

## Arthur D. Richmond

Arthur D. Richmond is a Senior Scientist at the High Altitude Observatory of the National Center for Atmospheric Research (NCAR), where he has worked since 1983. He received a B.S. in Physics in 1965 and a Ph.D. in Meteorology in 1970, both from UCLA. Between 1970 and 1983 he worked at several institutions, including the University of Colorado and the National Oceanic and Atmospheric Administration Space Environment Laboratory. His primary research has been in the field of ionospheric electrodynamics and upper atmospheric dynamics. He has authored or coauthored over 100 refereed publications, plus a number of book chapters and popular articles on the upper atmosphere. He has guided several doctoral students in their thesis projects, and has contributed to the work of many local, national, and international scientific organizations, including memberships on the National Research Council (NRC) Committee on Solar-Terrestrial Research (CSTR) and Committee on Solar and Space Physics (CSSP), chairmanship of Division II (Aeronomical Phenomena) of the International Association of Geomagnetism and Aeronomy (IAGA), membership on the Science Steering Committee of the Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) program, and current membership of the Science Steering Committee of the Climate and Weather of the Sun-Earth System (CAWSES) program of the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP). He is a Fellow of the American Geophysical Union, and Editor of the *Journal of Geophysical Research - Space Physics*.

### Selected Publications:

- Richmond, A.D., and R.G. Roble, Dynamic effects of aurora-generated gravity waves on the midlatitude ionosphere, *J. Atmos. Terr. Phys.*, *41*, 841-852, 1979.
- Richmond, A.D., Thermospheric dynamics and electrodynamics, in *Solar-Terrestrial Physics, Principles and Theoretical Foundations*, R.L. Carovillano and J.M. Forbes, eds., D. Reidel Publishing Company, Dordrecht, Holland, 523-607, 1983.
- Richmond, A.D., and Y. Kamide, Mapping electrodynamic features of the high-latitude ionosphere from localized observations: Technique, *J. Geophys. Res.*, *93*, 5741-5759, 1988.
- Richmond, A.D., Assimilative mapping of ionospheric electrodynamics, *Adv. Space Res.*, *12*, (6)59-(6)68, 1992.
- Richmond, A.D., Ionospheric electrodynamics using Magnetic Apex Coordinates, *J. Geomagn. Geoelectr.*, *47*, 191-212, 1995.
- Gasda, S., and A.D. Richmond, Longitudinal and interhemispheric variations of auroral ionospheric electrodynamics in a realistic geomagnetic field, *J. Geophys. Res.*, *103*, 4011-4021, 1998.
- Richmond, A.D., G. Lu, B.A. Emery, and D.J. Knipp, The AMIE procedure: prospects for space weather specification and prediction, *Adv. Space Res.*, *22*, 103-112, 1998.
- Galand, M., and A.D. Richmond, Ionospheric electrical conductances produced by auroral proton precipitation, *J. Geophys. Res.*, *106*, 117-125, 2001.
- Lu, G., A.D. Richmond, R.G. Roble, and B.A. Emery, Coexistence of ionospheric positive and negative storm phases under northern winter conditions: A case study, *J. Geophys. Res.*, *106*, 24,493-24,504, 2001.
- Matsuo, T., A. D. Richmond, and K. Hensel, High-latitude ionospheric electric field variability and electric potential derived from DE-2 plasma drift measurements: Dependence on IMF and dipole tilt, *J. Geophys. Res.*, *108(A1)*, 1005, doi:10.1029/2002JA009429, 2003.