MURRAY AND TRETTEL, INCORPORATED
DENNIS W. TRETTEL
Certified Consulting Meteorologist
Founded 1946, Micro/Operational Forecasting • Media • Air Quality/Environmental/PSD Monitoring/Studies • Forensic Research • Dispersion Modeling • Nuclear Emergency Support
600 First Bank Drive, Suite A
Palatine, IL 60067
847-963-9000
FAX: 847-963-0245
E-mail: mt@weathercommand.com

NORTH AMERICAN WEATHER CONSULTANTS
DON A. GRIFFITH, PRESIDENT
Certified Consulting Meteorologist
Weather Modification • Air Quality Surveys & Field Studies • Applied Research • Forensic Meteorology
8180 South Highland Dr., Suite B-2
Sandy, UT 84093
801-942-9005
FAX 801-942-9007
E-mail: nawc@nawcinc.com

ERWIN K. KAUPER
Certified Consulting Meteorologist
Environmental Impact & Site Surveys • Air Pollution Field Studies • Diffusion Analysis • Weather & Air Quality Forecasting • Air Pollution Monitoring Instrumentation • Expert Testimony
2859 Vanderhoof Drive
West Covina, CA 91791
626-331-5902

WEATHER RESEARCH CENTER
JOHN C. FREEMAN WEATHER MUSEUM
JILL F. HASLING, DIRECTOR
Certified Consulting Meteorologists
Worldwide Weather & Oceanographic Forecasting • Climatology • Training • Expert Testimony • Research in Meteorology & Oceanography • Wave Spectra • Software Development • The WRC Weather Museum
5104 Caroline St.
Houston, TX 77004
Phone: 713-529-3076
Fax: 713-528-3588
Website: www.wxresearch.com
E-mail: WRC@wxresearch.org

ATMOSPHERIC SYSTEMS CORPORATION
KENNETH H. UNDERWOOD, Ph.D.
Certified Consulting Meteorologist
Sodar Systems/Boundary Layer Studies • Meteorological Instruments and Systems/Meteorological Analysis • Wind Engineering Studies/Micrometeorology/Mixing Depth Studies • Acoustic Propagation/Noise Studies/Expert Testimony
24900 Anza Drive, Unit D
Santa Clarita, CA 91355
phone: 661-294-9621
fax: 661-294-9667
E-mail: ken@minisodar.com

TRC ENVIRONMENTAL CORP.
GALE F. HOFFNAGLE
DOUGLAS R. MURRAY
Certified Consulting Meteorologists
Environmental Consulting & Research • Applied Meteorology • Air Quality and Meteorological Monitoring • Diffusion Modeling • Tracer Studies • Air Toxics Monitoring • Expert Testimony
1-800-TRC-5601
Offices in major industrial centers throughout the United States

McVEHIL-MONNETT ASSOCIATES, INC.
GEORGE E. McVEHIL, Ph.D.
Certified Consulting Meteorologists
Air Quality Analysis and Monitoring • Permitting • Dispersion Modeling • Air Toxics • Meteorological Analysis • Industrial Meteorology • Litigation Support • Expert Testimony
44 Inverness Drive East
Building C
Englewood, CO 80112
303-790-1332
FAX 303-790-7820
www.mcvehil-monnett.com

APPLIED METEOROLOGY, INC.
JOHN W. HATHORN
Certified Consulting Meteorologist
Meteorological Consulting & Analysis • Air Quality Modeling & Monitoring • Site Selection & Permitting • Environmental Data Acquisition Systems & Network with Remote-Control
P.O. Box 711147
Houston, TX 77271-1147
713-995-5004
E-mail: amihou@earthlink.net

SIMPSON WEATHER ASSOCIATES, INC.
M. GARSTANG, Ph.D.
R. H. SIMPSON, Ph.D. (retired)
G. D. EMMITT, Ph.D.
Certified Consulting Meteorologists
Environmental Risk Assessment • Air Quality Modeling/Monitoring • Instrumentation Development/Deployment • Lidar simulation/application
809 E. Jefferson St.
Charlottesville, VA 22902
434-979-3571
FAX: 434-979-5599

