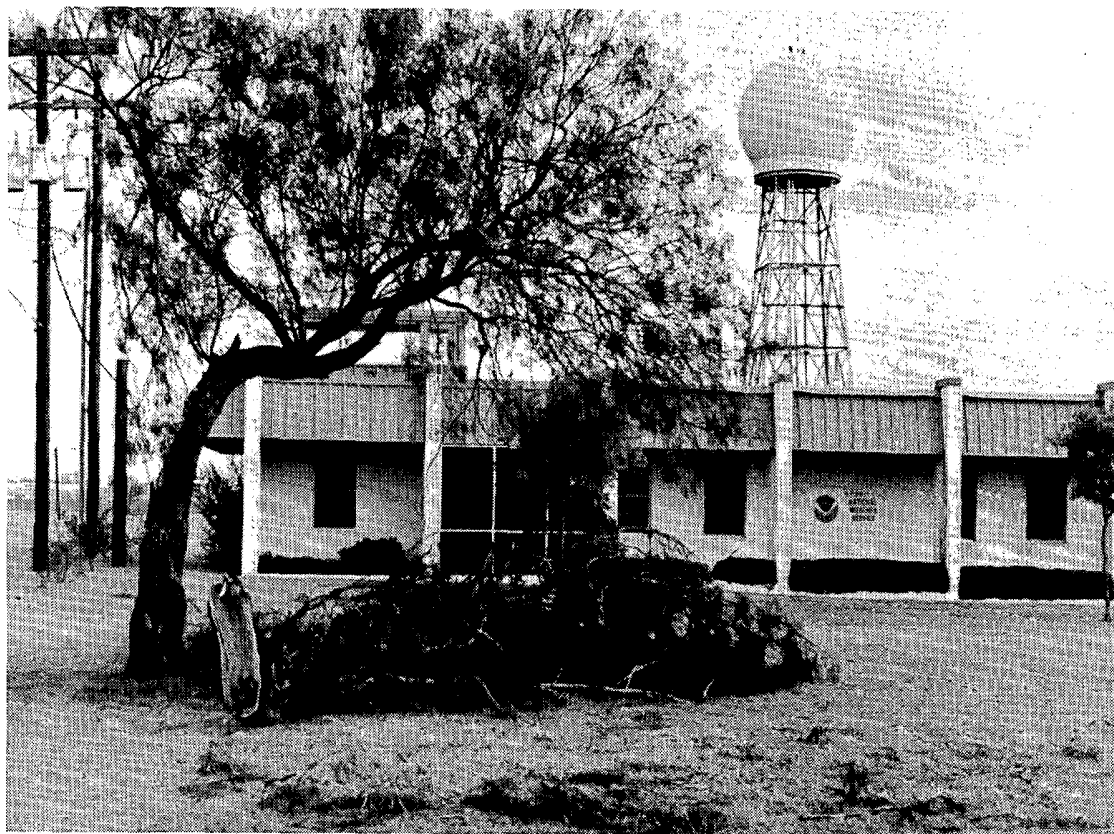


STORM DATA

WITH CORRECTED AUGUST 1987 COVER



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
 THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 AND IS COMPILED FROM INFORMATION RECEIVED AT THE
 NATIONAL CLIMATIC DATA CENTER, ASHEVILLE NORTH CAROLINA"
 28801

Kenneth D. Walden

DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

Support for this publication is provided in part by the Office of Naval Research,
 Marine Meteorology Program, Dr. Robert F. Abbey, Jr., Director.
 Extensive data collection efforts are provided by the National Weather Service.

C O N T E N T S

Cover: Freshly-fallen tree limbs decorate the lawn at the National Weather Service Office in Austin, Texas after thunderstorm winds gusting to 81 mph raked through the airport site on the afternoon of September 10, 1987 (see THUNDERSTORM WINDS at AUSTIN, TEXAS pages 12 through 15). ---Photo by Troy Kimmel, Meteorologist, KVUE-TV.

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NOTE: The cover photograph of the August 1987 issue was inadvertently inverted prior to the printing of the publication. I regret any inconvenience this action caused our subscribers, the photographer - Dooley Shroyer, and the supplier - NWSFO Sioux Falls, S. D. A corrected cover is supplied at the back of this issue as a replacement. ~~8~~

STORM DATA (ISSN 0039-1972)

The section on Outstanding Storms of the Month is prepared by Professor T. Theodore Fujita, editor, and Duane J. Stiegler, associate editor, the University of Chicago, with funding by the U. S. Office of Naval Research. The Storm Data and Unusual Weather Phenomena narratives, and summaries of Hurricanes/Tropical Storms are prepared by the National Weather Service. The National Climatic Data Center compiles statistics on deaths, injuries, damage and prepares the annual summaries of tornadoes and Lightning. This publication contains our best information on storms, but due to the difficulties inherent in collection of this type of data it is not all-inclusive. Late reports and corrections will be carried quarterly. Maps of zones used in the Storm Data and Unusual Weather Phenomena will be published in all editions.

Storm Data is published monthly by the National Climatic Data Center.

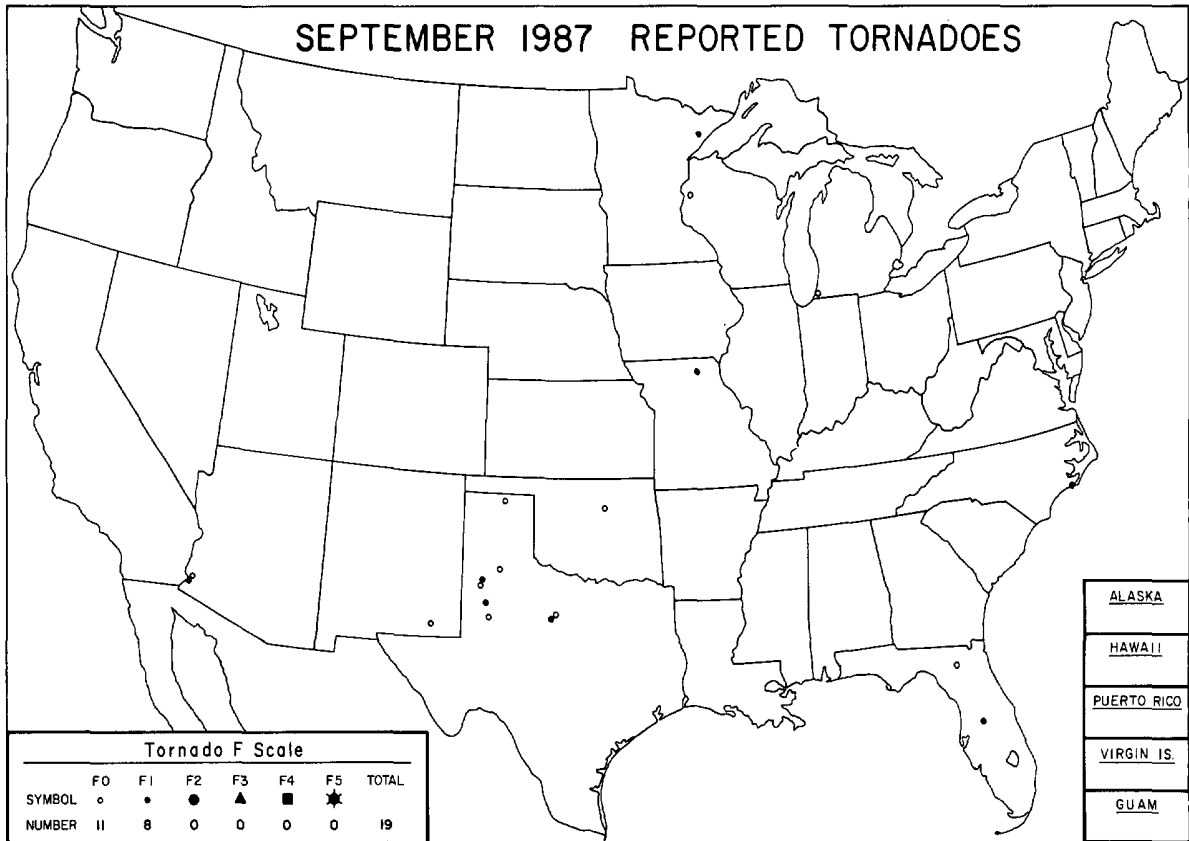
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Supervisory Meteorological Technician	Editorial Clerk

