S. Peter Gary

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Sex: Male Height: 6 feet Weight: 145 lbs.

Born: Cleveland, Ohio, USA (3 October 1939) US Citizen

Academic Data

B.S. in Physics (with Honors), Case Institute of Technology, Cleveland, OH, 1961.
National Merit Scholar, 1957-1961

A.M. (Physics), Washington University, St. Louis, MO, 1966.

Ph.D (Physics), Washington University, St. Louis, MO, 1967.
Graduate Teaching Assistant, 1961-1963
NSF Co-Operative Fellow, 1963-1966

Professional Employment

Aerospace Engineer, Marshall Space Flight Center, NASA, Huntsville, AL (Summers 1961, 1962)

Instructor, Webster College, Webster Groves, MO (1966-1967)

Summer Employee, Oak Ridge National Laboratory, Oak Ridge, TN (Summer 1967)

Research Associate, University of Iowa, Iowa City, IA (1967-1968)

Research Assistant, Unversity of St. Andrews, St. Andrews, Fife, Scotland (1968-1969)

Vacation Associate, Culham Laboratory, Abingdon, Berkshire, England (Summer 1969)

Leverhulme Visiting Fellow, University College of North Wales, Bangor, Caernarvonshire, Wales (1969-1970)

Visiting Scientist, Institut fur Plasmaphysik, 8046 Garching bei Munchen, Federal Republic of Germany (Summer 1970, August 1978)

Assistant Professor, College of William and Mary, Williamsburg, VA (1970-1975)

NASA-ASEE Summer Research Fellow, Langley Research Center, NASA, Hampton, VA (Summer 1971)

Summer Research, Langley Research Center, NASA, Hampton, VA (Summers 1972, 1973, 1974)

Visiting Staff Member, Los Alamos Scientific Laboratory, Los Alamos, NM (1974-1975, Summer 1976)

Associate Professor, College of William and Mary, Williamsburg, VA (1975-1977)

Staff Member, Los Alamos National Laboratory, Los Alamos, NM (1977-1984; 1992-2002)

SRC Senior Visiting Fellow, University of St. Andrews, St. Andrews, Fife, Scotland (July 1978; June 1980)

Adjunct Professor, University of New Mexico, Albuquerque, NM (Spring 1980; Spring 1982; Fall 1983)

Associate Group Leader, Los Alamos National Laboratory, Los Alamos, NM (1984-1987)

Group Leader, Los Alamos National Laboratory, Los Alamos, NM (1987-1992)

Professional Renewal Leave, University of California, San Diego, CA (Fall 1992)

Project Lead, Kurchatov Institute Project, Lab-to-Lab/MPC&A Program (1995-2002)

Fellow, Los Alamos National Laboratory, Los Alamos, NM (2002-Present)

Professional Activities

Member, American Physical Society

Member, Executive Committee, Division of Plasma Physics, American Physical Society, 1999-2002.

Member, American Geophysical Union

Associate Editor, Journal of Geophysical Research (Space Physics), 1982-1984, 2000-2001.

Associate Editor, Physics of Fluids B, 1989-1993

Associate Editor, Physics of Plasmas, 1994-Present

Referee, Geophysical Research Letters

Referee, Journal of Plasma Physics

Referee, The Astrophysical Journal

Referee, Physical Review Letters

Referee, Annales Geophysicae

Co-Chairman, University of California Institute of Geophysics and Planetary Physics Workshop on Space Plasma Physics, Los Alamos, NM, 4-5 September 1980.

Chairman, NASA Solar Terrestrial Theory Program Meeting and Workshop, Los Alamos, NM, 14-16 November 1984.

Chairman, IGPP Workshop on the Plasma Physics of the Earth's Magnetopause and its Boundary Layers, Los Alamos, NM, 2-4 October 1990.

Chair, Mini-Conference on Magnetic Reconnection in Space and Astrophysical Plasmas, APS/Division of Plasma Physics Meeting, Long Beach, CA, 30 October– 2 November 2001.

