

CURRICULUM VITAE

RICHARD JOHN REED

Personal Data

Born: Braintree, Massachusetts - June 18, 1922

Address: Department of Atmospheric Sciences, Box 351640
University of Washington
Seattle, Washington 98195

Education:

B. S., California Institute of Technology 1945
Major - Meteorology

ScD., Massachusetts Institute of Technology 1949
Major - Meteorology

Doctoral Thesis: "The Effect of Atmospheric Motions on Ozone Distribution and Variations"

Professional Experience:

July 1991 to present	Professor Emeritus
September 1954 to July 1991	Assistant (1954), Associate (1958), and full Professor (1963), Department of Atmospheric Sciences, University of Washington
July 1959 to Sept. 1959	Visiting Associate Professor, Department of Meteorology, UCLA
Sept. 1961 to June 1962	Consultant, National Meteorological Center, Suitland, MD
Sept. 1968 to July 1969	Executive Scientist, US GARP Committee, NAS/NRC, Washington, D.C.
Sept. 1985 to July 1986	Visiting Scientist, European Centre for Medium Range Weather Forecasting, Reading, England
Sept. 1989 to Oct. 1989	Honorary Lecturer, Massachusetts Institute of Technology, Cambridge, MA

Honors and Awards

Fellow:

American Meteorological Society
American Association for the Advancement of Science
American Geophysical Union

Member, National Academy of Sciences.

Meisinger Award, American Meteorological Society, 1964.

Second Half Century Award, American Meteorological Society, 1972

Invited Lecturer, Fifth Annual NASA Summer Visiting Scientist Seminar Series, 1982.

Victor Starr Memorial Lecture, Massachusetts Institute of Technology, 1983.

Charles Franklin Brooks Award, American Meteorological Society, 1983.

Invited Lecturer, NMC Lecture Series, Spring, 1984.

Invited Lecturer, NMC International Training Program for Professional Development, 1984

Invited Lecturer, University of Oslo, December, 1985.

Invited Lecturer, University of Berlin, January, 1986.

Invited Lecturer, University of Munich, January, 1986.

Invited Lecturer, Cambridge University, February, 1986.

Invited Lecturer, Oxford University, March, 1986.

Invited Lecturer, Reading University, March 1986.

Carl-Gustaf Rossby Research Medal, American Meteorological Society, 1989.

Invited Papers at National and International Scholarly Meetings

1. "The development and status of modern weather prediction." Bjerknes Memorial Lecture, *57th Annual Meeting of the American Meteorological Society*. Tucson, AZ. January 1977.
2. "Utilization of GATE data in Budget Studies." *WMO Technical Conference on GATE Data Utilization with Implications for Forecasting and Research in Tropical Countries*. Cairo, Egypt, December 1977.
3. "The Structure and Behavior of Easterly Waves over West Africa and the Atlantic." *Conference on Meteorology over the Tropical Oceans*. London, England, August, 1978.
4. "Synoptic-Scale Motion.s" *International Conference on Scientific Results of the GARP Atlantic Tropical Experiment*. Kiev, U.S.S.R., September, 1980.
5. "Upper-Tropospheric Waves in the Subtropical Pacific During SOP-1 of FGGE and Their International Interaction with the ITCZ." *Third Scientific Assembly, International Association of Meteorology and Atmospheric Physics*. Hamburg, Germany, August, 1981.
6. "The Diurnal Variation of Precipitation in the Tropics." *First International Conference on Southern Hemisphere Meteorology*. Sao Jose dos Campos, Brazil, Preprints, August, 1983.
7. "Westward-Travelling, Synoptic-Scale Disturbances of the Northern Hemisphere Summer in the Tropical Atlantic and the Adjacent Atlantic." *WMO Regional Conference on GATE, WAMEX and Tropical Meteorology*, Dakar, Senegal, December, 1984.
8. "Baroclinic Instability as a Mechanism for Polar Low Formation." *International Conference of Polar Lows*, Oslo, Norway, May 1986.
9. "Prediction of Easterly Waves over Africa and the Tropical Atlantic by the ECMWF Model. Part I: Synoptic results. Part II: Statistical and Spectral Results." *Institute for Theoretical Physics*, Trieste, Italy, May 1988.
10. "Advances in Knowledge and Understanding of Extratropical Cyclones During the Past Quarter Century: An Overview." *Palmen Memorial Symposium on Extratropical Cyclones*, Helsinki, August 1988.
11. "Recent Advances in Understanding and Prediction of Ocean Storms." 24th Congress of the Canadian Meteorological and Oceanographic Society, Victoria B.C., May 1990.
12. "Cyclogenesis from a Potential Vorticity Perspective." 71st Annual Meeting, American Meteorological Society, New Orleans, January, 1991.
13. "An Assessment of the Role of Air-Sea Interaction in Rapid Cyclogenesis." IAMAP Symposium, Vienna, Austria, August 1991.