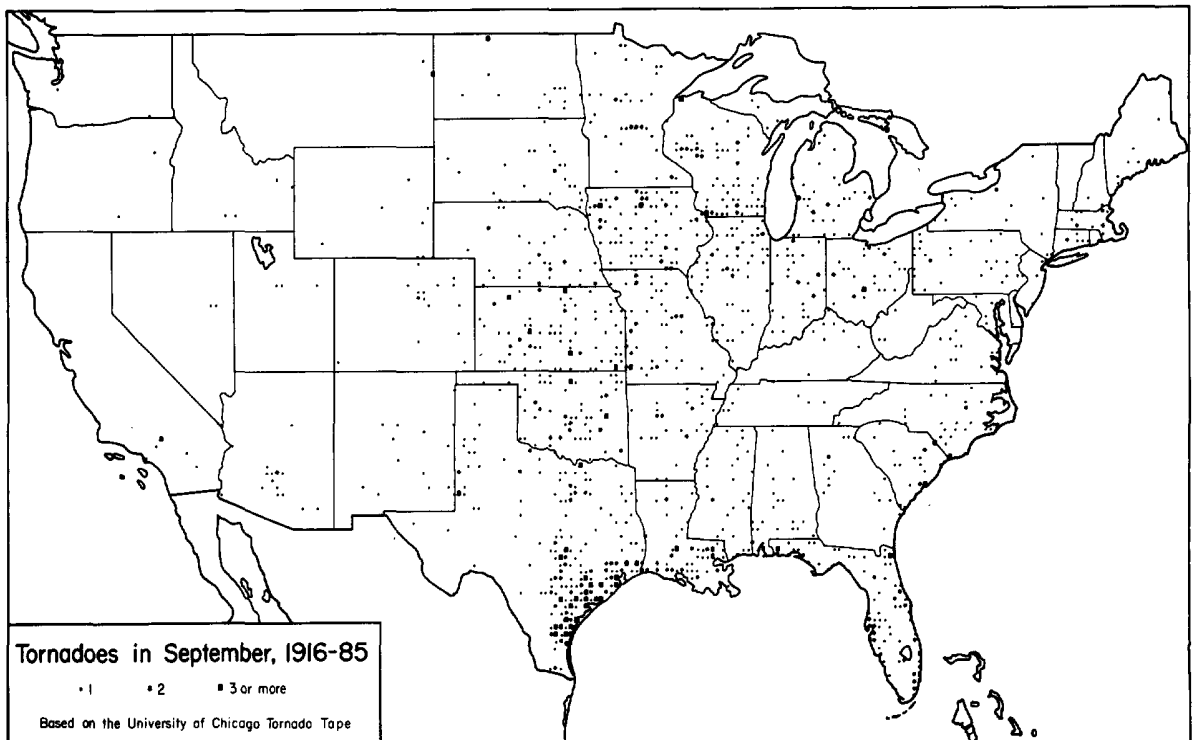
Subscription, pricing, and ordering information is available from:

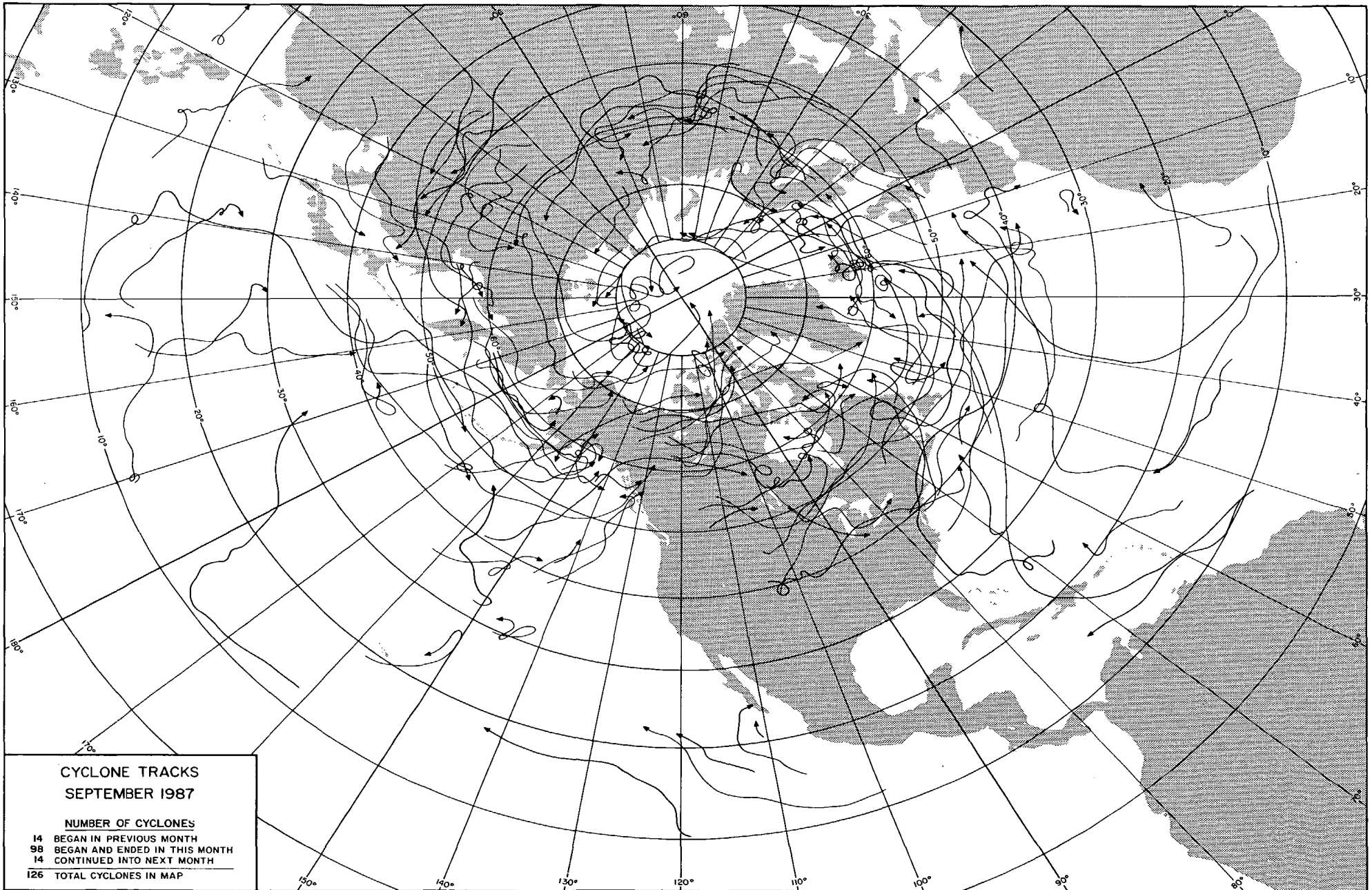
National Climatic Data Center
Federal Building
Asheville, NC 28801-2696