Publications

223 refereed scientific publications, including 104 first-authored papers, as of 1 Sept 2002.

Scientific monograph, *Theory of Space Plasma Instabilities*, Cambridge University Press, 1993.

Honors

Editors' Citation for Excellence in Refereeing (*Journal of Geophysical Research–Space Physics*), 1993.

Editors' Citation for Excellence in Refereeing (*Geophysical Research Letters*), 1993.

Fellow, Los Alamos National Laboratory, Los Alamos, NM, 2002.

Refereed Publications

1. Gary, S. P., Third order oscillations in a Maxwellian plasma, *Phys. Fluids*, **10**, 570, 1967.

2. Gary, S. P., and D. Montgomery, Numerical studies of turbulent heating, *Phys. Fluids*, **11**, 2733, 1968.

3. Gary, S. P., D. Montgomery and D. W. Swift, Particle acceleration by electrostatic waves with spatially varying phase velocities, *J. Geophys. Res.*, **73**, 7524, 1968.

4. Gary, S. P., Nonlinear transverse waves in a Vlasov plasma, *J. Plasma Phys.*, **3**, 577, 1969.

5. Gary, S. P., Nonlinear ion acoustic waves in a Vlasov plasma, *Phys. Fluids*, **13**, 694, 1970.

6. Gary, S. P., and J. J. Sanderson, Longitudinal waves in a perpendicular collisionless plasma shock, I, *J. Plasma Phys.*, **4**, 739, 1970.

7. Gary, S. P., Longitudinal waves in a perpendicular collisionless plasma shock, II, *J. Plasma Phys.*, **4**, 753, 1970.

8. Gary, S. P., Electron heating by ion wave turbulence, *Phys. Letters* **33A**, 301, 1970.

9. Gary, S. P., and D. Biskamp, Instabilities in perpendicular shock waves, *J. Phys. A* **4**, L27, 1971.

10. Abas, S., and S. P. Gary, Ion wave instability in an electrostatic shock, *Plasma Phys.*, **13**, 262, 1971.

11. Gary, S. P., and J. W. M. Paul, Anomalous resistivity due to elctrostatic turbulence, *Phys. Rev. Lett.*, **26**, 1097, 1971.

12. Gary, S. P., Longitudinal waves in a perpendicular collisionless plasma shock, 3, *J. Plasma Phys.*, **6**, 561, 1971.

13. Gary, S. P., Longitudinal waves in a perpendicular collisionless plasma shock, 4, *J. Plasma Phys.*, **7**, 417, 1972.

14. Gary, S. P., Long wavelength instability in a perpendicular shock, *Plasma Phys.*, **15**, 399, 1973.

15. Gary, S. P., and F. Hohl, Ion kinematics in a plasma focus, *Phys. Fluids*, **16**, 997, 1973.

16. Gary, S. P., and H. Bloomberg, Ion acceleration in high current diodes, *Appl. Phys. Lett.*, **23**, 112, 1973.

17. Bloomberg, H. W., and S. P. Gary, Particle acceleration by an electrostatic wave with spatially increasing phase velocity, *J. Geophys. Res.*, **78**, 7531, 1973.

18. Schmidt, M. J., and S. P. Gary, Density gradients and the Farley-Buneman instability, *J. Geophys. Res.*, **78**, 8261, 1973.

19. Gary, S. P., Solar cosmic ray acceleration by a plasma instability, *Ap. J.*, **187**, 195, 1974.

20. Gary, S. P., and M. J. Schmidt, Anomalous viscosity due to electrostatic turbulence, *Phys. Letters* **48A**, 23, 1974.

21. Gary, S. P., Ion acceleration in a plasma focus, *Phys. Fluids*, **17**, 2135, 1974.

22. Gary, S. P., W. C. Feldman, D. W. Forslund and M. D. Montgomery, Electron heat flux instabilities in the solar wind, *Geophys. Res. Lett.*, **2**, 79, 1975.

23. Gary, S. P., I. Alexeff and H. W. Bloomberg, Reflection and Transmission of ion acoustic waves from a plasma discontinuity, *IEEE Trans. on Plasma Science*, **PS-3**, 46, 1975.

