INDEX OF ORIGINAL SURFACE WEATHER RECORDS (HOURLY, SYNOPTIC AND **AUTOGRAPHIC**)



Indexes for the period of record through 1976 have been prepared for each of the 50 states, for the Pacific Islands, and for Puerto Rico U.S. Virgin Islands the (information for the District of Columbia is included in the Maryland index). The indexes are assembled in pamphlet form and range in size from 15 pages for Delaware to 148 pages These 52 indexes were for California. part of ENDEX. produced as Environmental Data Index. ENDEX is designed to consolidate and automate existing indexes of environmental data to efficiently serve the needs of atmospheric and earth scientists.

Hourly aviation, synoptic, supplementary airways and similar observations available in manuscript form at the National Climatic Center for the 52 areas are listed in these indexes. Sample pages of the several types of indexes prepared for Illinois are shown in Exhibits 1, 2, 3, and 4 (Records Indexes -Alphabetic by Station, by Elevation and bv Year, by Information about unusual respectively). records, such as those which would help in plotting detailed synoptic weather maps, is also included. Information concerning autographic charts and traces has been included in the indexes since values of temperature, pressure, wind, humidity, etc., can be extracted from these records for use in the kinds of studies these indexes have been designed to aid. Information about records similar to the cooperative climatological daily observations is not included in these indexes.

One of the most valuable parts of these indexes is the station history information that is shown by the latitude-longitude and station elevation data. Extensive effort was made to pinpoint the station locations.

The records covered by this series of indexes form the major file of meteorological data within the United States. Begun by the Army Signal Service in the late 19th Century, some of the records have been preserved and passed on by succeeding government agencies. records that are filed by the National Archives are not included in the indexes; nearly all of those records are for years prior to 1900.

Copies of the original records can be provided at the requester's expense in a number of paper copy, including microfiche or magnetic tape. For additional information concerning records subsequent to 1976 or the costs involved write to: National Climatic Center, Federal Building, Asheville, NC 28801.

DESCRIPTION OF INDEXES

Alphabetic

The alphabetic listing utilizes the names of the weather station preparing the observations. This is often the name of the city or community; occasionally, it is the name of a military installation, an airport, or a geographical feature. Cross-referencing has been inserted to help the user. For a given station, the records are listed in time order. When one becomes familiar with the index, this arrangement gives a quick, and almost pictorial, presentation of the weather station activity of each location. Station moves stand out.

By Year

The records are listed from the oldest to the newest to readily show which are available for studies based on many years of data. This arrangement also expedites the selection of records when studying particular storms of the past. By referring to a specific year, all available records can be seen. An interesting feature of this index is the way in which it shows the expansion of the national meteorological network. From few entries per year in the early times, there is a marked increase with the advent of commercial aviation in the 1930's. The many stations shown during World War II and the post-War era are followed in most states by a shrinkage due to retrenchment in the more recent times.

By Elevation

This index will aid those looking for observations taken at various altitudes above sea level. Stations with unknown elevations are shown at the end of this list.

By Latitude

This index is abbreviated to give names and station history data for locating weather observing points on a geographical basis. This supplements the map.

EXPLANATION OF ENTRIES

Station Name

Long names are abbreviated. Commonly used abbreviations are:

AP, APT	- Airport
Cty	- City
Fld	- Field
Ft	- Fort
Hb	- Harbor
l s	Island
LB Sta	 Light Boat Station
Lk	- Lake
LS	Light Ship/Station
Mt	- Mount, Mountain
Nk	- Neck
Pt	- Point/Port
Rck	- Rock
Rvr	- River

Type

The type of weather station. This is sometimes best described by naming the service which operated the station. Codes used are:

Code	Type	o f	Station

WEATHER BUREAU (now known as NATIONAL WEATHER SERVICE)

A Aviation Reports & Coop-A Stations

Code	Type of	Station
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WEATHER BUREAU (Continued)

AC	Cooperative Aviation Reports
В	Basic
S	Synoptic Reports
SA	Syoptic and Aviation Reports
SAC	Cooperative Synoptic and
	Aviation Reports
SC	Cooperative Synoptic Reports
WBAS	Weather Bureau Airport Sta-
	tion
WBFO	Weather Bureau Forecast
	Office
WBMO	Weather Bureau Meteoro-
	logical Observatory
WBO	Weather Bureau Office
WBUA	Weather Bureau Upper Air
	Unit
WSFO	Weather Service Forecast
	Office
WSMO	Weather Service Meteoro-
	logical Observatory
WSO	Weather Service Office