Review Committees

Massachusetts Institute of Technology Corporation Visiting Committee for Earth Sciences, 1971-1975.

Travel in Foreign Countries for Professional Purposes:

- 1959-Germany, Norway, Conferences on Ozone and Polar Meteorology, Ravensburg, Oslo
- 1962-Germany, Symposium on Stratosphere and Mesosphere, Free Univ. Berlin
- 1965-Russia, Symposium on Dynamics of Large-Scale Motions, Moscow
- 1966-Japan, Pac. Sci. Congress, Tokyo
- 1971-Russia, U. S. Delegation on Atmospheric modelling, numerical prediction and weather data processing under 1970-71 USSR-USA exchange agreement, Moscow, Leningrad, Novosibirsk
- 1974-AMS delegation to People's Republic of China
- 1974-Africa, Nairobi, Kenya, International Tropical Meteorology Meeting and Dakar, Senegal, GARP Atlantic Tropical Experiment (GATE)
- 1977-Tashkent, USSR, Conference on Energetics of the Tropical Atmosphere;
- 1977-Cairo, Egypt, WMO GATE Symposium
- 1978-London, visiting scientist, British Meteorological Office
- 1981-Germany, IAMAP Symposium, Hamburg
- 1981-U.K., IAMAP Symposium, Reading
- 1982-Australia, WMO Conference, Melbourne
- 1983-Brazil, First International Conference on S. Hemisphere, Sao Jose dos Campos
- 1984-Dakar, Senegal, WMO Regional Scientific Conference on GATE, WAMEX and Tropical Meteorology in Africa
- 1985-86-On Sabbatical in England with professional travel in France, Germany and Norway
- 1988-Italy, Institute for Theoretical Physics, Trieste
- 1988-Finland, Palmén Memorial Symposium on Extratropical Cyclones, Helsinki
- England, IAMAP Symposium, Reading
- 1991-Austria, IAMAP Symposium, Vienna
- 1991-Taipei, Taiwan
- 1994-Symposium on Lifecycles of Extratropical Cyclones, Bergen, Norway

Professional Activities Related to or Under the Auspices of Municipal or National Government:

Consultant: Washington State Water Resources
 U. S. Army
 U. S. Navy
 U. S. Weather Bureau
 ESSA
 National Science Foundation
 NASA

Professional Associations, Learned and Technical Societies (indicates offices held and committee service, if any):

Associate Editor, *Journal of Meteorology/Journal of the Atmospheric Sciences*, 1957-1965

Editor, *Journal of Applied Meteorology*, 1966-68

Member, NAS Committee on Global Atmospheric Research Program, 1969-

Member, NAS Committee to the National Oceanic and Atmospheric Administration, 1970-73.

President, American Meteorological Society, 1972.

Chairman, U. S. GARP Committee NAS/NRC, 1975-76.

Associate Editor, *Journal of the Atmospheric Sciences*, 1977-83.

