

# Edward N. Lorenz Papers

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LC Online Catalog record:

<http://lcn.loc.gov/mm2008085426>

Prepared by Joseph K. Brooks with the assistance of Brian McGuire and Jewel McPherson

## Collection Summary

**Title:** Edward N. Lorenz Papers

**Span Dates:** circa 1895-2009

**Bulk Dates:** (bulk 1942-1991)

**ID No.:** MSS85426

**Creator:** Lorenz, Edward N.

**Extent:** 15,000 items ; 44 containers plus 12 oversize, 1 artifact, and electronic files ; 17.6 linear feet ; 1 microfilm reel

**Language:** Collection material in English

**Location:** Manuscript Division, Library of Congress, Washington, D.C.

**Summary:** Meteorologist and mathematician. Correspondence, articles, scientific papers, computer printouts, computer graphics, book files, speeches and presentations, photographs, military records, subject files, printed matter, electronic files, and miscellaneous material documenting Lorenz's activities as a meteorology professor and discovery of deterministic chaos.

## Selected Search Terms

The following terms have been used to index the description of this collection in the Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

### People

Arakawa, Hidetoshi, 1907-1984--Correspondence.  
Blackmon, Maurice L., 1940-2012--Correspondence.  
Blumen, William, 1931-2002--Correspondence.  
Brier, Glenn W. (Glenn Wilson), 1913- --Correspondence.  
Chelam, E. V.--Correspondence.  
Craig, Richard A.--Correspondence.  
Davies, D. A.--Correspondence.  
Davies, Thomas Vivian--Correspondence.  
Dutton, John A. (John Altnow)--Correspondence.  
Enger, Isadore--Correspondence.  
Firor, John--Correspondence.  
Gates, W. Lawrence (William Lawrence), 1928- --Correspondence.  
Ghil, Michael--Correspondence.  
Gleick, James--Correspondence.  
Hare, F. Kenneth (Frederick Kenneth), 1919- --Correspondence.  
Held, Isaac M., 1948- --Correspondence.  
Houghton, Henry G.--Correspondence.  
Jordan, Charles L. (Charles Lemuel), 1922- --Correspondence.  
Kelley, Elizabeth A.--Correspondence.  
Klein, William H., 1919- --Correspondence.  
Kraus, E. B. (Eric Bradshaw), 1913- --Correspondence.  
Leith, Cecil E., 1923-- --Correspondence.  
Lorenz, Edward N.  
MacDonald, Gordon J. (Gordon James), 1929-2002--Correspondence.  
Malone, Thomas F.--Correspondence.  
Mintz, Yale--Correspondence.  
Muench, H. Stuart--Correspondence.  
Nordø, Jack, 1923- --Correspondence.  
Peixoto, José Pinto--Correspondence.  
Rasool, S. I., 1933- --Correspondence.  
Roberts, Walter Orr--Correspondence.  
Schereschewsky, P. L.--Correspondence.  
Sellers, William D.--Correspondence.

Shorr, Bernard--Correspondence.  
Smagorinsky, J. (Joseph)--Correspondence.  
Spengler, Kenneth C., 1915-2010--Correspondence.  
Thompson, Philip Duncan--Correspondence.  
Trenberth, Kevin E.--Correspondence.  
Yorke, James A.--Correspondence.

### **Organizations**

Massachusetts Institute of Technology.  
United States. Army Air Forces.

### **Subjects**

Chaotic behavior in systems.  
Climatology--Data processing.  
Climatology--Mathematical models.  
Deterministic chaos.  
Long-range weather forecasting.  
Meteorology in aeronautics.  
Meteorology--Data processing.  
Meteorology.  
Numerical weather forecasting.  
Weather forecasting.

### **Occupations**

Educators.  
Mathematicians.  
Meteorologists.

## **Administrative Information**

### **Provenance**

The papers of Edward N. Lorenz, meteorologist and mathematician, were given to the Library of Congress by his children, Cheryl A. Lorenz, Nancy J. Lorenz, and Edward H. Lorenz, in 2008, and by Kerry A. Emanuel in 2009.