MILITARY

AAB	Army Air Base
AAF	Army Air Field
AAFB	Auxiliary Air Force Base
AB	Air Base (Air Force)
AF	Air Force
AFB	Air Force Base
AFS	Air Force Station
ANG	Air National Guard
ASC	Army
MCAF	Marine Corps Air Facility
MCAS	Marine Corps Air Station
NAAF	Naval Auxiliary Air Facility
NAAS	Naval Auxiliary Air Station
NAF	Naval Air Facility
NAS	Naval Air Station
NF	Naval Facility
NS	Naval Station

OTHERS

AMOS	Automatic Weather Station
CAA	Civil Aeronautics Administra-
	tion Facility
CG	Coast Guard
COOP	Cooperative
FAA	Federal Aviation Agency
FSS	Flight Service Station (FAA)
LAWR	Limited Airport Weather
	Reporting Station (Tower)

Code	Type of Station
<u>OTHERS</u>	Continued
MARS	Marine Reporting Station
PAA	Pan American Airways
SAWR	Supplementary Airways Weather Reporting Station
SPL	Special Purpose Office (Fire weather, temporary observing sites)

Latitude, Longitude

The coordinates given for the station in the most authoritative documents available to the worker. Given in degrees and minutes.

Elevation

in feet. The height above sea level of the barometer was used if known. The reported station elevations and ground heights at the stations were used as first and second alternatives when necessary.

"Hourly" Records by Month

These are the records usually made for aviation purposes and are the most detailed observations made. Because of their importance, they have been indexed in greater detail than the other records. A number entry means that records are on file for that month. The value of the number is a code which tells the number of observations recorded per day.

Code for Observations per Day Used in the "Hourly" Records Columns

Blank - No records

1 - 24 per day

2 - (Not used)

3 - 3 or less obs per day

4 _ 4

5 - 5 to 11

6 - 12 to 18

7 - 19 to 23

0 - Records on microfilm only. See the film for number of obs per day.

A valuable source of information about data appearing on these forms through the years is: History of Weather Bureau Climatological Record Forms for Surface Synoptic and Airway Observations. (Key to Meteorological Records Documentation No. 2.211, Washington, DC, 1964. For sale by the Superintendent of Documents, Washington, DC 20402.)

Number of Months in Year with:

The records in these categories are so voluminous that it was felt an abbreviated index would suffice for nearly all purposes. In these columns, a 12 means that records are on file for every month. A blank means that no records are on file. 08 followed by a group of 12 will nearly always mean that records began in May of the first year and were continuous thereafter. Numbers higher than 50 mean that the records exist only on microfilm. In such cases, 50 has been added to the number of months available for that year.

Synoptic Form

Form B-15 (formerly Form 1083). usually gives 4 observations per day in the special code used for reporting weather internationally. Examples of the forms are given in the publication listed previously under "Hourly" explanation for records. 3-hourly observations Intermediate sometimes included on the form; from July 1939 to December 1948 the 3-hourly observations may appear on a companion form Some stations omitted the (Form 1082). Laymen find these nighttime observations. forms difficult to use because of their special coding and the fact that times are often in "Hourly" records, if available, are usually preferable.

Meteorological Summary

Form 1001, and/or 1002, and/or 1014. These are the comprehensive station records kept by first-order Weather Stations from 1892 to 1948. A few stations have continued a modified form. Examples of the forms are given in the publication listed previously under the explanation for "hourly" records. A similar military record, Form 1, is also indexed under this category.

Barograms

A continuous record of pressure in which the oscillations have been traced by a pen on a moving sheet of paper. In the older records, a 1-inch change of pressure was shown as a 1-inch change on the chart. Beginning in 1936, the older instruments were replaced by microbarographs which magnified the change two and one-half times. At Weather Bureau stations each chart formerly contained 4 days' record. The exact times of pressure changes with squall lines, thunderstorms, and other