Chairman, Committee on Atmospheric Sciences and Climate, NAS/NRC, 1980-82.

Vice-Chairman, Board on Atmospheric Sciences and Climate, NAS/NRC, 1982-83.

U. S. Delegate, Committee on Atmospheric Sciences and Climate, World Meteorological Organization, 1982-1995.

Associate Editor, *Monthly Weather Review*, 1983-1985.

Member, Commission on Physical Sciences, Mathematical Resources, NAS/NRC, 1986-1989.

Member, Board of Trustees, University Corporation for Atmospheric Research, 1986-1992.

Publications**1950**

“The role of vertical motions in ozone-weather relationships.” *Journal of Meteorology*, 263-267.

1951

“A study of atmospheric vorticity.” Technical Report No. 10, M.I.T., p. 19.

“A quantitative analysis of two proposed mechanisms of vertical ozone transport in the lower atmosphere.” (with Julius L. Anthony) *Journal of Meteorology*, 321-325.

1953

“A synoptic study of the mechanics of cold low formation.” Technical Report No. 13, M.I.T.

“An investigation of the development of a mid-tropospheric frontal zone and its associated vorticity field.” (with Frederick Sanders) *Journal of Meteorology*, 348-349.

“Large-scale eddy flux as a mechanism for vertical transport of ozone.” *Journal of Meteorology*, 296-297.

1954

“Results of tests on the numerical computation of pressure tendencies.” Technical Report No. 15, M.I. T., 40.

“Atmospheric cooling by melting snow.” (with R. Wexler and J. Honig) *Bull. Amer. Meteor. Soc.*, 48-51.

1955

“A study of a characteristic type of upper level frontogenesis.” *Journal of Meteorology*., 226-237.

1956

“Miscellaneous studies of polar vortices.” (with W. Tank) Occasional Report No. 4, Department of Meteorology and Climatology, University of Washington, p. 21.

1957

“Detailed wind structure in an intense frontal zone.” *Bull. Amer. Meteor. Soc.*, 357-360.

“A graphical method for preparing 1000 millibar prognostic charts.” *Journal of Meteorology*, **14**, 65-70.

1958

“Discontinuity surfaces in the boundary region between troposphere and stratosphere.” Occasional Report No. 8, Department of Meteorology and Climatology, University of Washington, 21pp.

“Synoptic studies in arctic meteorology.” Occasional Report No. 9, Department of Meteorology and Climatology, University of Washington, 64pp.

“Arctic synoptic analysis”, “Cold polar vortices,” and “A baroclinic graphical prediction model.” Contributions to the Study of the Arctic Circulation, 48-76. McGill University, Montreal.

“Arctic Weather Analysis.” Polar Atmosphere Symposium, Part I, 124-137, Pergamon Press, New York.

1959

“A graphical prediction model incorporating a form of non-adiabatic heating.” *Journal of Meteorology*, **15**, 1-8.

“Flying saucers over Mount Rainier.” *Weatherwise*, **11**, 43-46. 1959

“Arctic weather analysis and forecasting.” Occasional report No. 11, Department of Meteorology and Climatology, University of Washington, 119 pp.

“Results of a series of dynamical predictions for the Arctic: Summer season.” Occasional report No. 12, Department of Meteorology and Climatology, University of Washington, 52 pp.

“Arctic weather studies: Summer season.” (with Ronald K. Surface) Scientific Report No. 5, Contract AF 19(604)-3063, 48 pp.

“Fronts in the vicinity of the tropopause.” (with Edwin F. Danielsen) *Archiv fuer Meteorologie, Geophysik und Bioklimatologie.*, **11**,1-17.

“Results of a series of dynamical predictions for the Arctic: Winter season.” Scientific Report No. 8, Contract AF19 (604)-3063, p. 50.

“Arctic circulation studies.” Final Report, Contract AF19 (604)-3063, 57 pp.

1960

“On the practical use of graphical prediction methods.” *Mon. Wea. Rev.*, **88**, 209-218.

