

Brief Bibliography

SNOWSTORMS



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SNOWSTORMS

Snowstorms cause, directly or indirectly, an average of more than 100 deaths a year in the United States. During just one of the colder months from November to March, it is not uncommon for up to eight separate storms to affect some area across the continent. The sudden and often sporadic appearances of lake-effect squalls in the lee of Lakes Erie and Ontario are legendary, and winter storms along the East Coast occasionally surprise the Atlantic megapolis with paralyzing storms.

NOAA is moving rapidly to modernize its weather service. In particular, the development and implementation of a broad array of remote-sensing technologies will increase the accuracy of weather forecasts and provide for earlier warnings of severe storms.

This selective bibliography covers a wide array of published materials on snowstorms, from descriptive and general to technical and analytical. Most of the items listed are contained in the NOAA library. Questions about this material should be addressed to the Reference Desk, NOAA Central Library, 6009 Executive Blvd., Rockville, MD 20852, or call (301) 443-8330.

I. "Record " Snowstorms

1. Record Texas snowstorm.

Beckman, Samuel K. NESS, Satellite Field Serv. Station, Kansas City, MO.

United States National Weather Service. National Environmental Satellite Service, Satellite Applications Information Note 78/7, 7 p., 1978.

2. Presidents' day snowstorm of 18-19 February 1979: a subsynoptic-scale event.

Bosart, Lance F. Dept. of Atmos. Sci., State Univ. of N.Y. at Albany. Monthly Weather Review, Boston, 109(7): 1542-1566, July 1981.

3. Great blizzard of '88.

Brandt, N.

American Heritage, N.Y., 28(2): 33-41, Feb. 1977.

4. Storm of February 6-7, 1980.

D'Aleo, Joseph S.; Andre Bernier. Weather Channel, Atlanta, GA.

National Weather Digest, Temple Hills, MD., 8(3): 28-41, Aug. 1983.

5. Classic lake-effect snowstorm at Buffalo, New York, on 15 November 1974.

Dietz, Gregory C.; Benjamin Kolker. Natl. Weather Serv. Forecast Off., Buffalo, N.Y.

Weatherwise, Boston, 28(5): 205-207, Oct. 1975.

6. Blizzard of '78.

Fair, Thomas; David M. Feit. Natl. Weather Serv., NOAA, Boston, MA.

Mariners Weather Log, Wash., D.C., 22(4): 255-260, July 1978.

7. Great Upper Plains blizzard of January 1975.

Graff, John V.; Joseph H. Strub. Natl. Weather Serv. Forecast Office, NOAA, Minneapolis, MN.

Weatherwise, Boston, 28(2):66-69, April 1975.

8. Great snow in the Southeast in February 1973.

Weatherwise, Boston, 26(2):74-77, 84, April 1973.

9. Great snowstorm of February 1973 over Georgia.

Harms, Rheinhart W. Weather Serv. Forecast Off., NOAA, Atlanta, GA.

Weatherwise, Boston, 27(5):192-198, Oct. 1974.

10. Blizzard of '88.

Hughes, P.

Weatherwise, Wash., D.C., 34(6): 250-256, Dec. 1981.

11. Northeast blizzard of '78, February 5-7, 1978: a report to the administrator.

United States National Oceanic and Atmospheric Administration, Rockville, MD.

Its Natural Disaster Survey Report 78-1, Sept. 1978. 61 p.

12. White death - blizzard of '77.

Rossi, E.

Port Colborne, Ontario: 77 Publishing, 356 p., 1978.

13. **Profiling Colorado's Christmas Eve blizzard.**
Schlatter, Thomas W.; Donald V. Baker and John F. Henz. Program for Regional Observing and Forecasting Serv., NOAA Environ. Resources Lab., Boulder, CO.; Littleton, CO.
Weatherwise, Wash., D.C., 36(2): 60-66, April 1983.
14. **Halloween blizzard of 1979.**
Schultz, Larry W. Natl. Weather Serv., Topeka, KS.
National Weather Digest, Marlow Heights, MD., 5(4): 3-16, Nov. 1980.