INTERNATIONAL CENTER FOR THE SOLUTION OF ENVIRONMENTAL PROBLEMS
JOSEPH L. GOLDMAN, PH.D., TECHNICAL DIRECTOR
Certified Consulting Meteorologist
Broad Scope Assessments by Interdisciplinary Experts Worldwide • Specialize in Mesometeorological Variations • Climate Change • Problems Posed, Solutions Implemented & Demonstrated
509 North 7th Street
Alpine, TX 79830
432-837-0157
E-mail: icsep4064@sbcglobal.net

Certified Consulting Meteorologist: The certification program of the American Meteorological Society is aimed at fostering the establishment and maintenance of a high level of professional competency and mature and ethical counsel in the field of consulting meteorology. Requirements of knowledge, experience, and character are determined by a five-person board. Objectives of the program and application procedures are described in full detail in the August 2001 Bulletin (pp. 1689–1694).
### Professional Directory

**Space Reserved for Certified Consulting Meteorologists**

#### CLIMATOLOGICAL CONSULTING CORPORATION

**Lee E. Branscombe, Ph.D., President**

**Douglas A. Stewart, Ph.D.**

**Certified Consulting Meteorologists**
- Forensic Meteorology • Weather Risk Analysis
- Climate Studies • Computer Modeling of the Atmosphere

7338 155th Place North  
Palm Beach Gardens, FL 33418  
www.ccc-weather.com  
lbranscombe@ccc-weather.com

#### AEROCOMP

**Joseph A. Catalano**

**Certified Consulting Meteorologist**
- Expert Testimony • Climatological Analysis • Industrial Meteorology & Air Impact • Atmospheric Modeling • Wind & Ice Loading • Data Management Software & Services

P.O. Box 26109  
Santa Ana, CA 92799-6109  
E-mail: cm299@aerocomp.com

#### ATMOSPHERICS INCORPORATED

**Thomas J. Henderson, President**

**Certified Consulting Meteorologist**
- Weather Modification Equipment and Operations • Airborne Pyrotechnic Cloud Seeding Devices • Weather Radar Systems and Applications • General Meteorological Services

5652 E. Dayton Ave.  
Fresno, CA 93727  
559-291-5579  
E-mail: wxmod@atmos-inc.com  
Internet URL: www.atmos-inc.com

#### WILKENS WEATHER TECHNOLOGIES, L.P.

**Richard B. Wilkens, President**

**Certified Consulting Meteorologist**
- Specialists in Offshore, Energy, and Industrial Forecasting Worldwide • Hindcast and Climatological Studies • Custom Weather Graphics and Information

2925 Briarpark, 7th Floor  
Houston, TX 77042-3715  
(Toll Free) 800-503-5811  
E-mail: wwt@wilkensweather.com  
Web site: http://www.wilkensweather.com

#### FREESE-NOTIS WEATHER, INC.

**Harvey Freese, M.S.**  
**Charles Notis, M.S.**

**Certified Consulting Meteorologists**
- Worldwide Forecasts for: Agricultural & Energy Commodities • Construction • Media • Highway Departments • Forensic Meteorology • Internet Service Provider • Weather Products through Internet

2411 Grand Ave.  
Des Moines, IA 50312  
Phone: 515-262-9310  
Fax: 515-262-6832  
E-mail: hfreese@weather.net  
Internet: www.weather.net/fn/ams

#### AIR SCIENCE CONSULTANTS, INC.

**Anthony J. Sadar, M.S.**

**Certified Consulting Meteorologist**
- Forecasting Services for Industry, Government and News Media • Air Quality Modeling • Impact and Climatological Studies • Forensic Meteorology • Environmental Assessments