“The Arctic circulation in summer.” (with Bruce A. Kunkel) *Journal of Meteorology*, p. 17.

“The principal frontal zones of the northern Hemisphere in winter and summer.” *Bull. Amer. Meteor. Soc.*, **41**, 591-598.

1961

“Fronts.” In the McGraw-Hill Encyclopedia of Sciences.

“Evidence of a downward-propagating annual wind reversal in the equatorial stratosphere.” (with William J. Campbell, Lowell A. Rasmussen, and Dale G. Rogers) *J. Geophys. Res.*, **66**, 813-818.

“A study of squall line formation in two cases.” (with Gene D. Prantner) Scientific Report No. 1, AF 19 (604) 5192, 82 pp.

“On the physical prediction of cloud and fog formation and the change in ceiling height.” TRC-16, The Travelers Research Center, Inc., Hartford, 21 pp.

“A plan for the integration of radar and routine data in the objective analysis of cloud, precipitation, and convective activity.” TRC-20, The Travelers Research Center, Inc., Hartford, 17 pp.

“Detailed analysis of selected Pacific storms based on continuous radar records and short interval serial ascents.” Part I: Case of January 6-8, 1961. Technical Report No. 3, Department of Meteorology and Climatology, University of Washington, 44 pp.

1962

“The equilibrium drift of ice station alpha.” (with William J. Campbell) *J. Geophys. Res.*, **15**, 281-298.

“Wind and temperature oscillations in the tropical stratosphere.” *IGY Bulletin*, **56**, 1-5.

“Detailed analyses of selected Pacific storms based on continuous radar records and short-interval serial ascents, Vol. II, case of February 1-2, 1961.” (with Carl W. Kreitzberg) Technical Report No. 4, Department of Meteorology and Climatology, University of Washington, 46 pp.

“The circulation of the tropical stratosphere in the years 1954-1960.” (with Dale G. Rogers) *J. Atmos. Sci.*, **19**, 127-135.

“Energy changes and transformations in the sudden warmings of late January 1957 and 1958” and “The equatorial stratospheric oscillation and its role in the circulation of the tropical stratosphere.” Seminar on the Stratosphere and Mesosphere, Scientific Report No. 4, 19-22, 33-36. McGill University.

“Detailed analysis of selected Pacific storms based on continuous radar records and short interval serial ascents.” Vol. III, Case of February 7-10, 1961. (with Carl W. Kreitzberg) Technical Report No. 5, Department of Meteorology and Climatology, University of Washington, 64 pp.

“Arctic Forecast Guide.” U. S. Navy Weather Research Facility, Norfolk, 107 pp.

“Some features of the annual temperature regime in the tropical stratosphere.” *Mon. Wea. Rev.*, **90**, 211-215.

“Evidence of geostrophic motion in the equatorial stratosphere.” *Quart. J. of Roy. Meteor. Soc.*, 324-327.

“Continuous radar records and short-interval serial ascents.” Volume V, Case of June 5-7, 1961. Technical Report No. 7. Department of Meteorology and Climatology, University of Washington, 55 pp.

“Application of radar data to problems in synoptic meteorology.” (with Carl W. Kreitzberg) Final Report, Department of Meteorology and Climatology, University of Washington, 82 pp.

1963

“Experiments in 1000 mb prognosis.” National Meteorological Center Technical Memorandum No. 26, 31 pp.

“Motions in the stratosphere and mesosphere.” Special Report, 26. U. S. Army Electronics R & D Activity.

“A spectral analysis of the energetics of the stratospheric sudden warming of early 1957.” (with John L. Wolfe and Hiroshi Nishimoto) *J. Atmos. Sci.*, **20**, 256-275.

“On the cause of the 26 month periodicity in the equatorial stratospheric winds.” *Meteorologische Abhandlungen*, **36**, 245-255.

“On the cause of the stratospheric sudden warming phenomenon.” *Meteorologische Abhandlungen*, **36**, 315-334.