II. General Works

1. **Climatology of severe winter storms.**
Changnon, S. A.
Urbana, IL: Illinois State Water Survey, 45 p., 1969.
2. **Record winter storms in Illinois, 1977-1978.**
Changnon, Stanley A., Jr.; David Changnon.
Water Survey, Urbana, IL. Report on Investigation, No. 88,
23 p., 1978.
3. **Winter storms and the record-breaking winter in Illinois.**
Changnon, Stanley A., Jr.; David Changnon. State Water Survey, Urbana, IL
Weatherwise, Wash., D.C., 31(6): 218-225, Dec. 1978.
4. **Survey of major East Coast snowstorms, 1960-1983. Part 1: Summary of surface and upperlevel characteristics. Part 2: Case studies of eighteen storms.**
Kocin, P. J. and L. W. Uccellini
Greenbelt, MD: NASA/Goddard Space Flight Center, NASA TM-86195 and TM-86196), 1985.
5. **Summary of the Blizzard of '88 Centennial Meeting.**
Kramer, M. L.; G. Solomon
American Meteorological Society, Boston, Bulletin, 69(8):981-983,
Aug. 1988.
6. **Notes on National Weather Analysis Center conference, October 31, 1955; Discussion of East Coast snowstorms.**
Lennahan, C. M. (comp.)
Washington, D.C., 27p., 1956.
7. **A hundred years of Boston snowstorms.**
Ludlum, David M.
Weatherwise, Boston, 22(2):72-75, April 1969.
8. **Significant snow storms, Northeastern United States.**
Stamos, G. J. Weather Services Corporation, Bedford, MA.
Bedford, MA: Weather Services Corporation, 1978.

III. Snowstorm Forecasting

1. **Snow forecasting in the South: occasional blizzards over the Southern Plains to rare Gulf Coast snows.**
Conner, W. Clyde; Kenneth C. Crawford and Eulah L. Hill. NOAA, Natl. Weather Serv., New Orleans, LA.
Weatherwise, Boston, 26(6):244-249, Dec. 1973.

2. **Dreaming of a white Christmas.**
Cook, David R. Atmos. Phys. Program, Argonne Natl. Lab., Chicago, IL.
Weatherwise, Wash., D.C., 39(6): 308-310, Dec. 1986.
3. **Lake Erie induced mesosystems: an operational forecast model.**
Dewey, K. F. Climatol. Program, Univ. of NB., Lincoln.
Monthly Weather Review, Boston, 107(4):421-425, April 1979.
4. **Decision tree for snow-/heavy snow in west Texas.**
National Weather Digest, 14(4):19, November 1989.
5. **Classification and prediction of snowstorm severity.**
Dovico, William W. Natl. Weather Serv., Allentown, Pa.
National Weather Digest, Temple Hills, MD., 10(2): 31-38, May 1985.
6. **Snow forecasting for southeastern Wisconsin.**
Harms, Rheinhard W. Natl. Weather Serv., Atlanta, GA.
Weatherwise, Boston, 26(6):250-255, Dec. 1973.
7. **Man and machine forecast big snow.**
Kerr, Richard A.
Science, Wash., D.C., 235(4795): 1460-1461, March 20, 1987.
8. **Mesoscale numerical forecast of an intense convective snowburst along the East Coast.**
Kocin, Paul J. Goddard Lab. for Atmospheres, NASA/Goddard Space Flt. Ctr., Greenbelt, MD.
American Meteorological Society, Boston, Bulletin, 66(11): 1412-1424, Nov. 1985.
9. **Operational forecasting of lake effect snowfall in western and central New York.**
Niziol, Thomas A. NOAA, NWS Forecast Off., Buffalo, NY.
Weather and Forecasting, Boston, 2(4): 310-321, Dec. 1987.
10. **Forecast of explosive coastal cyclogenesis.**
Orlanski, I. and J. Katzfey. Geophys. Fluid Dynamics Lab./NOAA, Princeton Univ., N.J.
World Climate Research Programme, Geneva, Report No. 9, p. 5.7-5. 10. (WMO/TD- No. 141), Sept. 1986.
11. **Use of satellite data in East Coast snowstorm forecasting.**
Parmenter, Frances C.
United States National Oceanic and Atmospheric Administration, National Environmental Satellite Service, Technical Memorandum (NOAA TM NESS 33), 21 p., Feb. 1972.
12. **National Weather Service heavy snow forecast verification, 1962-1972.**
Sadowski, Alexander F.; Geraldine F. Cobb
United States National Oceanic and Atmospheric Administration. National Weather Service, Silver Spring, MD., Technical Memorandum (NOAA-NWS-FCST-20), 29 p., Jan. 1974.
13. **Snow prediction in the eastern United States.**
Spar, J. et al. Dept. of Meteorology and Oceanography, New York Univ. University Heights, N.Y.: New York University, 81 p., 1970.