EXHIBIT 3

BY ELEVATION

ILLINOIS

ELEV.	NAME	TYPE	LAT.	LONG.	NBAN NUMBER	ELEY.	NAME	TYPE	LAT.	LONG.	MBAN NUMBER
320	CAIRD	SAHR	37 D4N	69 13H		658	PEBRIA	HBAS	40 40N	89 41H	14842
341	CAIRO	HBO	37 00N	89 10H	93809	660	PARK RIDGE	AF	41 59H	87 54H	14610
357	CAIRO	MBD	37 DON	89 10H	93809	663	QUINCY	A	39 548	81 55H	63513
374	CAIRO	H60	37 ODN	89 1DH	93809	664	DANVILLE	SAHR	40 12N	67 36H	i
390	CROSSVILLE	A	38 1DM	68 D4H		667	PARK RIDGE	AF	41 59H	87 54H	14810
390	PRAIRIE BOCH	A	38 05H	90 06H	93921	670	PEGRIA	HOAS	40 40M	89 41H	14842
406	CARBONDALE	SALR	37 47N	89 15W	93610	675	DECATUR	FS5	39 50M	88 52H	
413	CAHOLIA	SALA	38 348	80 10H	ŀ	675	DECATUR	LAME	39 50N	66 52H	1
416	CARBONDALE	5	37 44N	89 13H	93810	675	DECATUR	SAMR	39 504	88 524	i
421	EAST ST LOUI	SAM	38 34N	80 11H		680	MAUKEGAN	COOP	42 22h	87 52H	1
429	LAMRENCEVILE	SALIR	38 46H	87 35H		681	NORTHBROOK	A	42 DBN	87 51H	1
433	GEORGE FIELD		38 46N	87 37H	13809	683	PEGRIA	HBAS	40 40H	69 41H	14842
444	SCOTT	AAF	38 33N	89 51H	13802	683	PEGRIA	MSD	40 40N	89 414	14842
444	SCOTT	AFB	38 338	89 51H	13602	690	MACOMO	SAMR	40 31N	80 39H	
452	MARION	SALR	37 45H	88 DDH	03865	691	CHICAGO BH	HBAS	41 59N	87 54H	94846
460	MARION	SALE	37 45N	89 DOH	03865	692	CHICAGO OH	HOAS	41 59N	87 54W	94846
465	MOUNT VERNON		38 198	88 524		692	CHICAGO OH	HSD	41 59N	87 54H	94846
470	BLNEY	SALR	38 43N	68 11H		710	AURDRA	LAMR	41 46N	88 28H	1
474	MOUNT VERNON		38 20N	88 52H		710	HOOPESTON	COOP	40 28N	87 40H	
480	HOUNT VERNON		38 20N	68 54H		713	CHENDA	A	40 4411	88 444	14016
520	CENTRAL IA		38 31N	69 06H	03625	715	CHICAGO	ASC	41 538	67 38W	14681
520	CENTRAL JA	SAHR	38 31N	69 05H		720	MATGON	SALR	39 29N	88 17⊯	
522	LA SALLE	COOP	41 20N	89 084		722	SPRINGFIELD	HBD	39 48M	89 391	93896
535	VANDAL IA	CAA	38 59N	69 104	03638	727	HAUKEGAN	A	42 25H	87 52H	14660
535	VANDAL JA	F55	38 59N	99 10H	03838	732	ROCKFORD	CAA	42 12M	68 0PH	94822
536	LA SALLE	HBO	41 20M	89 D5H		732	ROCKFORD	HBAS	42 12N	89 054	94622
541	AL TON	FAA	38 538	80 03H	l	732	ROCKFORD	HSO	42 12N	88 06H	94822
541	AL TON	SAHR	38 53H	9D 03H	}	733	MARSEILLES	MSMO	41 22N	88 41H	i