1964

“A Climatology of Wind and Temperatures in the Tropical Stratosphere Between 100 mb and 10mb.” *US Navy Weather Research Facility*, 56 pp.

“Equatorial Wind Oscillation.” *McGraw-Hill Yearbook of Science and Technology*, McGraw-Hill Company, 216-217.

“A tentative model of the 26-month oscillation.” *Quarterly Journal of the Royal Meteorological Society*, **90**, 441-466.

1965

“A contribution to the problem of stratospheric diffusion by large-scale mixing.” (with K.E. German) *Monthly Weather Review*, **93**, 313-321.

“The quasi-biennial oscillation of the atmosphere between 30 and 50 km over Ascension Island.” *Journal of the Atmosphere Sciences*, **22**, 331-333.

“The present status of the 26-month oscillation.” *Bull. Amer. Meteor. Soc.*, **46**, 374-387.

1966

“Further evidence of enhanced diurnal tidal motions near the stratopause.” (with Donald J. McKenzie and Joan C. Vyverberg) *J. Atmos. Sci.*, **23**, 247-251.

“Diurnal tidal motions near the stratopause during 48 hours at White Sands Missile Range.” (with N. J. Beyers and B. T. Miers) *J. Atmos. Sci.*, **23**, 325-333.

“Diurnal tidal motions between 30 and 60 kilometers in summer.” (with Donald McKenzie and Joan C. Vyverberg) *J. Atmos. Sci.*, **23**, 416-423.

“Zonal wind behavior in the equatorial stratosphere and lower mesosphere.” *J. Geophys. Res.*, **71**, 4223-4233.

1967

“Semidiurnal tidal motions between 30 and 60 kilometers.” *J. Atmos. Sci.*, **24**, 315-317.

“Equatorial stratospheric wind oscillation.” In the Encyclopedia of Atmospheric Sciences and Astrogeology. Encyclopedia of Earth Sciences Series, V. II. New York: Reinhold Publishing Corporation, 367-368.

“The structure and dynamics of the 26 month oscillation.” In *Dynamics of Large Scale Atmospheric Processes*. Proceedings of the International Symposium, Moscow, June 23-30, 1965. Moscow: Izdatel-stvo ‘Nauka’, 393-402.

1968

“Roles of mean meridional circulation and eddy diffusion in the transport of trace substances in the lower stratosphere.” (with Paul H. Gudiksen and A. W. Fairhall) *J. Atmos. Sci.*, **26**, 163-167.

1969

“The annual temperature variation in the lower tropical stratosphere.” (with C.L. Vlcek) *Journal of the Atmospheric Sciences*, **26**, 163-167.

“A comparison of observed and theoretical diurnal tidal motions between 30 and 60 kilometers.” (with Michael J. Oard) *Mon. Wea. Rev.*, **97**, 456-459.

“A study of the relation of clear air turbulence to the mesoscale structure of the jet stream region.” In *Clear Air Turbulence and Its Detection*. New York: Plenum Press, 288-307.

“Superpressure balloon flights in the tropical stratosphere.” (with Vincent E. Lally and Aubrey P. Schumann) *Science*, **166**, 738-739.

1970

“Structure and characteristics of easterly waves in the equatorial western Pacific during July-August 1967.” Proceedings Symposium Tropical Meteorology, Honolulu, June 1970, Amer. Meteor. Soc., EII-1 to EII-8, Boston.

1971

“The effects of GARP and other future large programs on education and research in the atmospheric sciences.” *Bull. Amer. Meteor. Soc.*, **52**, 458-462.

“Structure and properties of synoptic scale wave disturbances in the equatorial Western Pacific.” (with E. E. Recker) *J. Atmos. Sci.*, **28**, 1117-1133.

1972

“A case study of persistent, intense, clear air turbulence in an upper level frontal zone.” (with K. R. Hardy) *J. Appl. Meteor.*, **11**, 541-549.