OUTSTANDING STORMS OF THE MONTH



<ul style="list-style-type: none"> ● COMPLETE REPORT RECEIVED ○ PRELIMINARY REPORT RECEIVED ○ REPORT NOT RECEIVED <p>(N) northern (W) western (S) southern (C) central (E) eastern (O) coastal (SE) southeastern</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>● 1AL</td><td>● 7DE</td><td>● 14KS</td><td>● 21MN</td><td>● 28NJ</td><td>● 33OH</td><td>● 39SD</td><td>● 44VA</td><td>● 49AK(SE)</td></tr> <tr> <td>● 2AZ</td><td>● 8FL</td><td>● 15KY</td><td>● 22MS</td><td>● 29NM</td><td>● 34OK</td><td>● 40TN</td><td>● 45WA</td><td>● 50HI</td></tr> <tr> <td>● 3AR</td><td>● 9GA</td><td>● 16LA</td><td>● 23MO</td><td>● 30NY(O)</td><td>● 35OR</td><td>● 41TX(N)</td><td>● 46WV</td><td>● 51PR</td></tr> <tr> <td>● 4CA(N)</td><td>● 10ID</td><td>● 17ME</td><td>● 24MT</td><td>● 30NY(C)</td><td>● 36PA(E)</td><td>● 41TX(S)</td><td>● 47WI</td><td>● 52VI</td></tr> <tr> <td>● 4CA(S)</td><td>● 11IL</td><td>● 18MD</td><td>● 25NE</td><td>● 30NY(W)</td><td>● 36PA(W)</td><td>● 41TX(W)</td><td>● 48WY</td><td>● 53PC</td></tr> <tr> <td>● 5CO</td><td>● 12IN</td><td>● 19MA</td><td>● 26NV</td><td>● 31NC</td><td>● 37RI</td><td>● 42UT</td><td>○ 49AK(N)</td><td></td></tr> <tr> <td>● 6CT</td><td>● 13IA</td><td>● 20MI</td><td>● 27NH</td><td>● 32ND</td><td>● 38SC</td><td>● 43VT</td><td>● 49AK(S)</td><td></td></tr> </table>	● 1AL	● 7DE	● 14KS	● 21MN	● 28NJ	● 33OH	● 39SD	● 44VA	● 49AK(SE)	● 2AZ	● 8FL	● 15KY	● 22MS	● 29NM	● 34OK	● 40TN	● 45WA	● 50HI	● 3AR	● 9GA	● 16LA	● 23MO	● 30NY(O)	● 35OR	● 41TX(N)	● 46WV	● 51PR	● 4CA(N)	● 10ID	● 17ME	● 24MT	● 30NY(C)	● 36PA(E)	● 41TX(S)	● 47WI	● 52VI	● 4CA(S)	● 11IL	● 18MD	● 25NE	● 30NY(W)	● 36PA(W)	● 41TX(W)	● 48WY	● 53PC	● 5CO	● 12IN	● 19MA	● 26NV	● 31NC	● 37RI	● 42UT	○ 49AK(N)		● 6CT	● 13IA	● 20MI	● 27NH	● 32ND	● 38SC	● 43VT	● 49AK(S)	
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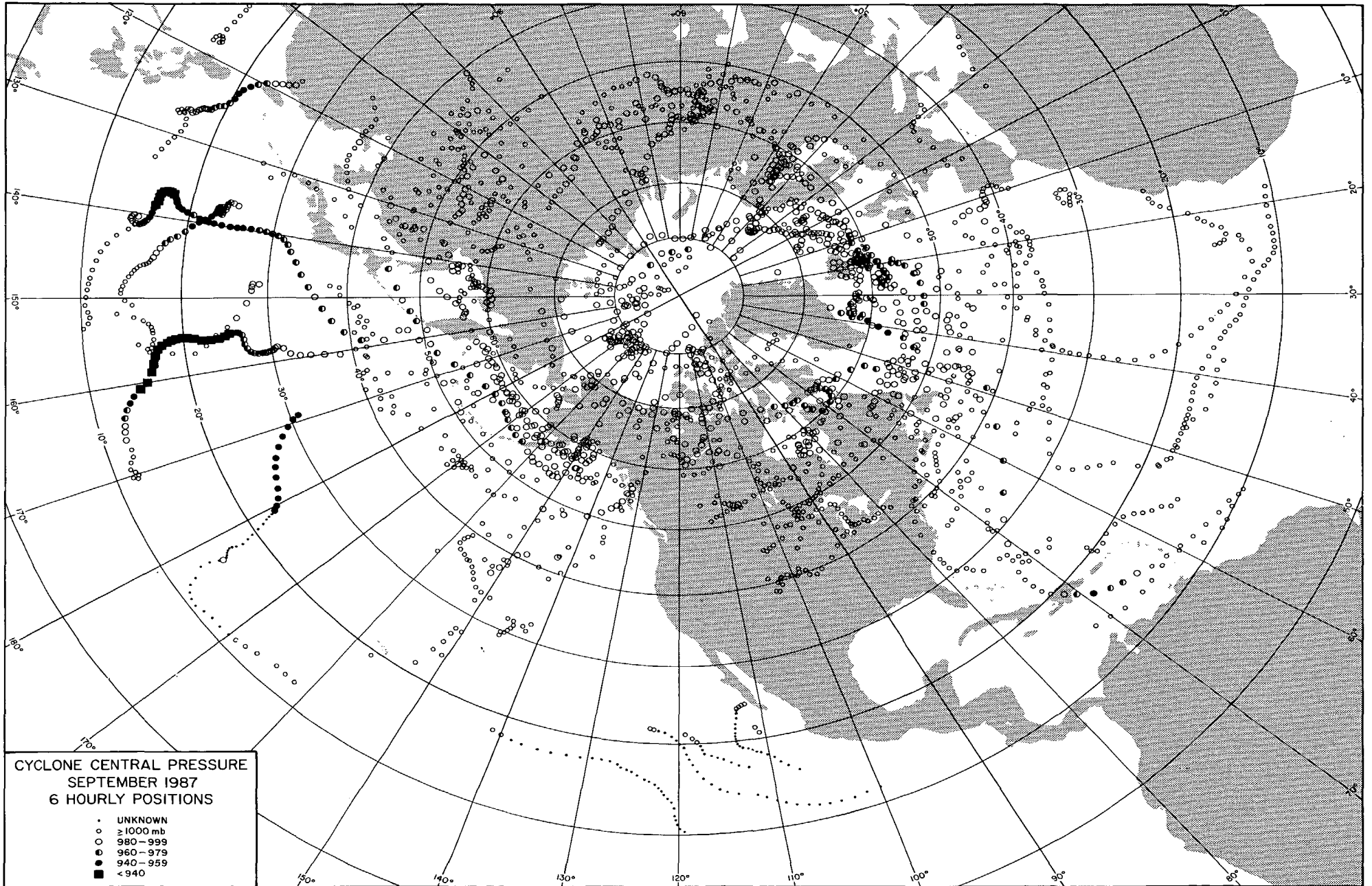