347 Prestley Rd.  
Bridgeville, PA 15017  
412-221-6000  
Fax: 412-221-3160  
E-mail: airsci@skywatchweather.com

#### COURTNEY CONSULTANTS, INC.

**F.E. Courtney, President**

**Certified Consulting Meteorologists**
- Meteorology, Modeling, Monitoring, Permits, Noise, Dust, Storms, Air Quality, Testimony, Accidents, Severe Weather, Forensic Meteorology, Accident Reconstruction

475 Mt. Vernon Highway  
Unit C234  
Atlanta, GA 30328  
404-256-2487

#### WEATHERDATA, INC.

**Michael R. Smith, Cofounder**  
**Stephen Pryor, Manager Research Meteorology**

**Certified Consulting Meteorologists**
- Premier Meteorological Consultants Serving All Industries • Forensic Services • Forecast Services • Expert Testimony • Exclusive Technology • Extensive Database • Comprehensive Studies

245 North Waco Ste. 310  
Wichita, KS 67202  
www.weatherdata.com  
www.stormhawk.com  
sales@weatherdata.com  
sales@stormhawk.com

#### METEREOLOGICAL APPLICATIONS

**James H. Meyer, President**

**Certified Consulting Meteorologist**
- Forensic and Applied Meteorology • Climatology & Environmental Research • Meteorological & Air Quality Instrumentation & Monitoring • Fugitive Dust & Cooling Tower Drift Studies • Expert Testimony

12928 Allerton Lane  
Silver Spring, MD 20904  
301-384-1875  
Fax: 301-879-8189

#### WEATHERNEWS

**Robert L. Cohen**

**Certified Consulting Meteorologist**
- Operational Weather Forecasts & Climatological Studies • Instrumentation • Forensic Meteorology • Optimum Ship Routing • Site Specific Wave Forecasting • Specialized Graphics

149 New Montgomery Street  
San Francisco, CA 94105  
PHONE: 415-848-5200  
4th Floor  
FAX: 415-848-5276

---

For professional card rates, please apply to:  
Executive Director, American Meteorological Society, 45 Beacon St., Boston, MA 02108-3693
Certified Consulting Meteorologist: The certification program of the American Meteorological Society is aimed at fostering the establishment and maintenance of a high level of professional competency, and mature and ethical counsel, in the field of consulting meteorology. Requirements of knowledge, experience, and character are determined by a five-person board. Objectives of the program and application procedures are described in full detail in the August 2001 Bulletin (pp. 1689–1694).
PROFESSIONAL DIRECTORY

SPACE RESERVED FOR CERTIFIED CONSULTING METEOROLOGISTS

AIR WEATHER & SEA CONDITIONS, INC.
JAY ROSENTHAL, PRESIDENT
Certified Consulting Meteorologist
Expert testimony and data analysis for legal and insurance matters
• Accident weather reconstruction • Satellite Interpretation • Air Pollution Transport • Excellent Client References • Emergency Response
P.O. Box 512
Pacific Palisades, CA 90272
Phone: 818-645-8632
310-454-7549
FAX: 310-454-7569
Website: www.weatherman.org
E-mail: AirWeather@aol.com

CARL LARRY PEABODY
Certified Consulting Meteorologist
Expert testimony and data analysis for legal and insurance matters
• Accident weather reconstruction • Satellite Interpretation • Air Pollution Transport • Excellent Client References • Emergency Response
P.O. Box 512
Pacific Palisades, CA 90272
Phone: 818-645-8632
310-454-7549
FAX: 310-454-7569
Website: www.weatherman.org
E-mail: AirWeather@aol.com

INTEGRATED ENVIRONMENTAL DATA
KATHLEEN E. MOORE, PH.D.
Certified Consulting Meteorologist
Renewable Energy • Forest & Agricultural Meteorology • Certified Forester • QA/QC Audits • Boundary Layer Studies • Sodar & Radar Profiling Analyses • Remote Sensing Studies
255 Fuller Rd.
Albany, NY 12203
kmoore@iedat.com
www.iedat.com
(518) 956-7030