“Wave patterns and clear air turbulence.” Preprint Volume of the *15th Radar Meteorology Conference*, Champaign-Urbana, Illinois, October 10-12, 1972, Amer. Met. Soc., Boston, 262-267.

“Further analysis of semidiurnal tidal motions between 30 and 60 kilometers.” *Mon. Wea. Rev.*, **100**, 479-581.

1973

“Comments on paper by Harry van Loon, Karin Labitzke, and Roy L. Jenne, ‘Half-yearly wave in the stratosphere.’” *J. Geophys. Res.*, **78**, 1484-1485.

“Observation of Kelvin-Helmholtz billows and their mesoscale environment by radar, instrumented aircraft, and a dense radiosonde network.” (with K. R. Hardy and G. K. Mather) *Quart. J. Roy. Meteor. Soc.*, **99**, 279-293.

1974

“Diagnosis of cloud population properties in tropical easterly waves.” (with R. H. Johnson) Preprint Volume (Part II), *International Tropical Meteorology Meeting*, Nairobi, Kenya, January 31- February 7, 1974, 50-55.

“The vorticity budget of synoptic scale wave disturbances in the tropical western Pacific.” (with R. H. Johnson) *J. Atmos. Sci.*, **31**, 1784-1790.

“Visit to the People's Republic of China: A report from the A. M. S. delegation.” (with W. W. Kellogg, D. S. Johnson. and K. C. Spengler) *Bull. Amer. Met. Soc.*, **55**, 1291-1330.

1975

“An example of a squall line in the B-Scale network.” Preliminary Scientific Results (Volume I) of the GARP Atlantic Tropical Experiment, GATE Report No. 14, 217-222.

“Aircraft observations of ITCZ structure on August 4, 1975.” (with N. E. LaSeur and D. Berrill) Preliminary Scientific Results (Volume I) of the GARP Atlantic Tropical Experiment, GATE Report No. 14, 211-216.

“Vertical Motion and Vorticity in the A/B Scale Area: Phase II.” (with W. H. Schubert) Preliminary Scientific Results (Volume I) of the GARP Atlantic Tropical Experiment, GATE Report No. 14, 137-144.

1977

“The structure and properties of African wave disturbances as observed during Phase II of GATE.” (with D. C. Norquist and E. E. Recker) *Mon. Wea. Rev.*, **105**, 317-333.

“The energetics of African wave disturbances as observed during Phase III of GATE.” (with D. C. Norquist and E. E. Recker) *Mon. Wea. Rev.*, **105**, 334-342.

“The development and status of modern weather prediction.” Bjerknes Memorial Lecture, *Bull. Amer. Met. Soc.*, **58**, 390-400.

1978

“Diurnal variations in satellite convective activity and in precipitation over west Africa and the adjacent ocean during Phases II. and III of GATE.” (with M. M. McGarry) *Mon. Wea. Rev.*, **106**, 101-113.

“The structure and behavior of easterly waves over west Africa and the Atlantic.” *Meteorology Over the Tropical Oceans*, a collection of papers presented at a Joint Conference, August 21-25, 1978, *Royal Met. Soc.*, 57-71.

1979

“Structure and properties of synoptic-scale wave disturbances in the intertropical convergence zone of the eastern Atlantic.” (with R. M. Thompson, Jr., S. W. Payne, and E. E. Recker) *J. Atmos. Sci.*, **36**, 53-72.

“Cyclogenesis in polar air streams.” *Mon. Wea. Rev.* **107**, 38-52.

1980

“Response of upper ocean temperatures to diurnal and synoptic scale variations of meteorological parameters in the GATE B scale area.” (with R. M. Lewis) In GATE - 1 Oceanography and surface layer meteorology in the B/C scale, (G. Siedler and J.D. Woods eds.), *Deep-Sea Research*, part A, **26**, Suppl. I, 99-114.