### **Transfers**

Items have been transferred from the Manuscript Division to other custodial divisions of the Library. Some photographic slides and posters have been transferred to the Prints and Photographs Division. Audiocassettes, VCR tapes, and a phonograph record have been transferred to the Motion Picture, Broadcasting, and Recorded Sound Division. All transfers are identified in these divisions as part of the Edward N. Lorenz Papers.

### **Copyright Status**

The status of copyright in the unpublished writings of Edward N. Lorenz is governed by the Copyright Law of the United States (Title 17, U.S.C.)

### **Access and Restrictions**

The papers of Edward N. Lorenz are open to research. Researchers are advised to contact the Manuscript Division Reading Room prior to visiting. Many collections are stored off-site and advance notice is needed to retrieve these items for research use.

### **Electronic Format**

Electronic files were received as part of the papers of Edward N. Lorenz. Consult reference staff in the Manuscript Division for more information.

## Microfilm

Microfilm on one reel was received as part of the papers of Edward N. Lorenz and is listed and described in this finding aid. This microfilm is not available for interlibrary loan.

## Preferred Citation

Researchers wishing to cite this collection should include the following information: Container or reel number, Edward N. Lorenz Papers, Manuscript Division, Library of Congress, Washington, D. C.

## Biographical Note

<i>Date</i>	<i>Event</i>
1917, May 23	Born, West Hartford, Conn.
1938	A.B. in mathematics, Dartmouth College, Hanover, N.H.
1940	A.M. in mathematics, Harvard University, Cambridge, Mass.
1942-1946	Weather forecaster, United States Army Air Forces
1948	Sc.D in meteorology, Massachusetts Institute of Technology, Cambridge, Mass. Married Jane Loban
1955-1956	Assistant professor of meteorology, Massachusetts Institute of Technology, Cambridge, Mass.
1961	Discovered deterministic chaos while working with computer models of weather systems
1956-1962	Associate professor of meteorology, Massachusetts Institute of Technology, Cambridge, Mass.
1962-1987	Professor of meteorology, Massachusetts Institute of Technology, Cambridge, Mass.
1977-1981	Head, Department of Meteorology and Physical Oceanography, Massachusetts Institute of Technology, Cambridge, Mass.
1981-1987	Emeritus status, Massachusetts Institute of Technology, Cambridge, Mass.
1983	Awarded Crafoord Prize, Stockholm, Sweden
1987	Retired, Massachusetts Institute of Technology, Cambridge, Mass.
1991	Awarded Kyoto Prize, Kyoto, Japan
2008, Apr. 16	Died, Cambridge, Mass.

## Scope and Content Note

The papers of Edward Norton Lorenz (1917-2008) span circa 1895-2009 with the bulk of the collection dating from 1942 to 1991. Lorenz's early academic background was in mathematics, but during World War II he trained as a meteorologist with the United States Army Air Forces and continued in that profession through a long career at the Massachusetts Institute of Technology, where he eventually rose to head the Department of Meteorology and Physical Oceanography. Late in 1961, while working with computer models of weather systems, he had the insight that led to his promulgation of the

deterministic chaos theory that had a profound effect on the physical sciences and other fields such as economics. The papers are arranged in eight series: [Correspondence](#), [Science File](#), [Organizations](#), [Speeches and Writings](#), [Miscellany](#), [Oversize](#), [Artifact](#), and [Electronic File](#).