MAYACAMAS WEATHER CONSULTANTS
JOHN P. MONTEVERDI, Ph.D., DIRECTOR
Certified Consulting Meteorologist
Forensic Meteorology • Climate Studies • Litigation Support • Expert Testimony • Operational Forecasts and Nowcasts
4425 View Street
Oakland, CA 94611
Phone: 510-653-4320
Fax: 510-653-4320
E-mail: montever@earthlink.net
Website: www.mayacamaswx.com

WEATHER DECISION TECHNOLOGIES, INC.
RICHARD L. CARPENTER, JR., Ph.D.
J. WILLIAM CONWAY
Certified Consulting Meteorologists
Radar Meteorology • Severe Weather Nowcasting and Analysis • Mesoscale and Microscale Numerical Modeling • Aviation Weather • Forensic Meteorology • Expert Testimony
1818 W Lindsey St., Suite D-208
Norman, OK 73072
Phone: 405-579-7675
Fax: 405-579-7642
www.wdtinc.com
www.hailtrax.com
info@wdtinc.com

ATLANTIC STATES WEATHER, INC.
STEPHEN W. HARNESS, President
Certified Consulting Meteorologist
Forensic Meteorology • Data Analysis for Legal and Insurance Investigations • Expert Testimony • Meteorological and Climatological Studies • Outdoor Event Forecasting
919-481-4020
919-481-0021 (fax)
sharned@asweather.com
www.asweather.com

ATMOSPHERIC INFORMATION SERVICES
JEFFREY M. FREEDMAN, ESQ., PH.D.
Certified Consulting Meteorologist
Applied Meteorological Research • Field Project Design and Management • Climatological Analysis • Environmental Assessments • Hydrometeorological Studies • Boundary Layer Studies • Forensic Investigations • Expert Testimony
255 Fuller Road
Suite 296
Albany, NY 12203
Phone: 518-437-8712
Fax: 518-437-8712
E-mail: jmf@atmosinfo.com
Web: www.atmosinfo.com

BIG SKY WEATHER CONSULTING
WAYNE R. SAND, Ph.D.
Certified Consulting Meteorologist
Aviation Meteorology • Forensic Meteorology • Fire Weather • Specialized Forecasting • Education
3131 Parkwood Lane
Bigfork, MT 59911-6049
Phone: 406-755-7259
Fax: 406-755-7242
E-mail: waynersand@centurytel.net

EARTH TECH, INC.
JOSEPH S. SICRE
ALFRED M. KLAUSMANN
Certified Consulting Meteorologists
Air Quality Modeling & Development • Evaluation • Permitting • Data Analysis • Air Toxics • Acid Deposition • Ozone • Complex Terrain • CALPUFF Modeling • MM5 Modeling • Expert Testimony
196 Baker Avenue
Concord, MA 01742
Phone: 978-371-4000
Fax: 978-371-2468
www.eathtech.com

TRADEWIND WEATHER
Certified Consulting Meteorologist
Worldwide Weather Forecasting & Analysis • Meteorological Consulting • Weather Risk Management • Custom Weather Graphics • GIS-Ready Weather Information • Expert Testimony
Houston, Texas
281-955-7765
E-mail: info@tradewindweather.com
Internet: www.tradewindweather.com

For professional card rates, please apply to:
Executive Director, American Meteorological Society, 45 Beacon St., Boston, MA 02108-3693
Certified Consulting Meteorologists

Air Quality Modeling & Development • Evaluation • Permitting • Data Analysis • Air Toxics • Acid Deposition • Ozone • Complex Terrain
• CALPUFF Modeling • MMS Modeling • Expert Testimony

196 Baker Avenue
Concord, MA 01742
978-371-4000
FAX: 978-371-2468

Certified Consulting Meteorologist: The certification program of the American Meteorological Society is aimed at fostering the establishment and maintenance of a high level of professional competency, and mature and ethical counsel, in the field of consulting meteorology. Requirements of knowledge, experience, and character are determined by a five-person board. Objectives of the program and application procedures are described in full detail in the August 2001 Bulletin (pp. 1689–1694).

