," *Fifth Int'l. Conf. on Plasma Physics and Controlled Nuclear Fusion Research*, Tokyo (1974), IAEA, Vienna, 311. (UCRL-75526)
- 11) H. L. Berk, H. P. Furth, D. L. Jassby, R. M. Kulsrud, C. S. Liu, M. N. Rosenbluth, P. H. Rutherford, F. H. Tenney, T. Johnson, J. Killeen, A. A. Mirin and M. E. Rensink, "Two Energy Component Toroidal Fusion Devices," *Fifth Int'l. Conf. on Plasma Physics and Controlled Nuclear Fusion Research*, Tokyo (1974), IAEA, Vienna, 569.
- 12) J. A. Byers, R. P. Freis, J. Killeen, E. Lee, B. McNamara, A. A. Mirin and M. E. Rensink, "Computational Studies of Two Component Mirror Reactors," *Fifth Int'l. Conf. on Plasma Physics and Controlled Nuclear Fusion Research*, Tokyo (1974), IAEA, Vienna, 551. (UCRL-75522)
- 13) J. Killeen, A. A. Mirin and M. E. Rensink, "The Solution of the Kinetic Equations for a Multi-Species Plasma," Methods in Computational Physics **16** (1976), Academic Press, New York, 389. (UCRL-76998)
- 14) K. D. Marx, A. A. Mirin, M. G. McCoy, M. E. Rensink and J. Killeen, "Calculation of $(\bar{\sigma}v)_{DT}$ for Anisotropic Mirror and Toroidal Distributions," *Nucl. Fusion* **16**, No. 4 (1976), 702. (UCRL-77873)
- 15) A. A. Mirin, J. Killeen, K. D. Marx and M. E. Rensink, "A Radial Transport Fokker-Planck Model for a Tokamak Plasma," *J. Comput. Physics* **23**, No. 1 (1977), 23. (UCRL-76770)
- 16) R. P. Freis, C. W. Hartman, J. Killeen, A. A. Mirin and M. F. Uman, "Calculations of Combined Stellerator-Multipole Toroidal Magnetic Field Configurations," *Nucl. Fusion* **17**, No. 2 (1977), 281. (UCRL-78598)
- 17) D. L. Jassby, R. M. Kulsrud, F. W. Perkins, J. Killeen, K. D. Marx, M. G. McCoy, A. A. Mirin, M. E. Rensink and C. G. Tull, "Counterstreaming-Ion Tokamak Fusion Reactors," *Sixth Int'l. Conf. on Plasma Physics and Controlled Nuclear Fusion Research*, Berchtesgaden (1976), IAEA, Vienna, II, 435.
- 18) A. A. Mirin, J. Killeen, and C. J. H. Watson, "Some Preliminary Q Calculations for Toroidally Linked Mirror Reactors," *Nucl. Fusion* **17**, No. 1 (1977), 47.

- 19) J. G. Cordey, K. D. Marx, M. G. McCoy, A. A. Mirin, M. E. Rensink and J. Killeen, "A New Expansion Method for Computing $\bar{\sigma}v$ for Reactant Distribution Functions," *J. Comput. Physics* 28 (1978), 115. (UCRL-79327)
- 20) J. Killeen and A. A. Mirin, "Numerical Solution of the Fokker-Planck Equations for a Multi-Species Plasma," *College in Theoretical and Computational Plasma Physics*, Trieste (1977), IAEA, Vienna, 27. (UCRL-79275)
- 21) R. H. Cohen, M. E. Rensink, T. A. Cutler and A. A. Mirin, "Collisional Loss of Electrostatically Confined Species in a Magnetic Mirror," *Nucl. Fusion* 18 (1978), 1229. (UCRL-80266).
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- 23) B. G. Logan, W. L. Barr, D. J. Bender, G. A. Carlson, W. L. Dexter, J. N. Doggett, R. S. Devoto, J. F. Fink, T. K. Fowler, G. W. Hamilton, D. Lappa, J. D. Lee, W. D. Neef, Jr., A. A. Mirin, R. W. Moir, M. A. Peterson and M. E. Rensink, "Tandem Mirror Reactors," *Seventh Int'l. Conf. on Plasma Physics and Controlled Nuclear Fusion Research*, Innsbruck (1978), IAEA, Vienna, III, 401. (UCRL-80644)
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- 27) J. Killeen, A. A. Mirin and M. G. McCoy, "A Fokker-Planck/Transport Model for Neutral Beam Driven Tokamaks," Modern Plasma Physics (1981), IAEA, Vienna, 395. (UCRL-83885)
- 28) B. G. Logan, A. A. Mirin and M. E. Rensink, "An Analytic Model for Classical Ion Confinement in Tandem Mirror Plugs," *Nucl. Fusion* 20 (1980), 1613. (UCRL-84357)
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- 34) A. A. Mirin and G. P. Tomaschke, "Is Fusion Reactivity in TFTR Affected by Distortions of the Bulk Ions from Maxwellians?" *Nucl. Fusion* 22 (1982), 1379. (UCRL-87709)

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