Much of the [Correspondence](#) series is the product of the Massachusetts Institute of Technology meteorology department or of projects Lorenz managed under the aegis of the department, so correspondence, especially in the earlier years, is sometimes between parties other than Lorenz. Much of the Correspondence relates to professional tasks such as organizing conferences, job recommendations for students and colleagues, speaking engagements and professional travel, requests for reprints of papers, and personnel matters. Topics covered in the correspondence include chaos theory, computer programming for weather and climate modeling, long-range weather prediction, and numerically based weather forecasting. Correspondents include Hidetoshi Arakawa, Maurice L. Blackmon, William Blumen, Glenn W. Brier, E. V. Chelam, Richard A. Craig, D. A. Davies, Thomas Vivian Davies, John A. Dutton, Isadore Enger, John Firor, W. Lawrence Gates, Michael Ghil, James Gleick, F. Kenneth Hare, Isaac M. Held, Henry G. Houghton, Charles L. Jordan, Elizabeth A. Kelley, William H. Klein, E. B. Kraus, Cecil E. Leith, Gordon J. MacDonald, Thomas F. Malone, Yale Mintz, H. Stuart Muench, Jack Nordø, José Pinto Peixoto, S. I. Rasool, Walter Orr Roberts, P. L. Schereschewsy, William D. Sellers, Bernard Shorr, J. Smagorinsky, Kenneth C. Spengler, Philip Duncan Thompson, Kevin E. Trenberth, and James A. Yorke.

The [Science File](#) includes chart records and computer readouts documenting Lorenz's discovery of the chaos phenomenon in which infinitesimal differences in data inputs yield wildly divergent results in the predictions of the behavior of chaotic systems such as the weather. He proved that accurate weather forecasting outside of a small time increment, perhaps as narrow as one week, was impossible even with constantly improving measuring and computer technology.

The [Organizations](#) series documents Lorenz's early experiences as a weather forecaster in the Army Air Forces and his career at the Massachusetts Institute of Technology. The [Miscellany](#) includes biographical material and files relating to his awards including the Crafoord and Kyoto prizes.

## Arrangement of the Papers

The collection is arranged in eight series:

- [Correspondence, 1952-2009](#)
- [Science File, 1961-1996](#)
- [Organizations, 1942-2003](#)
- [Speeches and Writings, 1941-2007](#)
- [Miscellany, circa 1895-2008](#)
- [Oversize, 1937-2008](#)
- [Artifact, circa 1961](#)
- [Electronic File, 1985-2009](#)

## Description of Series

<i>Container</i>	<i>Series</i>
BOX 1-13	<p><b><u>Correspondence, 1952-2009</u></b></p> <p>Professional and personal correspondence.</p> <p>Arranged in three groupings: professional, general, and postcard and greeting card files, the professional file in reverse chronological order and the general correspondence and postcard and greeting card files are in regular chronological order.</p>
BOX 14-15	<p><b><u>Science File, 1961-1996</u></b></p> <p>Computer printouts, computer graphics, computer programs, chart records, drawings, conference material, printed matter, notes, photographs, and miscellaneous material.</p> <p>Arranged alphabetically by type of material or topic.</p>
BOX 15-18	<p><b><u>Organizations, 1942-2003</u></b></p> <p>Military personnel records, subject files, contracts, proposals, teaching files, printed matter, material relating to World War II reunions, and miscellaneous material.</p> <p>Arranged alphabetically by name of organization.</p>
BOX 19-39	<p><b><u>Speeches and Writings, 1941-2007</u></b></p> <p>Articles, scientific papers, book files, speech files, overhead and slide presentations, reviews, and bibliographies.</p> <p>Arranged alphabetically by type of material.</p>
BOX 39-44	<p><b><u>Miscellany, circa 1895-2008</u></b></p> <p>Awards, biographical material, photographs, printed matter, high school yearbook and other material relating to Lorenz's grade school and undergraduate education.</p> <p>Arranged alphabetically by type of material or topic.</p>
BOX OV 1-OV 13	<p><b><u>Oversize, 1937-2008</u></b></p> <p>Awards, card indexes, computer graphics, computer printouts, chart records, photographs, and poster.</p> <p>Arranged and described according to the series, containers, and folders from which the material was removed.</p>
BOX VA 1	<p><b><u>Artifact, circa 1961</u></b></p> <p>Chart record.</p> <p>Arranged and described according to the series, containers, and folders from which the item was removed.</p>
BOX EF	<p><b><u>Electronic File, 1985-2009</u></b></p> <p>Computer files.</p> <p>Unprocessed and unavailable.</p>

