

## Nathaniel J. Fisch

### Current Drive Key Papers

- [1] N. J. Fisch, *Confining a Tokamak Plasma With RF-Driven Currents*, Physical Review Letters **41**, 873–876 (September, 1978).
- [2] C. F. F. Karney and N. J. Fisch, *Numerical Studies of Current Generation by Radio-Frequency Traveling Waves*, Physics of Fluids **22**, 1817 (1979).
- [3] N. J. Fisch and A. H. Boozer, *Creating an Anisotropic Plasma Resistivity With Waves*, Physical Review Letters **45**, 720 (1980).
- [4] N. J. Fisch, *Current Generation by Minority-Species Heating*, Nuclear Fusion **21**, 15 (1981).
- [5] N. J. Fisch and C. F. F. Karney, *Current Generation With Low-Frequency Waves*, Physics of Fluids **24**, 27 (1981)
- [6] C. F. F. Karney, N. J. Fisch, and F. C. Jobes, *Comparison of the Theory and the Practice of Lower Hybrid Current Drive*, Physical Review A **32**, 2554 (1985).
- [7] N. J. Fisch, *Theory of RF Current-Drive*, Reviews of Modern Physics **59**, 175 (1987).

### Current Drive Secondary Papers

- [1] C. F. F. Karney and N. J. Fisch, *Currents Driven by Electron Cyclotron Waves*, Nuclear Fusion **21**, 1549 (1981).
- [2] N. J. Fisch, *Current Generation in a Relativistic Plasma*, Physical Review A **24**, 3245 (1981).
- [3] N. J. Fisch, *Conductivity of RF-Heated Plasma*, Physics of Fluids **28**, 245 (1985).
- [4] C. F. F. Karney and N. J. Fisch, *Efficiency of Current Drive by Fast Waves*, Physics of Fluids **28**, 116 (1985).
- [5] N. J. Fisch and C. F. F. Karney, *Conversion of Wave Energy to Magnetic Field Energy in a Plasma Torus*, Physical Review Letters **54**, 897 (1985).
- [6] C. F. F. Karney and N. J. Fisch, *Current in Wave Driven Plasmas*, Physics of Fluids **29**, 180 (1986).
- [7] N. J. Fisch, *Transport in Driven Plasmas*, Physics of Fluids **29**, 172 (1986).
- [8] N. J. Fisch and J-M. Rax, *Current-Drive by Lower Hybrid Waves in the Presence of Energetic Alpha-Particles*, Nuclear Fusion **32**, 549 (1992).
- [9] N. J. Fisch, *Review of Current Drive in Tokamaks: Selected Topics*, Plasma Physics and Controlled Fusion **35**, A91 (1993).
- [10] N. J. Fisch, J. M. Rax and I. Y. Dodin, *Current Drive in a Ponderomotive Potential with Sign Reversal*, Physical Review Letters **91**, 205004 (2003).

## $\alpha$ -channeling Key Papers

- [1] N. J. Fisch and J-M. Rax, *Interaction of  $\alpha$ -Particles with Intense Lower Hybrid Waves*, Physical Review Letters **69**, 612 ( 1992).
- [2] N. J. Fisch and J-M. Rax, *Free Energy of Wave-Driven Plasma*, Physics of Fluids B **5**, 1754 ( 1993).
- [3] N. J. Fisch and M. C. Herrmann, *Utility of Extracting Power from Alpha Particles by Waves*, Nuclear Fusion **34**, 1541 (1994).
- [4] N. J. Fisch and M. C. Herrmann, *Alpha Channeling with Two Waves*, Nuclear Fusion **35**, 1753 (1995).
- [5] N. J. Fisch, *Alpha Channeling Using Ion Bernstein Waves*, Physics of Plasmas **2**, 2375 (1995).
- [6] E. J. Valeo and N. J. Fisch, *Excitation of Large- $k_\theta$  Ion Bernstein Waves in Tokamaks*, Physical Review Letters **73**, 3238 (1994).
- [7] M. C. Herrmann and N. J. Fisch, *Cooling Energetic  $\alpha$  particles in a Tokamak with Waves*, Phys. Rev. Lett. **79**, 1495 ( 1997).
- [8] N. J. Fisch and M. C. Herrmann, *A Tutorial on Alpha Channeling*, Plasma Physics and Controlled Fusion **41**, A221 (1999).
- [9] N. J. Fisch, *Physics of Alpha Channeling and Related TFTR Experiments*, Nuclear Fusion **40**, 1095 (2000).
- [10] D. S. Clark and N. J. Fisch, *Fast Ion Diffusion by Driven Contained Modes*, Physics of Plasmas **7** 2923 (2000).