EYEWITNESS
Evolution of the Atmospheric Sciences
by ROBERT G. FLEAGLE

Eyewitness: Evolution of the Atmospheric Sciences describes how the atmospheric sciences were transformed in the span of the author’s professional career from its origins in primitive weather forecasting to its current focus on numerical modeling of environmental change. It describes the author’s observations of persons, events, and institutions beginning with graduate study during the Second World War and moving on to continuing expansion of the atmospheric sciences and technologies, through development of a major university department, development of new scientific and professional institutions, and to the role that the science of the atmosphere now plays in climate change and other issues of social and political policy.

EYEWITNESS: EVOLUTION OF THE ATMOSPHERIC SCIENCES
ISBN 1-878220-39-X, 129 pp., hardbound, $75 list/$55 member. To place an order, submit your prepaid orders to: Order Department, AMS, 45 Beacon Street, Boston, MA 02108-3693; call 617-227-2425 to order by phone using Visa, Mastercard, or American Express; or send e-mail to amsorder@ametsoc.org. Please make checks payable to the American Meteorological Society.
WEATHER SURVEYS, INC
CONRAD B. GOSSET, M.S., FORENSIC METEOROLOGIST

Specializing in Investigations for Law Firms & Insurance Companies

32-34 Main Street 203-854-9105
Norwalk, CT 06801 Fax: 203-854-9107
Web: www.weathersurveys.com E-mail: congosset@aol.com

GEOMET TECHNOLOGIES, INC.
MARK J. STUNDER

Environmental Expert Systems, Artificial Intelligence • Air Pollution Analysis, Modeling & Monitoring • Weather Risk Management, Climatological Studies • Research and Operations

20251 Century Blvd. 301-428-9898
Germantown, MD 20874

ACCU WEATHER, INC.
JOEL N. MYERS, Ph.D., PRESIDENT
EJLIOAT ABRAMS, M.S., CCM, SENIOR VICE PRESIDENT
JOSEPH P. SOREL, Ph.D., SENIOR VICE PRESIDENT

Accurate, Custom Weather Forecasts and Warnings • Internet Content • Climatological, Forensic and Consulting Services • Complete Weather Systems and Solutions • 40 Years of Quality Service

385 Science Park Road 814-237-0309
State College, PA 16803 Fax: 814-235-8509
AccuWeather.com E-mail: intermail@accuwx.com

FLEETWEATHER, INC.
Since 1969
TORE H. JAKOBSEN, M.S., CO-OWNER

Forecasts for Weather-Sensitive Industry • Past Weather Research & Expert Testimony • Global Ship-Guidance & Surveillance • Weathercasting • Automated Weather Databases & Delivery Systems

The Fleetweather Building, 2566 Route 52 845-226-1918
Hopewell Jct., NY 12533 Fax: 845-226-8300
E-mail: info@fleetweather.com

METEOROLOGICAL EVALUATION SERVICES, CO. INC. (MES)
FRANK P. CASTELLI MARK L. KRAMER

Consulting Meteorologists Since 1968
Air-Quality Modeling and Analysis • Forensic Meteorology • Monitoring and Data Analysis • Nuclear and Industrial Permitting Studies

165 Broadway 631-691-3395
Amityville, NY 11701 E-mail: info@mesamity.com

CONNECTICUT WEATHER CENTER, INC.
WILLIAM JAQUEMIN, CHIEF METEOROLOGIST, PRESIDENT

PROFESSIONAL SERVICES: Weather Forecasting for Media, Utilities, Industry, Ski Areas, Government, Educational Svcs, and Insurance/Lawyer Reports

18 Woodside Avenue Phone: 203-730-CTWX (2899)
Danbury, CT 06810-7123 Fax: 203-730-CTFX (2839)
Web site: www.ctweather.com E-mail: weatherlab@ctweather.com