# Container List

<i>Container</i>	<i>Contents</i>
<b>BOX 1-13</b>	<b>Correspondence, 1952-2009</b> Professional and personal correspondence. Arranged in three groupings: professional, general, and postcard and greeting card files, the professional file in reverse chronological order and the general correspondence and postcard and greeting card files are in regular chronological order.
<b>BOX 1</b>	Professional 1952-1963 (5 folders)
<b>BOX 2</b>	1964-1969 (7 folders)
<b>BOX 3</b>	1971-1970 (6 folders)
<b>BOX 4</b>	1974-1977 (6 folders)
<b>BOX 5</b>	1978-1982 (9 folders)
<b>BOX 6</b>	1983-1984 (6 folders)
<b>BOX 7</b>	1985-1986 (5 folders) 1987 (2 folders)
<b>BOX 8</b>	(1 folder) 1988-1989 (4 folders) 1990 (1 folder)
<b>BOX 9</b>	(1 folder) 1991 (2 folders) 1992 (2 folders)
<b>BOX 10</b>	(1 folder) 1993-1994 (5 folders) 1995 (1 folder)
<b>BOX 11</b>	(1 folder) 1996-2003 (6 folders)
<b>BOX 12</b>	2004-2009 (5 folders)

## Correspondence, 1952-2009

<i>Container</i>	<i>Contents</i>
BOX 13	General, 1955-2008, undated (3 folders) Postcards and greeting cards, 1957-2008, undated (2 folders)
BOX 14-15	<b>Science File, 1961-1996</b> Computer printouts, computer graphics, computer programs, chart records, drawings, conference material, printed matter, notes, photographs, and miscellaneous material. Arranged alphabetically by type of material or topic.
BOX 14	Computer graphics, chart records, and drawings Miscellaneous, 1979-1991, undated <i>See also Oversize</i> (2 folders) Moist model runs, 1981 "Chaos 25 Years Ago," chart record, circa 1961 <i>See Artifact</i> "Some Strange Birds . . .," display, undated <i>See Oversize</i> Computer printouts, 1961-1987 <i>See Oversize</i> Computer programs, 1974, 1980 Conferences, 1963-2003 Notes, undated (2 folders)
BOX 15	Photographs, undated Printed matter 1963, 1996 Toronto Pearson International Airport, Canada, weather data, 1970-1972 <i>Available only on microfilm. Shelf no. 23,490</i> Royal McBee Corp., computer, 1958-1961
BOX 15-18	<b>Organizations, 1942-2003</b> Military personnel records, subject files, contracts, proposals, teaching files, printed matter, material relating to World War II reunions, and miscellaneous material. Arranged alphabetically by name of organization.
BOX 15	Massachusetts Institute of Technology, Cambridge, Mass. Charney, Jule G. Interviews, 1982-1986 (3 folders) Miscellany, 1967, 1981-1986 Scientific papers presented in his honor, 1983 (1 folder)
BOX 16	(1 folder) Contracts and proposals Department of Commerce. 1966-1969 Miscellaneous, 1963, 1976-1977, 1988 National Science Foundation, 1968-2000 United States Air Forces, 1955-1968, 1985-1987, undated (5 folders)
BOX 17	United States Navy, 1951-1956 (2 folders)

Curry, James H., 1978-1988  
Miscellany, 1977-2003  
Phone lists, 1887, 1997  
Printed matter, 1977-1988, 1987, 1991  
Retirement, 1987  
Teaching file  
Class 19.962, 1983-1984  
Miscellany  
1959-1981  
(2 folders)  
1984-1991

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Miscellaneous, 1955, 1977-1979  
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Society of Industrial and Applied Mathematics, 1979  
United States Army Air Forces, World War II service  
Miscellany, 1942-1954  
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Reunions, 1942, 1978-1996  
(2 folders)

**BOX 19-39**

**Speeches and Writings, 1941-2007**

Articles, scientific papers, book files, speech files, overhead and slide presentations, reviews, and bibliographies.  
Arranged alphabetically by type of material.