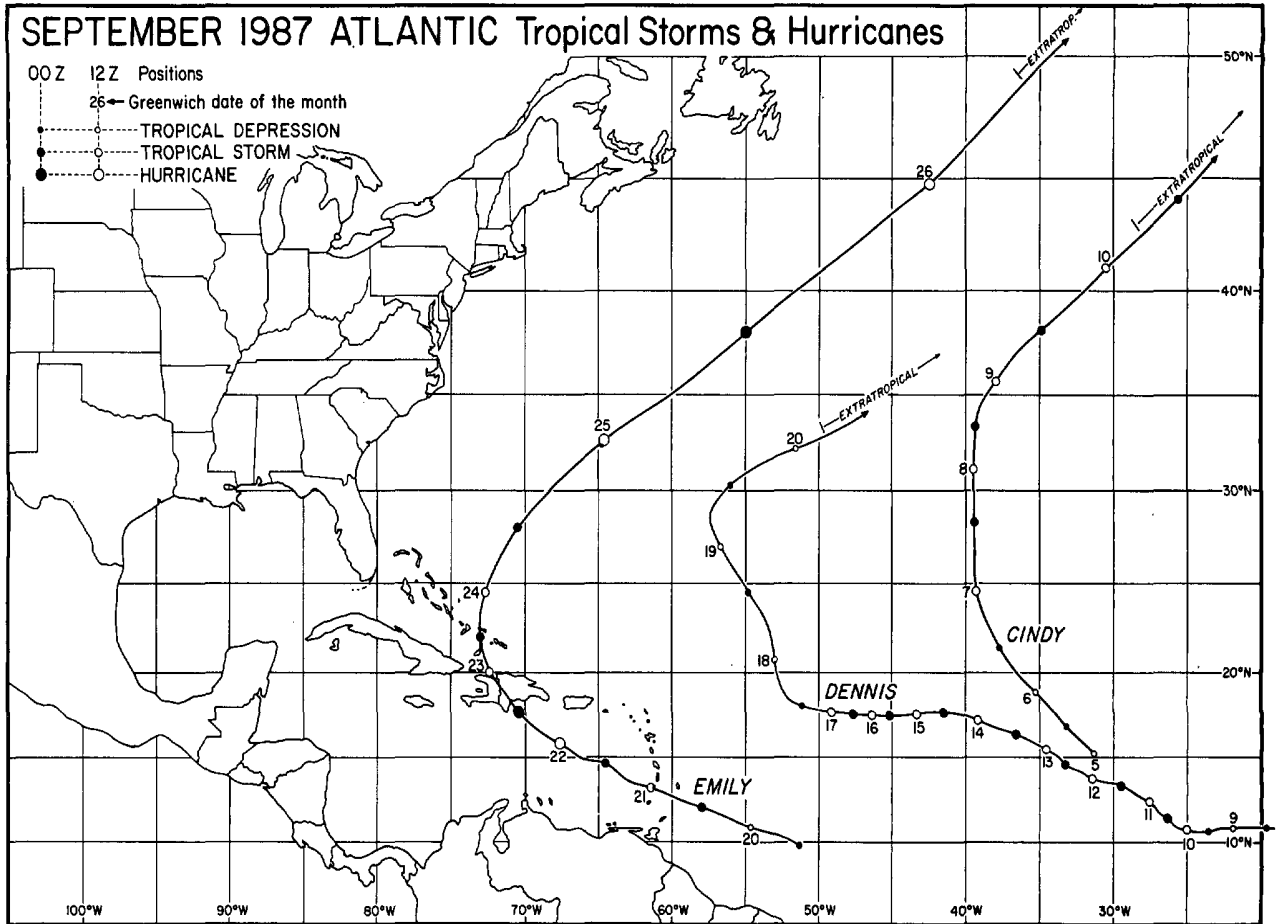
**CYCLONE TRACKS
SEPTEMBER 1987**

NUMBER OF CYCLONES	
14	BEGAN IN PREVIOUS MONTH
98	BEGAN AND ENDED IN THIS MONTH
14	CONTINUED INTO NEXT MONTH
126	TOTAL CYCLONES IN MAP

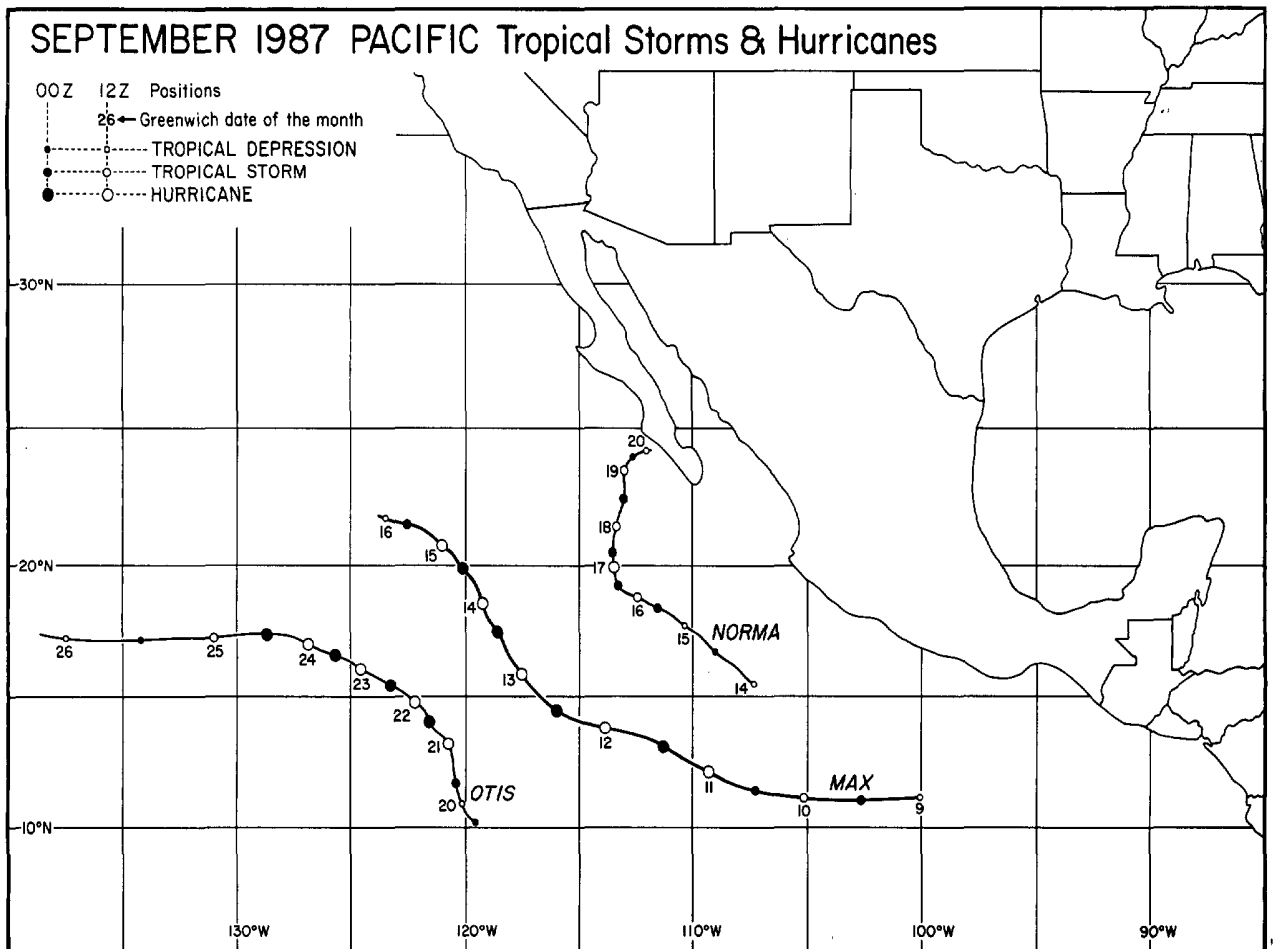
Mapped at the University of Chicago from NMC, 6-hourly surface maps



TROPICAL STORMS AND HURRICANES



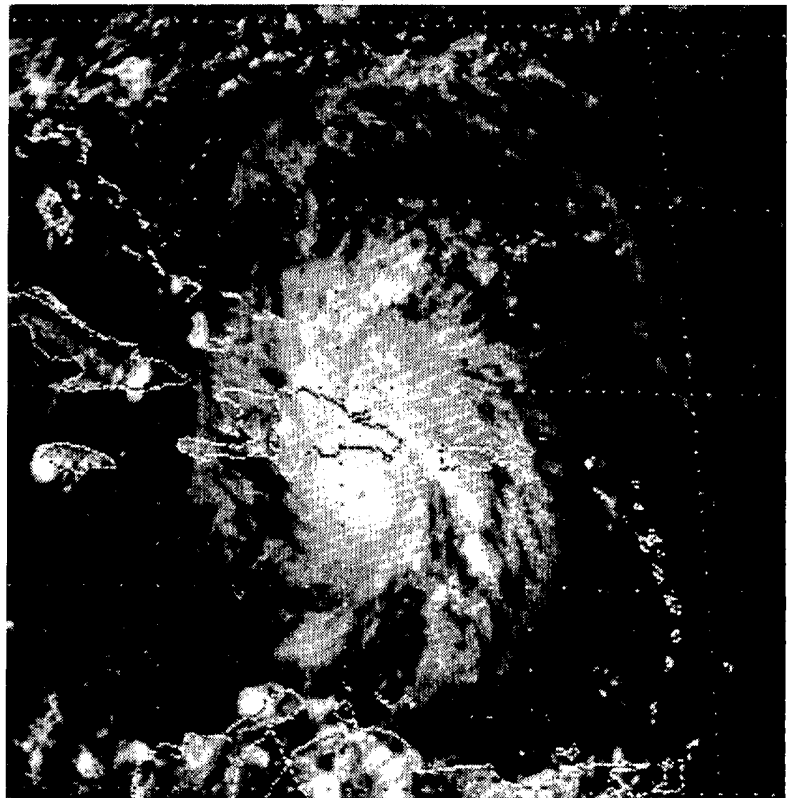
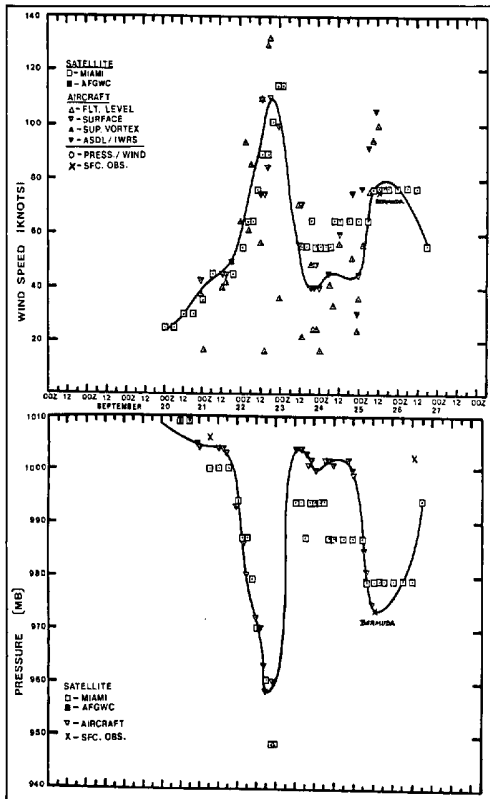
---Best track data from the National Hurricane Center, Miami, Florida.