EXHIBIT 4

BY LATITUDE

ILLINOIS

LAT.	NAME	TYPE	LONG.	MBAN NUMBER	LAT.	NAME	TYPE	LONG.	NUMBE
42 25N	MAUKEGAN	A	87 52H	14660	39 50N	SPRINGF IELD	HBAS	89 404	93822
42 22H	MAUKEGAN	COOP	87 52H	1	39 50N	SPRINGFIELD	MS0	89 402	93822
42 21N	ROCKFORD	CAA	69 D3H	14844	39 48H	SPRINGFIELD	HBO	68 38H	93886
42 15N	FREEPORT	SAME	89 35W		39 47N	JACKSONVILLE	SALE	9D 14W	
42 12H	ROCKFORD	CAA	89 05H	94822	39 45H	SPRINGFIELD	54	89 41H	93822
12 12N	ROCKFORD	MBAS	89 054	94822	39 45N	SPRINGFIELD	HBA5	89 41H	93822
42 12H	ROCKFORD	MS0	89 D6H	94822	39 294	MATOON	SAHR	68 17H	1
42 DBN	HORTHBROOK	6	87 51W		39 15N	CHESTERF JELD	A	80 D4H	l
42 05H	GLENVIEW	NAS	87 50H	14855	39 094	EFF INGHAM	CAR	88 33₩	93816
42 D5N	MOUNT CARROL	COOP	89 58H		39 094	EFF INGHAM	HBAS	88 33H	93816
12 D4N	ELGIN	SAMR	88 17H		38 598	VANDAL IA	CAA	88 10H	03836
11 59N	CHICAGO OH	₩8.95	87 54H	94846	38 594	VANDAL IA	FSS	99 10H	03836
11 59N	CHICAGO OH	MSO	87 54H	94846	38 538	AL TON	FRA	90 03H	
4) 50N	PARK RIDGE	AF	87 54H	14810	38 538	AL TON	SALAR	80 D3H	l
41 55N	H CHICAGO	FAA	88 15H		38 461	GEORGE FIELD	AAF	87 37H	13809
11 55N	H CHICAGO	F55	88 154		38 46H	LAMRENCEVILE	SAMR	87 36W	l
11 53N	CHICAGO	ASC	87 38H	14881	38 438	BLNEY	SAM	68 114	
41 53H	CHICAGO	HBO	87 38H	14881	38 394	SALEM	HBMG	88 58H	03079
41 52N	CHICAGO MEIG		87 37H	94666	38 348	CAHBKIA	SAHR	90 1DH	
41 52N	CHICAGO MEIG		87 37H	94866	38 348	EAST ST LOUI	SAHR	80 11H	ŀ
41 50N	DIXON	SAUR	69 27H		38 339	SCOTT	AAF	89 51H	13802
	STERLING	A	89 384		36 338	SCOTT	AFB	60 91H	13802
41- 49N		Ä	89 38H		36 318	CENTRAL IA	A	89 D5H	03825
41 48N 41 47N	STERLING	HBAS	87 45H	14019	38 318	CENTRAL IA	SAHR	89 05H	l
41 47H	CHICAGO MID	WS0	87 45H	14819	36 224	MOUNT VERNON	COOP	88 55H	
91 47N	CHICAGO UNIV	AF.	87 36H	14602	38 204	MOUNT VERNON	COOP	88 54H	
41 47N	CHICAGO DAIY	PPG	87 36W	14892	38 20N	MOUNT VERNON	5	66 52H	l
4) 47N	CHICAGO DAIY	MSMO	87 36W	14692	38 19N	HOUNT VERNON	SAUR	68 52H	
4) 47N	DUNNE CRIB	CG	87 32H	1	38 10M	CROSSVILLE	A	68 044	1
41 46N	AURORA	LAMR	88 28H		38 05%	PRAIRIE ROCH	A	90 06H	83921
11 46N	HATERMAN	A	88 45H	94821	37 47H	CARBONDALE	SAMR	69 15H	93610
41 44H	STERLING RF	SAHR	69 41H		37 45N	MARION	SAHR	89 001	03865
41 43N	CALUMET HOR	CG	87 32H	i e	37 44H	CARBONDALE	5	98 13H	93910
41 32N	LANSING	SAHR	87 32H		37 D4N	CAJRO	SALIR	88 13P	
41 30N	JOL JET	A	88 10H	14834	37 DDN	CAIRD	MBB	89 10H	93809