**BOX 19**

By Lorenz

Articles

Alphabetical file

“An Alternative Layered Model,” undated  
“Application of the Angular Momentum Principle to Cyclones,” 1952  
“An Attractor Embedded in the Atmosphere,” undated  
“Atmospheric Predictability Experiments with a Large Numerical Model,” 1982  
“Atmospheric Predictability: Do We Have a Mathematical Theory?,” undated  
“Atmospheric Predictability: The Formulation of a Theory,” undated  
“Attractor Sets and Quasi-Geostrophic Equilibrium,” 1980  
“Available Energy in a Moist Atmosphere,” undated  
“Available Potential Energy and the Maintenance of the General Circulation,” 1954  
“Barotropic Instability of Rossby-Wave Motion,” undated  
“Can Chaos and Intransitivity Lead to International Variability,” undated  
“Chaos and Climate,” 1993-1994  
“Chaos and the Limitations to Prediction,” undated  
“Chaos and Weather Prediction,” 1991  
“The Circulation of the Atmosphere,” undated  
“Climate Is What You Expect,” undated  
“Climate Sensitivity and long-Period Temperature Fluctuations,” 1987  
“Computational Chaos—a Prelude to Computational Instability,” 1988  
“Computational Periodicity as Observed in a Simple System,” undated

BOX 20

- “Compound Windows on the Hénon-Map,” undated
- “Construction of a 3-Component G. C. M.,” undated
- “Designing chaotic Models,” 2004
- “Deterministic and Stochastic Aspects of Atmosphere Dynamics,” 1987
- “Deterministic Nonperiodic Flow,” 1963
- “Dimensionality of Weather and Climate Attractors,” undated
- “Dynamical Systems with Strange Attractors and Strange Repellers,” undated
- “Effects of Analysis and Model Errors on Routine Weather Forecasts,” undated
- “Energetics of Atmosphere Circulation,” undated
- “Energy and Numerical Weather Prediction,” 1960
- “Entropy as a Measure of Atmospheric Uncertainty,” undated
- “Estimates of Atmospheric Predictability at Medium Range,” undated
- “Evolution of Dynamic Meteorology,” undated
- “Expected Inverses of Covariance Matrices,” undated
- “An Experiment in Nonlinear Statistical Weather Forecasting,” 1976
- “The Feasibility of a Low-Order Model of Moist General Circulation,” 1980
- “Formulation of a Low-Order Model of a Moist General Circulation,” 1984
- “Fluid Models in Geophysics,” 1953
- “Forecast for Another Century of Weather Progress,” undated
- “The Future Quality of Weather Forecasting,” 1969
- “The General Circulation of the Atmosphere: An Evolving Problem,” 1991
- “Generation of Available Potential Energy and the Intensity of the General Circulation,” 1955
- “A Generalization of the Dirac Equations,” 1941
- “The Growth of Errors in Prediction,” 1985
- “A History of Prevailing Ideas about the Circulation of the Atmosphere,” undated
- “How Complicated Is the Circulation of the Earth's Atmosphere,” undated
- “How Good Can Weather Forecasting Become? The Start of a Theory,” undated
- “The Index Cycle Is Alive and Well,” undated
- “The Interaction between a Mean Flow and Random Disturbances,” 1952
- “Investigations of Atmospheric Predictability,” undated
- “Large-Scale Motions of the Atmosphere: Circulation,” undated
- “The Local Structure of a Chaotic Attractor,” 1983
- “A Look at Some Details of the Growth of Initial Uncertainties,” undated
- “Low Order Models Representing Realizations of Turbulence,” 1971
- “Lyapunov Numbers and the Local Structure of Attractors,” 1984
- “The Mathematical Basis of Climate,” undated
- “The Mechanics of Vacillation,” 1963
- “Model Bending,” undated
- “The Nature of the Global Circulation of the Atmosphere: A Personal View,” 1970
- “An N-Cycle Time Differencing Scheme for Stepwise Numerical Integration,” 1971
- “A Nine-Variable Primitive-Equation Model with a Quadratic Energy Invariant,” undated
- “Noisy Periodicity and Reverse Bifurcation,” 1980
- “Nonlinearity, Weather Prediction, and Climate Deduction,” 1966
- “A Note on Extended Range Predictability,” 1973
- “Notes on Atmospheric Energy,” undated