IV. Snowstorm Measurement and Analysis

1. **Snowfall rates obtained from radar reflectivity within a 50 km range.**
Boucher, R. J.
Hanscom AFB, MA: Meteorology Division, Air Force Geophysics Laboratory, 25 p., 1981.
2. **Similar cases of cold air cyclogenesis and heavy snowfall just east of the Rockies and Appalachians.**
Brody, Frank. Natl. Weather Serv., Natl. Met. Ctr., Camp Springs, MD.
National Weather Digest, Temple Hills, MD., 10(2): 22-25, May 1985.
3. **Great Salt Lake effect snowfall: Some notes and an example.**
Carpenter, D. M. National Weather Service, Salt Lake City, UT.
Western Region.
Salt Lake City, UT: NOAA, NWS, Western Region, NOAA-TM-NWS-WR-190, 25p., Oct. 1985.
4. **Circulation analysis of two snowstorms during the SNOW-TWO program. Technical Rept. 16 Jan-31 Aug. 84.**
Chen Y. L.
Hanscom AFB, MA: Air Force Geophysics Lab., 80 p., Sep. 1984
5. **Thunderstorms with snow: a comprehensive, empirical study of their occurrence, development and structure. Master's thesis.**
Elkins, H. A.
Wright-Patterson AFB, OH: Air Force Inst. of Tech., 91 p., 1987.
6. **Application of the 4-D McIDAS to a model diagnostic study of the President's Day Cyclone.**
Hibbard, W. et al.
American Meteorological Society, Boston, Bulletin, 70(11):1394-1403, Nov. 1989.
7. **Snow squalls in the lee of Lake Erie and Lake Ontario: a review of the literature.**
Hill, Jerry D. Weather Serv. Off. For Agric., Lexington, Ky.
U. S. National Oceanic and Atmospheric Administration, National Weather Service, Technical Memorandum (NOAA-TM-NWS-ER 43), 20 p., Aug. 1971.
8. **Numerical sensitivity study of the morphology of lake-effect snow storms over Lake Michigan.**
Hjelmfelt, M. Natl. Ctr. for Atmos. Res., Boulder, CO.
Annalen der Meteorologie, Offenbach a./M., n.s., No. 25, 1988. Vol. 2, p. 413-415.
9. **Mesoscale lake-effect snowstorms in the vicinity of Lake Michigan: linear theory and numerical simulations.**
Hsu, Hsiao-Ming Natl. Ctr. for Atmos. Res., Boulder, CO.
Journal of the Atmospheric Sciences, Boston, 44(7): 1019-1040, April 1, 1987.
10. **Snowfall properties of Lake Erie and Ontario storms.**
Jiusto, James E. and Michael L. Kaplan State Univ. of N. Y., Albany;
Eastern Snow Conference, 28th, Fredericton, N. B., Canada, Feb. 4-5, 1971, Proceedings. [1971]. p. 17-24.