24. Hsieh, S. L., H. W. Bloomberg and S. P. Gary, Coherent ion acceleration at a density gradient, *J. Plasma Phys.*, **13**, 553, 1975.

25. Gary, S. P., and D. W. Forslund, Electromagnetic current instabilities, *Phys. Letters* **54A**, 347, 1975.

26. Montgomery, M. D., S. P. Gary, D. W. Forslund and W. C. Feldman, Electromagnetic ion-beam instabilities in the solar wind, *Phys. Rev. Lett.*, **35**, 667, 1975.

27. Gary, S. P., W. C. Feldman, D. W. Forslund and M. D. Montgomery, Heat flux instabilities in the solar wind, *J. Geophys. Res.*, **80**, 4197, 1975.

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30. Gary, S. P., M. D. Montgomery, W. C. Feldman and D. W. Forslund, Proton temperature anisotropy instabilities in the solar wind, *J. Geophys. Res.*, **81**, 1241, 1976.

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32. Lemons, D. S. and S. P. Gary, Temperature anisotropy instabilities in a plasma of two ion components, *J. Plasma Phys.*, **15**, 83, 1976.

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39. Lemons, D. S. and S. P. Gary, Electromagnetic effects on the modified two-stream instability, *J. Geophys. Res.*, **82**, 2337, 1977.

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77. Gary, S. P., P. A. Bernhardt and T. E. Cole, Density drift instabilities and weak collisions, *J. Geophys. Res.*, **88**, 2103, 1983.

78. Thomsen, M. F., H. C. Barr, S. P. Gary, W. C. Feldman and T. E. Cole, Stability of electron distributions within the Earth's bow shock, *J. Geophys. Res.*, **88**, 3035, 1983.

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80. Sanderson, J. J. and S. P. Gary, Transport by weak electrostatic density drift fluctuations, *J. Plasma Phys.*, **30**, 153, 1983.

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86. Tokar, R. L. and S. P. Gary, The generation of electrostatic hiss in the dayside polar cusp at 2 to 5 R_E, *Geophys. Res. Lett.*, **11**, 1180, 1984.

87. Gary, S. P., and R. L. Tokar, The second order theory of electromagnetic hot ion beam instabilities, *J. Geophys. Res.*, **90**, 65, 1985.

88. Gary, S. P., and M. M. Mellott, Whistler damping at oblique propagation: laminar shock precursors, *J. Geophys. Res.*, **90**, 99, 1985.

89. Gary, S. P., Electromagnetic ion beam instabilities: hot beams at interplanetary shocks, *Ap. J.*, **288**, 342, 1985.

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91. Tokar, R. L. and S. P. Gary, The whistler mode in a Vlasov plasma, *Phys. Fluids*, **28**, 1063, 1985.

92. Winske, D., E. K. Stover and S. P. Gary, The structure and evolution of slow mode shocks, *Geophys. Res. Lett.*, **12**, 295, 1985.

93. Gary, S. P., M. B. Pongratz, C. D. Madland and D. W. Swift, The zero frequency ion ring instability, *Phys. Fluids*, **28**, 1727, 1985.

94. Gary, S. P., and C. D. Madland, Electromagnetic electron temperature anisotropy instabilities, *J. Geophys. Res.*, **90**, 7607, 1985.

95. Gary, S. P., and R. L. Tokar, The electron acoustic mode, *Phys. Fluids*, **28**, 2439, 1985.

96. Gary, S. P., Electrostatic instabilities in plasmas with two electron components, *J. Geophys. Res.*, **90**, 8213, 1985.

97. Rogers, B., S. P. Gary and D. Winske, Electromagnetic hot ion beam instabilities: quasilinear theory and simulation, *J. Geophys. Res.*, **90**, 9494, 1985.

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Plasma fluctuations and large-scale mixing near comet Giacobini-Zinner, *Geophys. Res. Lett.*, **13**, 271, 1986.

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