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	<p>“Notes on Numerical Solution on the Equations of Geophysics,” undated</p> <p>“Numerical Simulations of Climatic Modifications,” 1970</p> <p>“On the Nonexistence of a Slow Manifold,” 1987</p> <p>“On the Possible Reasons for Long-Period Fluctuations of the General Circulation,” undated</p> <p>“On the Prevalence of Aperiodicity in Simple Systems,” 1981</p> <p>“On the Range of Atmospheric Predictability,” undated</p> <p>“Optimal Sites for Supplementary Weather Observations: Simulations with a Small Model,” 1996</p> <p>“Persistence of Atmospheric Circulation,” undated</p> <p>“Predictability—A Problem Partly Solved,” 2006</p> <p>“Predictability and Periodicity: A Review and Extension,” undated</p> <p>“The Predictability of the Climate System,” undated</p> <p>“The Predictability of Geophysical Phenomena,” undated</p> <p>“The Predictability of Hydrodynamic Flow,” 1963</p> <p>“The Predictability of Flow which Possesses Many Scales of Motion,” 1969</p> <p>“The Problem of Deducing the Climate from the Governing Equations,” 1964</p> <p>“The Prospects for Improved Weather Forecasting,” undated</p> <p>“Prospects for Statistical Weather Forecasting,” 1959</p> <p>“A Rapid Procedure for Inverting Del-Square with Certain Computers,” undated</p> <p>Reflections on the Conception, Birth, and Childhood of Numerical Weather Prediction,” 2006</p> <p>“A Route to Computational Chaos Revisited,” 1997</p> <p>“Seasonal and Irregular Variations of the Northern Hemisphere Sea-Level Pressure Profile,” 1950</p> <p>“A Simple System Exhibiting Long-Period Oscillations,” undated</p> <p>“Simplified Dynamic Equations and Their Use in the Study of Atmospheric Predictability,” undated</p> <p>“The Simplest Chaotic Hamiltonian System,” undated</p> <p>“The Slow Manifold—What Is It,” undated</p> <p>“Some Aspects of Atmospheric Predictability,” undated</p> <p>“Some Comments on Climate and Climatic Change,” undated</p> <p>“Some Reflections on the Arrival of Numerical Weather Prediction,” 2003</p> <p>“The Statistical Prediction of Solutions of Dynamic Equations,” 1962</p> <p>“Strange Attractors: Are They Still Strange,” undated</p> <p>“Studies of Atmospheric Predictability,” 1969</p> <p>“A Study of the Predictability of a 28-Variable Atmospheric Model,” 1965</p> <p>“Three Approaches to Atmospheric Predictability,” undated</p> <p>“A Two Level Two-Latitude Quasi-Geostrophic Model,” undated</p> <p>“The Ubiquity of Chaos,” undated</p> <p>“The Use of ‘Rawin’ Observations at High Levels in Synoptic and Statistical Research,” undated</p> <p>“The Verification of Probability Forecasts,” undated</p> <p>“A Very Narrow Spectral Band,” 1984</p> <p>“What Is Climate,” 1994</p> <p>Chronological file, 1953-2007 (4 folders)</p>
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## Speeches and Writings, 1941-2007

### Container

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BOX 24	Books
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	Miscellany, 1990-2006
	Proofs, 1983
	(5 folders)
	Reviews, 1994-1996
	<i>A Method of Applying the Hydrodynamic and Thermodynamic Equations to Atmospheric Models</i> , 1948
BOX 25	<i>Nature and Theory of the General Circulation of the Atmosphere</i> , 1967
	Autographed edition
	Drafts
	(3 folders)
	Proofs
BOX 26	Overhead and slide presentations
	Additions and subtractions, Seattle, Wash.
	Analysis and model errors
	“The Atmosphere as a Dynamic System”
	“Can Chaos and Intransitivity Lead to Interannual Viability?”
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	Chaos and intransitivity
	Chaos and predictability
	Chaos, I.A.P. course
	Chaos, class-Rothman
	Chaos, Cuomo
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BOX 27	Chaos, miscellaneous
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	Chaos, unpredictability and strange attractors
	Chaos, extra figures, butterfly effect
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	Climate, spontaneous climatic changes