---Best track data from the NWSFO at San Francisco, California.

TROPICAL STORMS and HURRICANES ---- continued

Hurricane EMILY, the first hurricane in the Caribbean Sea since KATRINA (1981), ended an unusually long absence period for hurricanes in the Caribbean. Although small, EMILY was noteworthy for the impact of its landfall in the Dominican Republic and, after re-intensification and an acceleration of translation, its passage over Bermuda. In the Dominican Republic, 3 people were killed and \$30 million in damage was done. Two days later, with \$35 million in damage and winds gusting to 101 knots, the hurricane became the worst to strike Bermuda in 39 years.

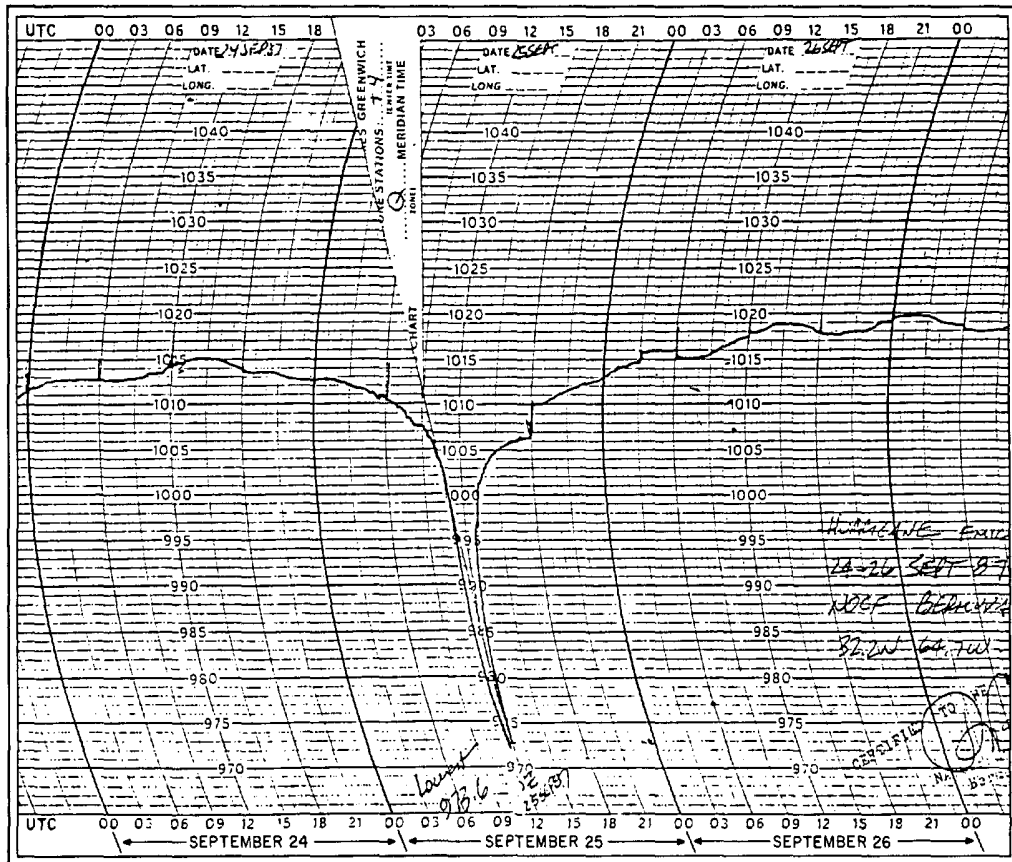
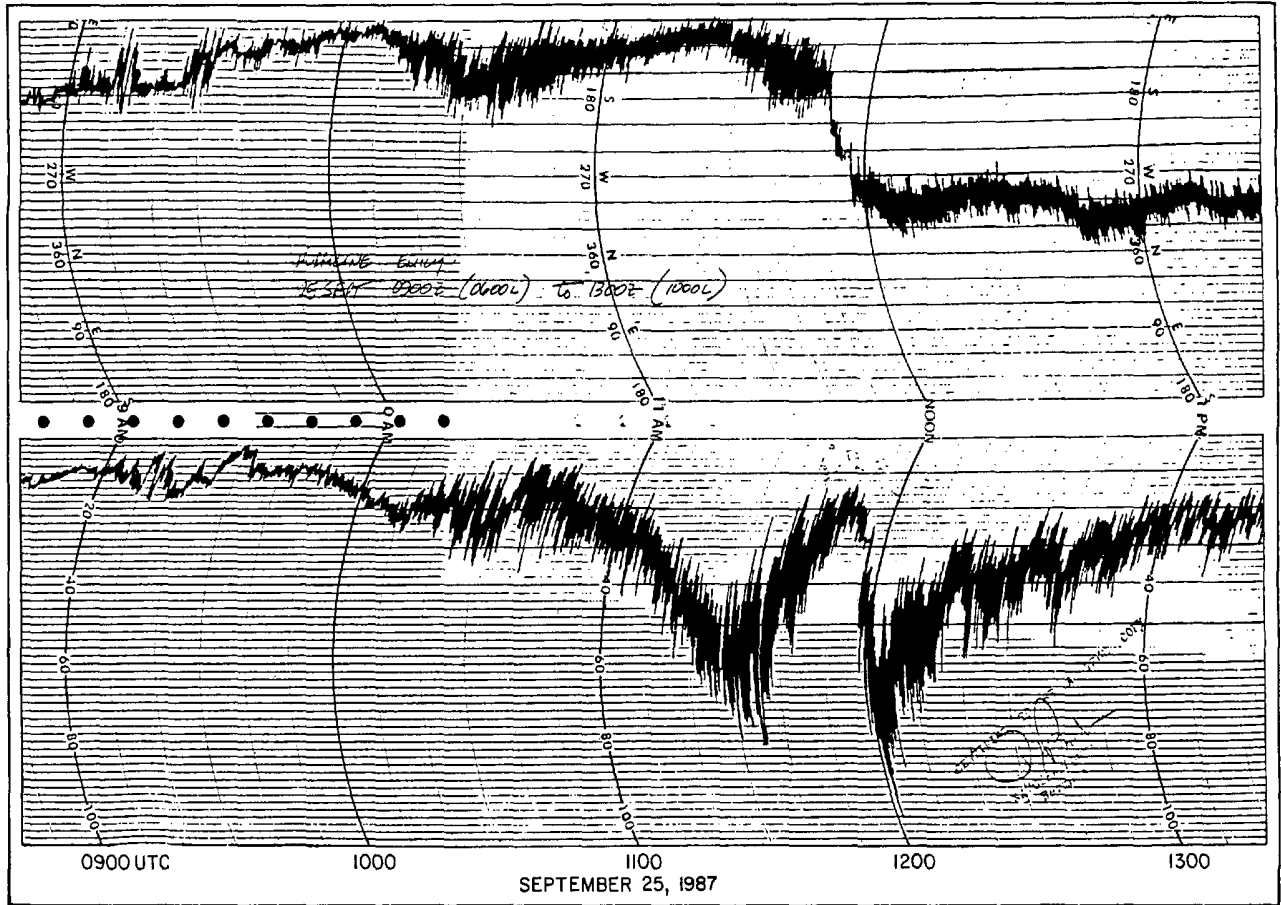


LEFT: Plots of estimated maximum wind speed and minimum surface pressure versus time for Hurricane EMILY. RIGHT: A GOES 6 satellite, visible image shows EMILY at 2001 UTC on September 22, 7 hours prior to its landfall in the Dominican Republic and 2 hours after attaining its 958 mb, minimum sea level pressure.