FOX WEATHER
ALAN FOX, DIRECTOR

Satellite Analyses • Remote Sensing Studies • Site Forecasts • Extended Outlooks • Quantitative Precipitation Forecasts, Product Delivery via Internet

662 Main Street 805-469-1368
Fortuna, CA 95540 Fax: 707-725-9380

SECO R INTERNATIONAL
INCORPORATED
STEPHEN R. ANDERSEN
Sims E. Duggins
THOMAS A. DAMIANA

Meteorological and Air Quality Measurements • Dispersion Modeling • Boundary Layer Studies • Data Analysis • Air Quality Permitting • Control Engineering • Emissions Measurements

4700 McMurray Dr., Suite 101 970-226-4040
Ft. Collins, CO 80525 Fax: 970-226-4099

R. M. YOUNG COMPANY

Meteorological Instruments since 1964

Sensors to Measure: Wind Speed • Wind Direction • Peak Gusts • Temperature • Pressure • Relative Humidity • Precipitation

2801 Aero-Park Drive 231-946-3980
Traverse City, Michigan 49686 Fax: 231-946-4772
www.youngusa.com

METEO CONSULT
HARRY A. OTTEN, MANAGING DIRECTOR
MAARTEN NOORT, DIRECTOR

Worldwide Forecasting • Media • Marine (legally recognized in Dutch law) • Leading Experts in Winter Road Maintenance • Agriculture • Data • Software • Research and Consulting • Lightning Data

P.O. Box 617 31 317 399800
6700 AP Wageningen 31 317 423164
The Netherlands Fax: 31 317 423164

For professional card rates, please apply to:
Executive Director, American Meteorological Society, 45 Beacon St., Boston, MA 02108-3693
WEATHERBANK, INC.
STEVEN A. ROOT, CCM
President/CEO
Operational Forecasting • Broadcast Services • Forensic Studies • Real-Time and Historical Weather Databases • Satellite Transmission Network • Weather/Air Quality Monitoring and Climatological Studies
More Than 35 Years of Providing Quality Service
1015 Waterwood Parkway, Suite J
Edmond, Oklahoma 73034
405-359-0773
Fax: 405-341-0115
www.weatherbank.com

SONALYSTS, INC.
RIP COLEMAN
KATHY LUCAS
Executive Vice President/CFO
wXstation® Weather Display and Analysis Software
Integrated display of worldwide satellite imagery, radar, lightning, GRIB, aircraft positions, and text weather from multiple sources. Software development, systems integration, training, installation, and maintenance.
215 Parkway North
P.O. Box 280
Waterford, CT 06385
Phone: 860-442-4355
Fax: 860-447-8883
Web: www.sonalysts.com

WEATHER CENTRAL INC.
Weather Central empowers broadcasters to attract and connect with viewers through highly local forecasts and severe weather coverage. Our solutions advance the business objectives of the broadcast, online, and print industries. Our clients dominate their markets with the best technology available.
5725 Tokay Boulevard
Madison, WI 53719
Phone: 608-274-5789
Fax: 608-278-2746
URL: www.weathercentral.tv
E-mail: sales@weathercentral.tv

D J GILE, INC.
METEOROLOGICAL & AIR QUALITY CONSULTING
Meteorological & Air Quality Monitoring • Turnkey Program Development • Worldwide Services • Environmental Auditing • Quality Assurance Program Development • Customized Data Acquisition & Software Programming • Data Management & Reporting
P. O. Box 706
Kennebunkport, ME 04046
Internet: www.djgile.com
Phone: 207-967-5286
Fax: 207-967-4107
E-mail: solutions@djgile.com

ALTOSTRATUS, INC.
HAIDER TAHHA, Ph.D., PRESIDENT
Meteorological modeling • Photochemical and dispersion modeling • Regulatory modeling for ozone and PM • Fine-resolution urban meteorological modeling • Aerometric data analysis • Weather derivatives and applied meteorology
940 Toulouse Way
Martinez, CA 94553
Phone: 925-228-1573
Fax: 925-228-8473
URL: www.altostratus.com
E-mail: haider@altostratus.com