“Meteorology.” In *Sciences in Contemporary China*, 214-233, (Leo A. Orleans, ed.). Stanford University Press, Stanford, California, 213-235.

“Destructive winds caused by an orographically induced mesoscale cyclone.” *Bull. Amer. Meteor. Soc.*, **61**, 1346-1355.

“The origin of African wave disturbances during Phase III of GATE.” (with J. P. Albignat) *Mon. Wea. Rev.*, **108**, 1827-1839.

1981

“A diagnostic study of the diurnal rainfall variation in the GATE B-scale area.” (with M. D. Albright, D. R. Mock, and E. E. Recker) *J. Atmos. Sci.*, **38**, 1429-1445.

“A case study of a Bora like windstorm in western Washington.” *Mon. Wea. Rev.* **109**, 2383-2393.

1982

“Diurnal variation of summer convection over west Africa and the tropical eastern Atlantic during 1974 and 1978.” (with K. Jaffe) *Mon. Wea. Rev.*, **109**, 2527-2534.

“Synoptic scale motions.” (with R. Burpee) GATE Monograph, Chapter IV. International Council of Scientific Unions/World Meteorological Organization, 61-121.

1983

“A note on the relationship between precipitation frequency and percent of correct forecasts.” *Bull. Amer. Meteor. Soc.*, **64**, 148-149.

“The diurnal variation of precipitation in the tropics.” *First International Conference on Southern Hemisphere Meteorology*, American Meteorological Society, 312-319.

1984

“Comments on 'Modulation of convective activity by large-scale flow pattern observed in GATE.’” (with R. Lewis) *J. Atmos. Sci.*, **41**, 305-307.

1985

“The diurnal variation of deep convection and inferred precipitation in the central tropical Pacific during January-February, 1979.” (with M. D. Albright, R. Dang, and E. E. Recker) *Mon. Wea. Rev.*, **113**, 1663-1680.

1986

“A case study of comma cloud development in the eastern Pacific/” (with Warren Blier) *Mon. Wea. Rev.*, **114**, 1681-1695.

“A further study of comma cloud development in the eastern Pacific.” (with Warren Blier) *Mon. Wea. Rev.*, **114**, 1696-1708.

“A case study of explosive cyclogenesis in the eastern Pacific.” (with Mark D. Albright) *Mon. Wea. Rev.*, **114**, 2297-2319.

1987

“Baroclinic instability as a mechanism for the serial development of polar lows: A case study.” (with Charles N. Duncan) *Tellus*, **39A**, 376-384.

1988

“On understanding the meteorological causes of Sahelian drought.” Study week on Persistent Meteo-Oceanographic Anomalies and Teleconnections, Sept. 23-27, 1986, *Pontificae Academiae Scientiarum Scripta Varia*, **69**, 179-213.

“Numerical simulation of an explosively deepening cyclone in the eastern Pacific.” (with Y-H. Kuo) *Mon. Wea. Rev.*, **116**, 2081-2105.

“A generalization of Petterssen’s frontogenesis function and its relation to the forcing of vertical motion.” (with D. Keyser and M. J. Reeder) *Mon. Wea. Rev.*, **116**, 762-780.

“The structure and characteristics of African easterly waves disturbances as determined from the ECMWF Operational Analysis/Forecast system.” (with E. Klinker and A. Hollingsworth) *Meteor. Atmos. Phys.*, **38**, 22-33.

“An evaluation of the performance of the ECMWF operational system in analyzing and forecasting easterly wave disturbances over Africa and the tropical Atlantic.” (A. Hollingsworth, W. A. Heckley, and F. Delsol) *Mon. Wea. Rev.*, **116**, 824-865.

“The role of latent heat release in explosive cyclogenesis: Three examples based on ECMWF quational forecasts.” (with A. J. Simmons, M. D. Albright, and P. Unden). *Wea. and Forecasting*, **3**, 217-229.

1989

“Cyclogenesis in cold air masses.” (with S. Businger) *Wea. and Forecasting*, **4**, 134-156.