LOCATION	LOWEST PRESSURE		WIND				RAINFALL	
	MB	Date/Time(UTC)	Dir/KT	Highest Sustained Date/Time(UTC)	Dir/KT	Peak Gust Date/Time(UTC)	24-HR	Storm
LESSER ANTILLES:								
Barbados TBFB	1005.1	21/0635	160/38	21/0700	160/40	21/0700	0.63	1.06
Guadeloupe TFRF	1010.9	20/2355	120/28	21/1650			1.61	
Dominica TDPD	1010.1	21/2000	160/16	21/1600			0.78	
St. Lucia TLPL	1008.3	21/2110	110/45	21/1100	110/48	21/1215	1.86	
St. Vincent TVSV	1005.6	21/1100	MSG/30	21/1145	MSG/43	21/1155	2.78	
Grenada TGPY	1010.0	21/0800	MSG/16	21/1600			0.45	
Tobago TIPT	1009.8	21/0800	MSG/07	21/2300	MSG/18	21/1350	0.40	
DOMINICAN REPUBLIC:								
Santa Domingo MDSD	1012.0	23/0100	150/20	23/0300	140/36	23/0240	2.92	4.59
Puerto Plata MDPP	1013.0	22/2300	160/16	22/2100			1.34	1.42
Santiago MDST	1011.9	23/0900	070/20	23/0700	070/36	23/0650	2.19	2.21
Sabana de la Mar MDSM	1014.1	23/0700	160/14	23/1200	160/29	23/0730	1.80	2.87
Herrera Airport MDHE					MSG/51	23/0400		
BAHAMAS:								
Great Inagua MYIG	1011.0	23/1500	MSG/08	23/1000			0.12	
Turks Is. MBUT			160/25	23/2022	160/50	23/2022		
Crooked Is. MYCI	1012.4	23/1800	MSG/20	23/1500			0.64	
Mayaguana Is. MYMM	1008.1	23/1900	MSG/30	23/1900			1.35	
Long Island MYAB	1012.2	23/1800	MSG/14	23/1800			0.00	
San Salvador MYSM	1013.4	24/0700	MSG/10	24/1300			0.00	
Caicos Is. MBSC	1010.0	24/0105	160/35	23/2000	160/45	23/2000		
Providenciales MBPV					160/40	23/2030		
BERMUDA:								
Naval Air Station TXKF	973.6	25/1200	290/75	25/1202	290/101	25/1202		

Selected meteorological data for Hurricane EMILY, September 20-26, 1987.

TROPICAL STORMS and HURRICANES ---- continued



Wind and pressure traces from Bermuda's Naval Air Station during EMILY's passage. As shown by the traces, the hurricane's circulation center passed by just north of the station shortly before 1200 UTC.

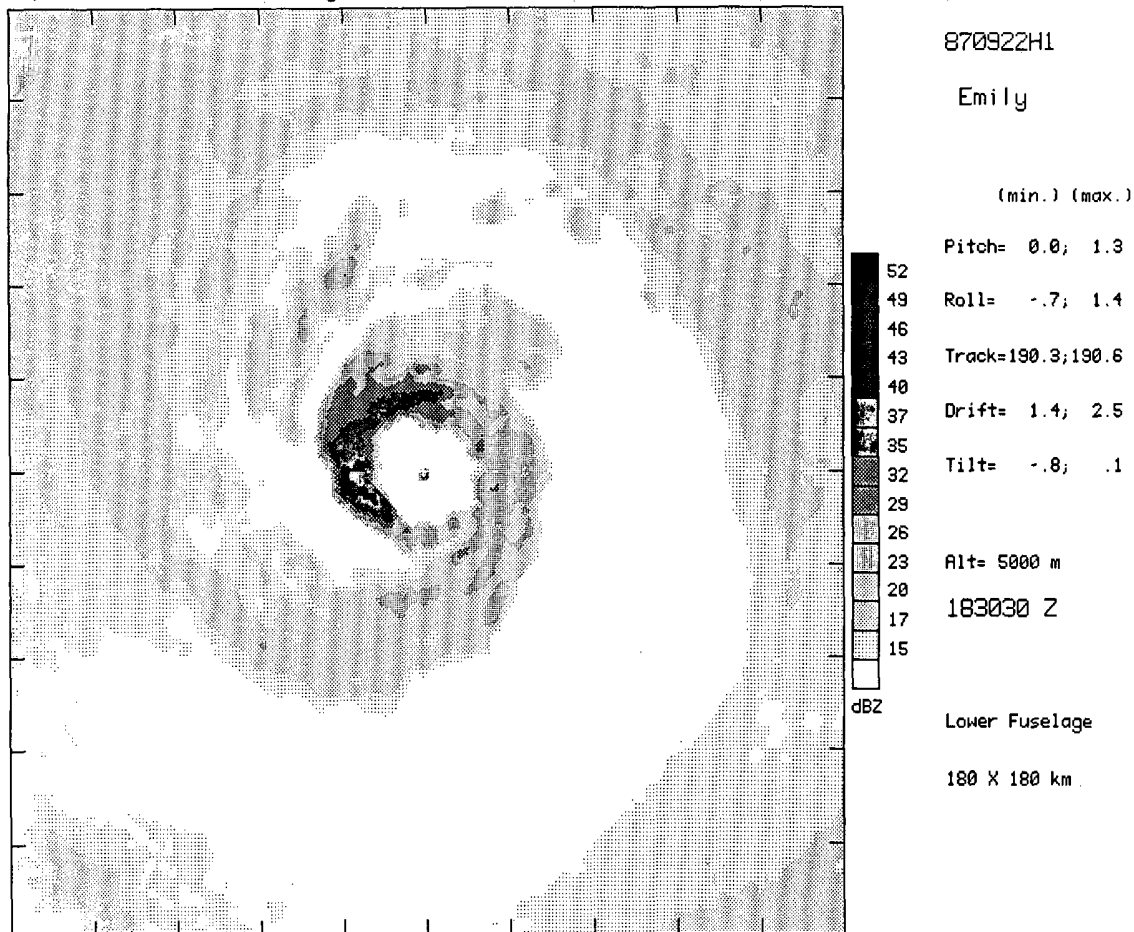
TROPICAL STORMS and HURRICANES ---- continued

VESSEL CALL SIGN	DATE		TIME	SHIP POSITION		WIND		PRESSURE
	MONTH	DAY	(UTC)	LAT(N)	LON(W)	DIR	SPEED(kt)	(mb)
WHDI	09	24	12	24.0	71.5	180	35	1009.5
DUEK	09	25	12	30.5	65.5	220	35	1012.5
VSBS	09	26	12	45.0	40.2	180	35	1002.5

Wind and pressure reports received from ships that encountered at least tropical storm force winds (35 knots or more) associated with EMILY. ---Table above and all material on pages 7 through 10 from the National Hurricane Center and supplied by AOML/Hurricane Research Division, both of Miami, Florida.

On September 22, 1987, the Hurricane Research Division of AOML carried out a 2-aircraft research mission on EMILY as part of an eyewall water budget study. During the experiment, EMILY had a well-developed circular eyewall with a 15 to 20 km diameter, maximum winds of 60 to 65 m/s, and a minimum surface pressure of 960 mb. Despite unusually strong vertical air motions and occasional lightning, NOAA pilots were able to complete the research patterns, and almost 7 hours of data from the storm's inner core was collected by each aircraft. One plane penetrated the eye 19 times, which is believed to be a record for a single Atlantic-basin flight. As a goal of the study, HRD plans to examine the manner in which liquid water and ice were generated in EMILY's eyewall, and, then were dispersed to other parts of the storm.

NEXT THREE FIGURES: EMILY, depicted in AOML/HRD computer-processed radar images taken from NOAA aircraft on September 22nd, is seen in PPI scan from the lower fuselage radar at 183030 UTC (below), in a cross-section scan from the tail radar at 183042 UTC (top, page 11), and again in PPI scan from the lower fuselage radar at 183306 UTC with the aircraft track and storm-relative (flight level) winds superimposed (bottom, page 11). ---All three figures from AOML/Hurricane Research Division, Miami, Florida.



