

Robert E. Ergun

Education

- 1974 B.A. *Cum Laude with Honors and Distinction*, Physics and Mathematics, Cornell University.
- 1989 Ph.D., Physics, University of California, Berkeley.

Appointments

- 2000- Associate Professor, Department Astrophysical and Planetary Science and Laboratory for Atmospheric and Space Physics, University of Colorado, Boulder.
- 1998-1999 Visiting Associate Professor, Department of Engineering, Brown University.
- 1998-1999 Associate Research Physicist, Space Sciences Laboratory, University of California, Berkeley.
- 1996 Instructor, Department of Physics, University of California, Berkeley.
- 1994-1999 Senior Fellow, Space Sciences Laboratory, University of California, Berkeley.
- 1989-1998 Assistant Research Physicist, Space Sciences Laboratory, University of California, Berkeley.

Recent Experimental Programs

- 2000- Co-investigator, *STEREO Radio Burst Tracker (SWAVES)*. STEREO studies coronal mass ejections and the effect they have on the Earth's magnetosphere.
- 2000- Principal Investigator, *Investigation of Radio Tomography Imaging of the Magnetosphere*. This study advances back projection methods (tomographic inversion) for a magnetospheric radio tomography imaging mission under NASA's SR&T program.
- 1997- Principal Investigator, *Development of a radio tomography mission for investigation of the Earth's magnetosphere*. This effort developed a radio tomography imaging mission under NASA New Missions Concept Program.
- 1995-1996 Principal Investigator, *A High Time Resolution Ion Spectrograph and Wave-Particle Correlator*, California Space Institute. This effort contributed to the development of a high-time resolution ion analyzer for sounding rocket flight.
- 1989- Co-investigator, *Fast Auroral Snapshot (FAST) satellite*. FAST was designed to study plasma physics of the auroral acceleration region. Dr. Ergun lead the electric and magnetic

- field instrument design and development.
- 1989-1999 Co-investigator, *University of California at Berkeley Sounding Rocket Program*,. This program carried out five sounding rocket experiments that studied plasma physics of the low-altitude auroral acceleration region. Dr. Ergun developed several electric field signal processing.
- 1989-1999 Co-investigator, *Wind* spacecraft. This mission studied plasmas of the solar wind and outer magnetosphere.

Recent Theoretical Programs

- 1998- Principal Investigator, Characterization and Numerical Simulation of Beam Solitary Waves in the Auroral Ionosphere, NASA. (With L. Muschietti and I. Roth.). This research effort investigated solitary structures that were observed in space plasmas.
- 1996-1999 Principal Investigator, Kinetic Analysis of Langmuir Waves in the Earth's Foreshock, NASA. This study investigated quasilinear relaxation of beam-driven Langmuir waves leading to localized packets.

Educational Outreach

- 1995-1998 Principal Investigator, *The Berkeley Satellite Connection - An educational outreach Program*, NASA. An educational outreach program that used "student mediated outreach" to disseminate scientific research.

Committees

- 1996 Geospace Multiprobe Science Definition Team, NASA.
- 1998 Magnetospheric Multiprobe Mission Science Definition Team, NASA.

Awards

- 1987-89 NASA Graduate Researchers Program Training Grant.
- 1994 NASA Special Act Group Award: FAST Integration and Test Team.
- 1997 NASA Group Achievement Award: FAST Development and Launch Team.
- 1998 NASA Group Achievement Award: Wind 3D Plasma Team.

Professional Societies

American Geophysical Union
 American Physical Society
 Union of Radio Science International