## Speeches and Writings, 1941-2007

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<b>BOX 28</b>	Colby College, Waterville, Maine “Compound Windows of the Hénon Map” Conference on Mechanisms of Interannual and Longer Term Climate Variations, Melbourne, Australia Designing chaotic models Designing chaotic systems Dimension aims E.A.P.S. symposium European Centre for Medium-Range Weather Forecasting Presentation Seminar Enhanced predictability Fiftieth reunion First Sloan workshop, Savannah, Ga. Forecasting and nonlinearity Fort Collins, Colo. Generations, Reading, England
<b>BOX 29</b>	Global change I.A.P. course (4 folders) “Irregularity: A Fundamental Property of the Atmosphere” “Low-Dimensional Weather and Climate Attractors” Low order models Lyapunov numbers McGill University, Montreal, Quebec, Canada Models N-Var plus 3-var National Center for Atmospheric Research, 1988. 1993 (2 folders) New Haven, Conn., presentation Nonlinear statistical weather prediction
<b>BOX 30</b>	“On the Existence of a Slow Manifold” “Optimal Sites for Auxiliary Observations: A Low-Order Simulation” Predictability “Predictability in a System with Regimes” Predictability meeting, La Jolla, Calif. Predictability conference, Sigtuna, Sweden Princeton University, Princeton, N.J. Regimes “Regimes in a Simple Dynamical System” Savannah, Ga., presentation Simple and complicated systems Simple Hamiltonian Chaos Slides “Some Reflections on the Arrival of Numerical Weather Prediction” Southern Connecticut State University, New Haven, Conn. Special, Climate Research Division seminar

## Speeches and Writings, 1941-2007

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	Theories of general circulation
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	Uncertainty
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<b>BOX 33</b>	(19 folders)
<b>BOX 34</b>	(16 folders)
<b>BOX 35</b>	Reviews of scientific articles and proposals, 1965-1993
	Speeches, 1949-2006, undated <i>See also Oversize</i>
	(7 folders)
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	Bryan, Kirk W., 1957
	“B” miscellaneous, 1996, 2004
	Charney, Jule G., 1949-1963
	Christensen, R. A., 1981-1985
	“C” miscellaneous, 1979-1991
	Dabby, Diana S., 1996
	“E” miscellaneous, 1980-1989, 2002
	“F” miscellaneous, 1984, 2002
	Gedzelman, Stanley David, 1991
	Gleick, James, 1987
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	Haynes, Peter H., 1985-1987
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	Hoffman, Ross N., 2000
<b>BOX 37</b>	“H” miscellaneous, 1984, 2001
	“I-J” miscellaneous, 2001
	(2 folders)
	Kelly, Elizabeth A., 1958
	Kravtsen, S., 2004
	“K” miscellaneous, 1989, 2001
	Lorenz, Ralph, 2001-2003
	“L” miscellaneous, 1982-1987
	Maloney, Eric D. 2000-2002

- McGraw-Hill Encyclopedia of Science and Technology*, 1993  
 McIntyre, Michael E., 1970  
 Mesinger, Fedor, 1995-1996  
 "M" miscellaneous, 2002-2004  
 Palmer, T. M., 1986, 2000  
 Peixoto, José Pinto, and Abraham Oort, *Physics of Climate*, 1989  
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 "W" miscellaneous, 1982-2007  
 "Y" miscellaneous, 1987, 2004  
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 Card indexes to works on meteorology, undated [\*See Oversize\*](#)  
**BOX 39-44**      **Miscellany, circa 1895-2008**  
 Awards, biographical material, photographs, printed matter, high school yearbook and other material relating to Lorenz's grade school and undergraduate education.  
 Arranged alphabetically by type of material or topic.  
**BOX 39**  
 Addresses and phone numbers, card file, undated [\*See Oversize\*](#)  
 Appointment books, 2006-2008  
 Awards  
     Crafoord Prize, 1983  
     Elliott Cresson Medal, 1989-1992  
     Kyoto Prize, 1991  
     Bound ceremonial presentation [\*See Oversize\*](#)  
     Miscellany  
     News clippings  
     Program