For professional card rates, please apply to:
Executive Director, American Meteorological Society, 45 Beacon St., Boston, MA 02108-3693
## TABLES OF CONTENTS FOR AMS JOURNALS

### Monthly Weather Review
Vol. 134, No. 7, July 2006

### ARTICLES

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object-Based Verification of Precipitation Forecasts. Part I: Methodology and Application to Mesoscale Rain Areas</td>
<td>Christopher Davis, Barbara Brown, and Randy Bullock</td>
<td>1772–1784</td>
</tr>
<tr>
<td>Object-Based Verification of Precipitation Forecasts. Part II: Application to Convective Rain Systems</td>
<td>Christopher Davis, Barbara Brown, and Randy Bullock</td>
<td>1785–1795</td>
</tr>
<tr>
<td>The Multiple-Vortex Nature of Tropical Cyclogenesis</td>
<td>Jason A. Sippel, John W. Nielsen-Gammon, and Stephen E. Allen</td>
<td>1796–1814</td>
</tr>
<tr>
<td>A Multiwinter Analysis of Channeled Flow through a Prominent Gap along the Northern California Coast during CALJET and PACJET</td>
<td>Paul J. Neiman, F. Martin Ralph, Allen B. White, David D. Parrish, John S. Holloway, and Diana L. Bartels</td>
<td>1815–1841</td>
</tr>
<tr>
<td>Boundary Layer and Microphysical Influences of Natural Cloud Seeding on a Lake-Effect Snowstorm</td>
<td>Joshua J. Schroeder, David A. R. Kristovich, and Mark R. Hielmfelt</td>
<td>1842–1858</td>
</tr>
<tr>
<td>Improving Seasonal Forecasting in the Low Latitudes</td>
<td>Heiko Paeth, Robin Girmes, Gunter Menz, and Andreas Hense</td>
<td>1859–1879</td>
</tr>
<tr>
<td>Intercomparison of Bulk Cloud Microphysics Schemes in Mesoscale Simulations of Springtime Arctic Mixed-Phase Stratiform Clouds</td>
<td>H. Morrison and J. O. Pinto</td>
<td>1880–1900</td>
</tr>
<tr>
<td>A Modeling Study of Hurricane Landfall in a Dry Environment</td>
<td>Sytske K. Kimball</td>
<td>1901–1918</td>
</tr>
<tr>
<td>The Interaction of Simulated Squall Lines with Idealized Mountain Ridges</td>
<td>Jeffrey Frame and Paul Markowski</td>
<td>1919–1941</td>
</tr>
<tr>
<td>Dimension Characteristics and Precipitation Efficiency of Cumulonimbus Clouds in the Region Far South from the Mei-Yu Front over the Eastern Asian Continent</td>
<td>Yukari Shusse and Kazuhisa Tsuboki</td>
<td>1942–1953</td>
</tr>
<tr>
<td>The NCAR CCM as a Numerical Weather Prediction Model</td>
<td>Steven Cocke, Hee-Sang Lee, Gyu-Ho Lim, and Chun-Woo Lee</td>
<td>1954–1971</td>
</tr>
<tr>
<td>Short-Range and Medium-Range Weather Forecasting in the Extratropics during Wintertime with and without an Interactive Ocean</td>
<td>Thomas Jung and Frederic Vitart</td>
<td>1972–1986</td>
</tr>
</tbody>
</table>

### NOTES AND CORRESPONDENCE

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Impact of Satellite-Derived Atmospheric Motion Vectors on Mesoscale Forecasts over Hawaii</td>
<td>T. Cherubini, S. Businger, C. Velden, and R. Ogasawara</td>
<td>2009–2020</td>
</tr>
<tr>
<td>Reply</td>
<td>Joon-Hee Jung and Akio Arakawa</td>
<td>2027–2029</td>
</tr>
</tbody>
</table>