TROPICAL STORMS and HURRICANES ---- continued

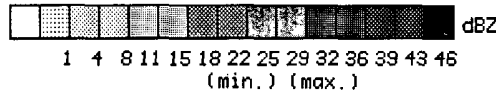


E 183042 Z

870922H1

Emily

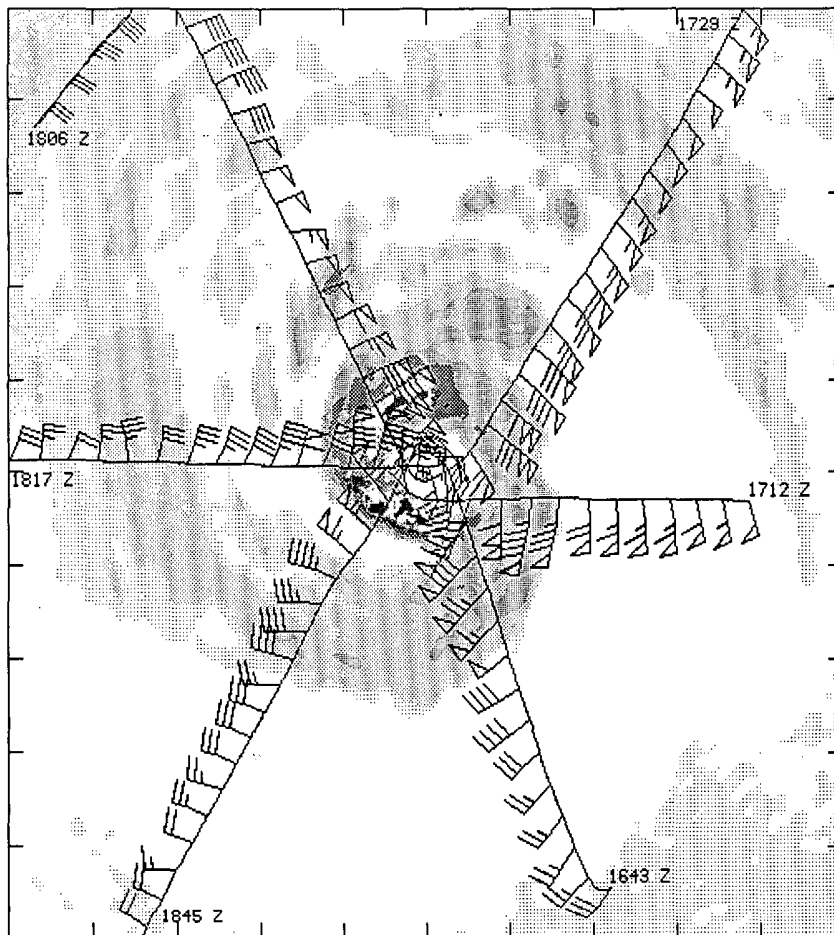
W



Pitch= .5; 2.5
Roll= -18.2; .1
Track=187.4;190.5

Drift= .1; 1.1
Tilt= -.3; 1.4

Alt= 5000 m
Tail Radar
162 X 20 km



870922I1

Emily

(min.) (max.)

Pitch= 1.2; 2.2

Roll= -2.0; 5.2

Track= 88.9; 91.4

Drift= -4.0; -2.7

Tilt= 2.7; 3.9

Alt= 3000 m

183306 Z

Lower Fuselage

180 X 180 km

Aircraft Position:

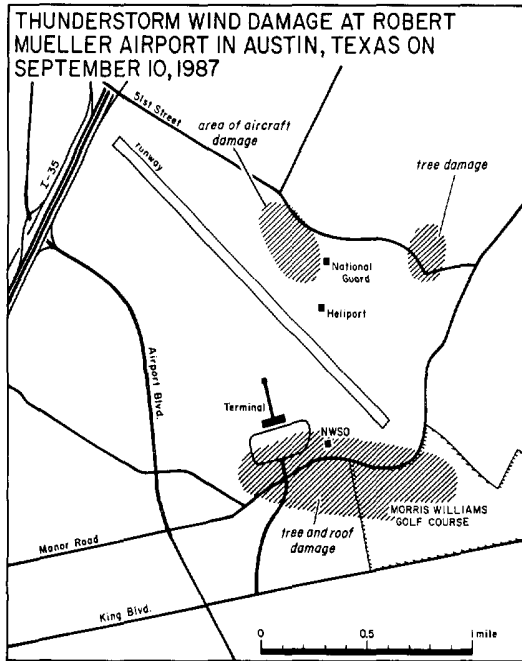
16.9 N

69.1 W

Winds plotted storm relative

1. THUNDERSTORM WINDS at AUSTIN, TEXAS on September 10, 1987

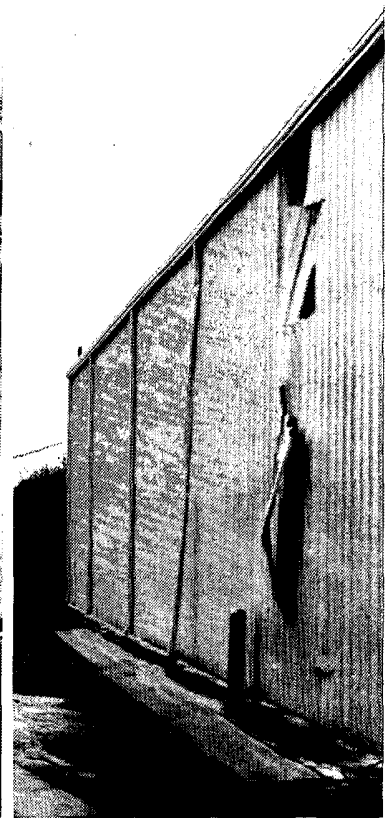
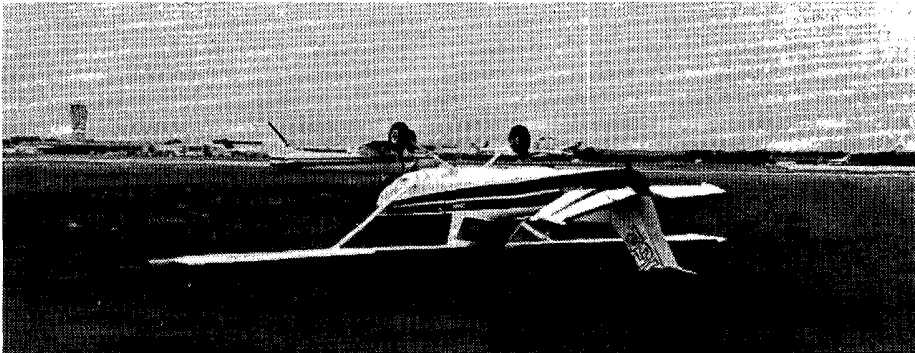
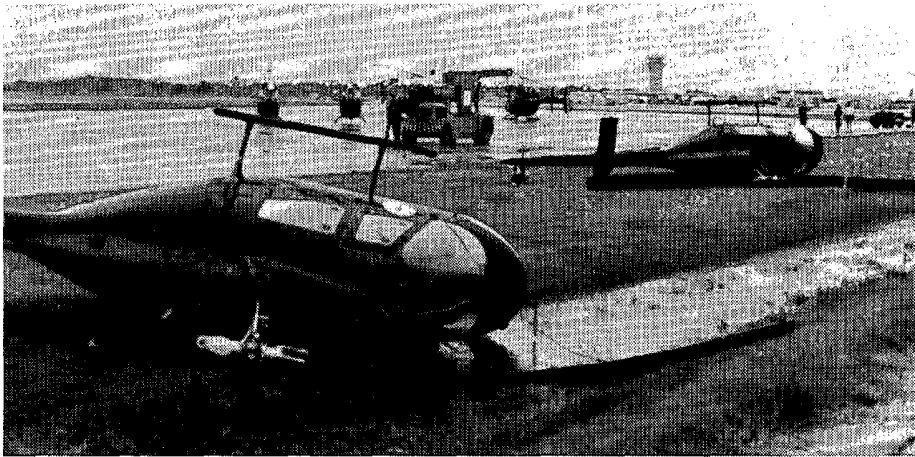
During the afternoon of September 10th, strong winds from a thunderstorm caused considerable damage in north and northeast Austin, Texas, especially at the Robert Mueller Municipal Airport. In a 20-minute period at the airport, winds gusted at up to 72 mph from the north starting at 1536CST, intensified while gusts increased to as high as 81 mph by 1545CST, and then changed direction gusting up to 71 mph from the southeast at 1556CST. Many aircraft suffered major damage or destruction from the winds, including 6 National Guard helicopters that were toppled. Other area damage consisted of downed trees and tree limbs and minor structural damage to hangars and other buildings on or near the airport grounds. Heavy rain accompanied the winds.