## Miscellany, circa 1895-2008

### Container

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- Scrapbook [See Oversize](#)
- BOX 40** Miscellaneous, 1943-2005 [See also Oversize](#)  
Biographical material  
Interviews, 1986-2000  
Miscellany, 1917-2008  
Childhood and early education  
Chess, 1920, 1931-1934  
Safety First match cover collection, circa 1925  
*West Hill Gazette*, West Hartford, Conn., 1930  
William H. Hall High School, West Hartford, Conn., 1934  
Christmas greeting drawing "to Eddie," undated  
Ericsson, Kerstin, affidavit of support, undated  
Friends and family, 1928-2002
- BOX 41** Lists, business and membership cards, ephemera, undated  
Mountaineering, 1965-1980  
Newspaper clippings, 1959-2005  
Ninetieth birthday, 2007  
Parkview Heights Elementary School, Lavista, Nebr., letters, 2007  
Passports and other travel documents, 1957-1987  
Photographs  
Exhibit photographs of Lorenz and his family, undated [See Oversize](#)  
Lorenz and others  
circa 1895-2007 [See also Oversize](#)
- BOX 42** Undated  
Lorenz portraits, circa 1934-1999  
Others, circa 1940, 1981-2007, undated  
(2 folders)  
Scenic and documentary photographs  
Floods and snow storms, circa 1930-circa 1939  
Miscellaneous, 1936-circa 2005  
(3 folders)
- BOX 43** Honeymoon, 1948  
Negatives, undated  
Printed matter, 1957, 1979-1980, 1987-2006  
(2 folders)  
Sudoku puzzle books, 2005-2006  
University education and honorary degrees  
Dartmouth College, Hanover, N.H.  
1934-1938
- BOX 44** 1938, 1963, 1981, 1992  
Miscellany, 1941, 1948, 1988-2003
- BOX OV 1-OV 13** **Oversize, 1937-2008**  
Awards, card indexes, computer graphics, computer printouts, chart records, photographs, and poster.  
Arranged and described according to the series, containers, and folders from which the material was removed.

## Oversize, 1937-2008

### Container

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BOX OV 1	Science File Computer graphics, chart records, and drawings Miscellaneous, undated (Container 14)
BOX OV 2	“Some Strange Birds . . .,” display, undated (Container 14)
BOX OV 3-OV 6	Computer printouts, 1961-1989, undated (Container 14)
BOX OV 7	Speeches and Writings By Lorenz Speeches Poster, “Ubiquity of Chaos,” University of South Carolina, Columbia, S.C. (Container 35)
BOX OV 8	Card indexes to works on meteorology No. 1, undated (Container 39)
BOX OV 9	No. 2, undated (Container 39) Miscellany Addresses and phone numbers card file, undated (Container 39)
BOX OV 10	Awards Kyoto Prize Bound ceremonial presentation, 1991 (Container 39) Scrapbook, 1991 (Container 39)
BOX OV 11	Miscellaneous, 1937-2008 (Container 40)
BOX OV 12	Photographs Exhibit photographs of Lorenz and his family, undated (Container 41) Lorenz with others “Army Air Force Training Detachment M.I.T.,” 1942 (Container 41)
BOX VA 1	<b>Artifact, circa 1961</b> Chart record. Arranged and described according to the series, containers, and folders from which the item was removed.
BOX VA 1	“Chaos 25 Years Ago,” chart record, circa 1961 (Container 14)
BOX EF	<b>Electronic File, 1985-2009</b> Computer files. Unprocessed and unavailable.
BOX EF	Unprocessed and unavailable