11. **Single Doppler radar study of horizontal-roll convection in a lake-effect snowstorm.**
Kelly, Robert D. Cloud Phys. Lab., Univ. of Chicago, IL.
Journal of the Atmospheric Sciences, Boston, 39(7): 1521-1531, July 1982.
12. **Meteorological analysis of the March 1888 Blizzard of '88**
Kocin, Paul J. Lab. for Atmospheres, NASA/Goddard Space Flt. Ctr., Greenbelt, MD.
American Geophysical Union, Wash., D.C., EOS: Transactions, 69(10): 137, 146, 147, March 8, 1988.
13. **Investigations of lake-effect storms.**
Lavoie, R. L. and et al. Dept. of Meteorology, Pennsylvania State University.
University Park, PA, 127 p., 1970
14. **Role of frontogenetical forcing and conditional symmetric instability in the midwest snowstorm of 30-31 January 1982.**
Moore, James T.; Pamela D. Blakley Dept. of Earth and Atmos. Sci., Saint Louis Univ., MO.
Monthly Weather Review, Boston, 116(11): 2155-2171, Nov. 1988.
15. **Evaluation of SNOTEL data during January 9-16, 1980, storm in the Tahoe-Truckee basins.**
Moreland, Ronald E. USDA, Soil Conservation Serv., Reno, NV.
Western Snow Conference, Annual Meeting, 49th, St. George, Utah, April 14-16, 1981, Proceedings. Ft. Collins, CO., Colorado State Univ. p. 105-115, 1981.
16. **Role of the winter land breeze in the formation of Great Lake snow storms.**
Passarelli, Richard E., Jr.; Roscoe R., Jr Braham. Dept. of Geophys. Sci., Univ. of Chicago, IL.
American Meteorological Society, Boston, Bulletin, 62(4): 482-491, April 1981.
17. **Synoptic analysis of the 25-26 January 1978 blizzard cyclone in the central United States.**
Salmon, Ellen M.; Phillip J. Smith. Dept. of Geosci., Purdue Univ., W. Lafayette, IN.
American Meteorological Society, Boston, Bulletin, 61(5): 453-460, May 1980.
18. **Frontogenesis and symmetric stability in major New England snowstorm.**
Sanders, Frederick.
Monthly Weather Review, Boston, 114(10): 1847-1862, Oct. 1986.
19. **Mesoscale structure in the megalopolitan snowstorm of 11-12 February 1983, Pt. 1, Frontogenetical forcing and symmetric instability.**
Sanders, Frederick and Lance F. Bosart. Ctr. for Met. and Physical Ocean., MIT, Cambridge; Dept. of Atmos. Sci., State Univ. of N.Y., Albany.
Journal of the Atmospheric Sciences, Boston, 42(10): 1050-1061, May 1985.

20. **Mesoscale structure in the megalopolitan snowstorm of 11-12 February 1983, Pt. 2, Doppler radar study of the New England snowband.**
Sanders, Frederick; Lance F. Bosart. Ctr. for Met. and Physical Ocean., MIT, Cambridge; Dept. of Atmos. Sci., State Univ. of N.Y., Albany.
Journal of the Atmospheric Sciences, Boston, 42(13): 1398-1407, July 1, 1985.
21. **Presidents' Day cyclone of 18-19 February 1979: synoptic overview and analysis of the subtropical jet streak influencing the precyclogenetic period.**
Uccellini, Louis W. Goddard Lab. for Atmos. Sci., NASA/Goddard Space Flt. Ctr., Greenbelt, MD.
Monthly Weather Review, Boston, 112(1): 31-55, Jan. 1984.
22. **Numerical model-based diagnostic study of the initial development phase of the Presidents' Day cyclone.**
Uccellini, Louis W.; Keith F. Brill and Paul J. Kocin. Lab. for Atmospheres, NASA/Goddard Space Flt. Ctr., Greenbelt, MD.; General Sci. Corp., Laurel; Lab. for Atmospheres.
In: Seminar on the Nature and Prediction of Extra Tropical Weather Systems, ECMWF, Reading, Eng., Sept. 7-11, 1987, Proceedings. Reading, Eng., European Centre for Medium-Range Weather Forecasts, March 1988. Vol. 1, p. 93-121.
23. **Interaction of jet streak circulations during heavy snow events along the East Coast of the United States.**
Uccellini, Louis W.; Paul J. Kocin. Lab. for Atmospheres, NASA/Goddard Space Flt. Ctr., Greenbelt, MD.
Weather and Forecasting, Boston, 2(4): 289-308, Dec. 1987.