EXHIBIT 2

RECORDS INDEX ARRANGED BY YEAR

ILLINOIS NUMBER OF MONTHS IN YEAR WITH A Law of the law of th Suppopular HOURLY RECORDS BY MONTH پ./ 1 - 24 085 PER DAY HBAN LONG. | ELEV. | J|F |M |A |M |J |J |A |S |D |M |D NUMBER YEAR NAME TYPE LAT. 41 53N 87 38H 657 10 1872 CHICAGO 14601 12 87 38H 657 ASC 41 53N 1873 CHICAGO 12 14681 1874 CHICAGO ASC 41 53N 87 38F 657 14681 12 41 53N 87 38H 657 1875 CHICAGO 14861 12 41 53N 67 38H CHICAGO ASC 1876 12 14661 41 53N 1877 CHICAGO ASC 87 384 657 12 14881 CHICAGO ASC 41 53N 67 38H 657 14661 41 53N 657 12 1879 CHICAGO ASC 87 384 15 1880 CHAMPAIGN ASC 40 08N 86 14H 14881 CHICAGO ASC 657 CHAMPAIGN 40 DBN 41 53N 767 657 12 1661 12 14881 12 CHAMPAIGN 40 08N 1662 88 14H 14661 ASC CHICAGO 657 CHAMPAIGN CHICAGO 40 08N 41 53N 767 657 12 1083 14881 12 14661 41 53N 87 38H 657 CHICAGO ASC 1004 12 14881 1885 CHICAGO ASC 41 53N 87 384 657 41 535 87 38H 657 12 14681 1686 41 53N 14881 ASC 67 384 715 CHICAGO 1687 12 14681 07 1666 CHICAGO ASC 41 538 87 38H 715 14881 CHICAGO ASC 41 531 67 38H 715 12 12 12 12 14881 CHICAGO ASC. 41 53N 87 38H 823 1890 12 14661 12 1691 CHICAGO HOD 41 53N 87 38H 623 14881 CHICAGO HOU 41 53H 87 384 823 12 12 37 DON 41 53N 39 46N CAIRD CHICAGO H60 H60 H60 89 10H 87 38H 89 39H 12 12 12 93809 1693 823 607 SPRINGF IELD CAIRD CHICAGO SPRINGFIELD 37 DDN 41 53N 39 48N 89 10H 87 38H 89 39H 93809 1894 12 623 607 15 12 12 14881 93595 37 00N 41 53N 39 48N 93809 14881 93896 12 12 12 CAIRD H60 89 10H 357 823 1895 12 12 CHICAGO HBG 67 38H SPRINGFIELD HBG 507 37 DDN 41 53N 39 48N 89 10H 87 38H 89 39H 12 93809 CAIRO 357 02 CHICAGB SPRINGFIELD M60 M60 12 623 607 93895 93809 1897 CAIRG 37 007 89 10H 357 12 12 12 41 53N 39 48N CHICAGO 12 14881 93696 SPRINGFIELD 607 93609 14881 93696 DOH 12 1898 12 15 CHICAGO 41 53N 39 48N H60 87 38W SPRINGFIELD 607 69 102 87 382 69 392 93609 1699 CAIRD 37 DON 357 12 12 12 12 12 93896 93609 14881 93896 12 12 12 1900 DRIAD 37 00N 89 10H 12 12 12 CHICAGO MBD 41 53N 39 48N 623 SPRINGFIELD HOD 69 392 607 37 00N 41 53N 39 46N 15 1901 CAIRD 12 93809 14881 93896 CHICAGO SPRINGFIELD HB0 HB0 87 38H 823 607 10 12 37 00N 41 53N 39 48N 15 15 15 93809 1902 CAIRG MB G 89 10H 357 H60 H60 67 38H 12 CHICAGO 12 14881 SPRINGF IELD 15 93809 14881 93896 37 DDN 41 53N 39 48N 12 12 12 12 12 12 69 10H 67 36H 69 39H CHICAGO SPRINGFIELD H60 66H 623 607 12 12

> 15 15 15 15 15 15 15 15

93809 14881

1904

CAIRD

CHICAGO

DDN 89 53N 87 phenomena were hard to read, so the chart commonly in use today is accelerated to rotate once each 12 hours. Two traces appear on each chart since they are changed daily.

Thermograms

A continuous record of temperature. A variety of charts has been used through the years. First-order stations are no longer required to operate thermographs. During the years in which thermograms were considered an official record, they were carefully annotated and the periods are nearly complete. In recent years, some instruments appear to be out of calibration and there are gaps in the series of forms. Most being received now are from cooperative stations that have volunteered their records.

Triple Register

Most of the records indexed under this column are the daily sheets from the station meteorographs, sometimes known also as a quadruple register since they recorded wind direction, wind speed, sunshine, and rainfall.

The oldest records are from single registers which recorded speed only; from two-magnet registers which recorded wind speed, rainfall, and sunshine; and from double registers

(anemographs) which recorded wind direction and speed. The most recent records of this type are in the form of long strips torn from continuous rolls in daily increments.

Wind Recorder

These show a continuous trace of wind speed as opposed to the triple register type of equipment which is based on an electrical contact opening and closing with the passage of each mile of wind. These records have not been quality controlled and there have been problems of calibration, lack of annotation, and improper time registration. Many of the records do not contain direction traces. For some stations, direction and speed are on different rolls.

Humidity Recorder

These are instrument charts which give a measurement of relative humidity or dew point. Those of the hygrothermograph type usually contain an adjoining record of temperature.

Radar Logs

These records give the radar operator's interpretation of the echoes seen on his scope. Location, size, shape, movement, intensity, and change intensity are given in code.

EXHIBIT 1

RECORDS INDEX ALPHABETIC BY STATION NAME