“Polar lows.” (with S. Businger) Published in *Polar and Arctic Lows*, (P.F. Twitchell, E. A. Rasmussen, and K. L. Davidson, Eds.), Deepak Publishing, Chicago, 3-45.

1991

“Effects of surface energy during the early development and rapid intensification stages of seven explosive cyclones in the western Atlantic.” (with Y. H. Kuo and S. Low-Nam) *Mon. Wea. Rev.*, **119**, 457-476.

“Numerical experiments on the ERICA IOP-5 storm: A surprise rapid deepener” (with G. Grell and Y.-H. Kuo) Preprints, *First International Winter Storm Symposium*, New Orleans, American Meteorological Society, 414-417.

“Cyclogenesis from a potential vorticity perspective.” Preprints, *First International Winter Storm Symposium*, New Orleans, American Meteorological Society, 1-5.

“Thermal structure of a simulated marine cyclone.” (with Y. H. Kuo and S. Low-Nam) Preprints, *First International Winter Storm Symposium*, New Orleans, American Meteorological Society, 372-376.

“The symmetric stability of a rapidly deepening marine cyclone as seen in a numerical simulation.” (with Y.-C. Tung and M. Stoelinga) Preprints, *First International Winter Storm Symposium*, New Orleans, American Meteorological Society, 383-386.

“Numerical simulation of an explosively deepening cyclone over the north Atlantic that was unaffected by concurrent surface energy fluxes.” (with A. J. Simmons) *Wea. and Forecasting*, **6**, 117-122.

1992

“A model aided study of the origin and evolution of the anomalously high potential vorticity in the inner region of a rapidly deepening marine cyclone.” (with M. Stoelinga and Y.-H. Kuo) *Mon. Wea. Rev.*, **120**, 893-913.

“Thermal structure and airflow in a model simulation of an occluded marine cyclone.” (with Y.-H. Kuo and S. Low-Nam) *Mon. Wea. Rev.*, **120**, 2280-2297.

1993

“The ERICA IOP 5 Storm. Part I: analysis and simulation.” (with G. A. Grell and Y.-H. Kuo) *Mon. Wea. Rev.*, **121**, 1577-1594.

“The ERICA IOP 5 Storm. Part II: sensitivity tests and further diagnosis based on model output.” (with G. A. Grell and Y. H. Kuo) *Mon. Wea. Rev.*, **121**, 1595-1612.

“Numerical simulation of the large-amplitude mesoscale gravity-wave event on 15 December 1987 in the Central United States.” (with J. G. Powers) *Mon. Wea. Rev.*, **121**, 2285-2308.

1994

“An adiabatic simulation of the ERICA IOP 4 storm: An example of quasi-ideal frontal cyclone development.” (with Y.-H. Kuo and S. Low-Nam) *Mon. Wea. Rev.*, **122**, 2688-2708.

1995

“Origin and structure of a numerically simulated polar low over Hudson Bay.” (with M. D. Albright and D. W. Ovens) *Tellus*, **47A**, 834-848.

1996

“The ERICA IOP 5 Storm. Part III: mesoscale cyclogenesis and precipitation parameterization.” (with Y.-H. Kuo and Y. Liu) *Mon. Wea. Rev.*, **124**, 1409-1434.

1997

“A polar-low development over the Bering Sea: Analysis, numerical simulation, and sensitivity experiments.” (with J. F. Bresh and M. D. Albright). *Mon. Wea. Rev.*, **125**, 3109-3130.

“Frontal structure in the interior of an intense mature ocean cyclone.” (with M.D. Albright). *Wea. Forecasting*, **12**, 866-876.

2001

“Analysis and modeling of a tropical-like cyclone in the Mediterranean Sea.” (with Y-H. Kuo, M. D. Albright, K. Gao, Y.-R. Guo, and W. Huang) *Meteorol. Atmos. Phys.*, **76**, 183-202.