LEFT: Areas of wind damage that occurred at and around the Robert Mueller Municipal Airport in Austin, Texas during the storm of September 10, 1987.



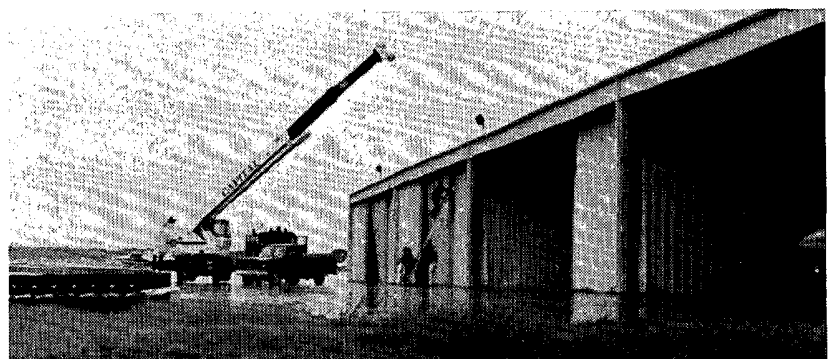
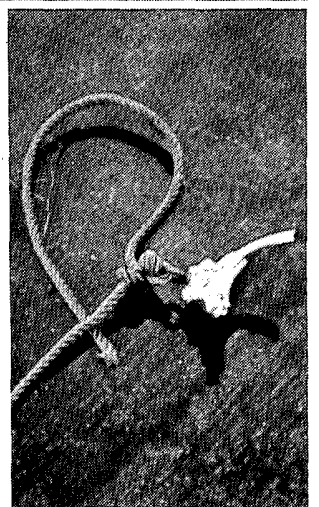
Snapped trees and tree limbs along Manor Road near the entrance to Mueller Airport.



Above examples of the damage at Mueller Airport include (clockwise from top left) tipped over National Guard helicopters, a ripped hangar wall, and a flipped Cessna 152, all at the north end of the airfield.



Another scene at the north end of the airfield, the 5 plane pile-up above resulted when the aircraft were torn from their tiedowns in the foreground and carried over 100 feet before coming to rest at the front of a hangar. The violent wrenching of the planes from their moorings not only destroyed the aircraft but created long gouges in the pavement (left) as well. In one case (right), it was the plane and not the tiedown that failed, as part of the plane remained attached to the securing rope.



Airport personnel attend to damaged hangar doors shortly after the storm.

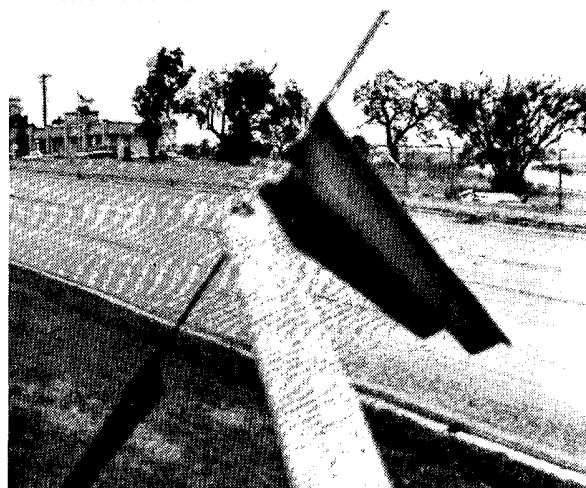
THUNDERSTORM WINDS at AUSTIN, TEXAS ---- continued



Meteorologist Jim Dugan points out one of the many damaged or destroyed trees near the NWSO at the south end of the airfield.



Although minor, damage was also sustained by the National Weather Service Office at the south end of Mueller Airport, demonstrated here by roof flanging that was bent upward on the south side of the building (top) and the north side of the second-floor observation deck (bottom).



Sheet metal ripped from hangars and other structures adorns trees, fencing and a guy wire, also near the NWSO (pictured).



A sample of the tree damage in a residential area at the northeast end of the airport. Tree and powerline damage was widespread throughout the north side of the city.

THUNDERSTORM WINDS at AUSTIN, TEXAS ---- continued

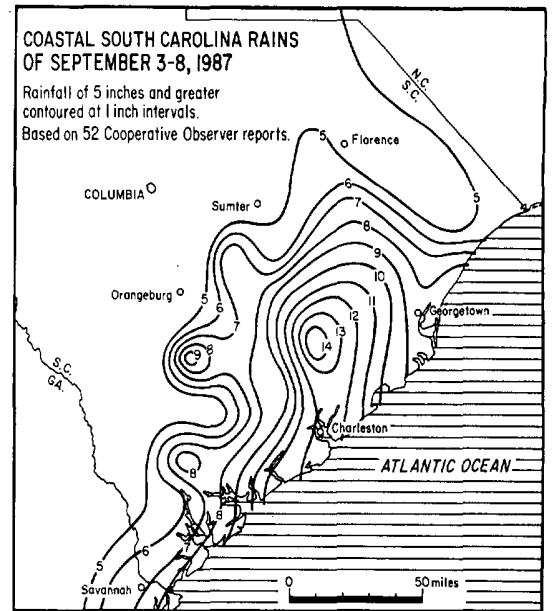


Damage resulting from the September 10th storm was also heavy at Austin's Morris Williams Municipal Golf Course, almost directly across Manor Road from the NWSO. A canopy was ripped from the front of the clubhouse (top left) and numerous trees were snapped or uprooted throughout the grounds. Despite the new hazards produced by the storm, many golfers continued their game after it subsided, including the duffer attempting to wedge his ball from amid fallen limbs at bottom right.

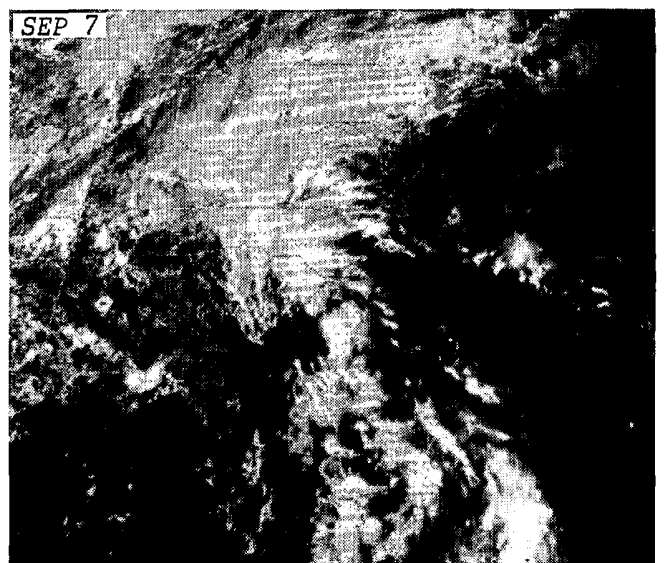
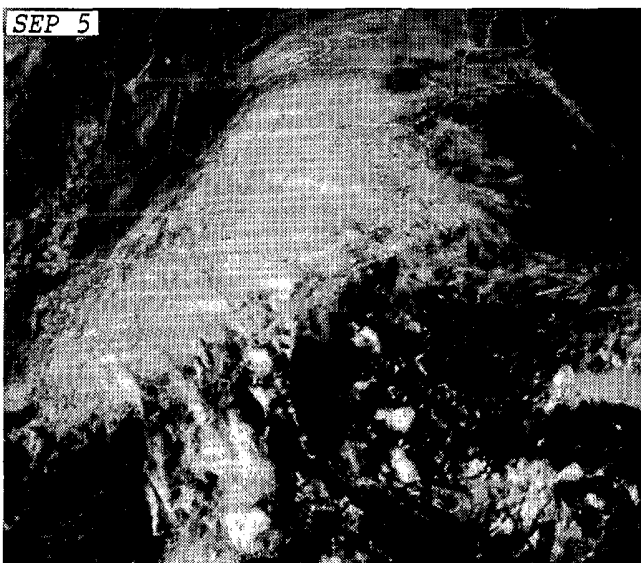
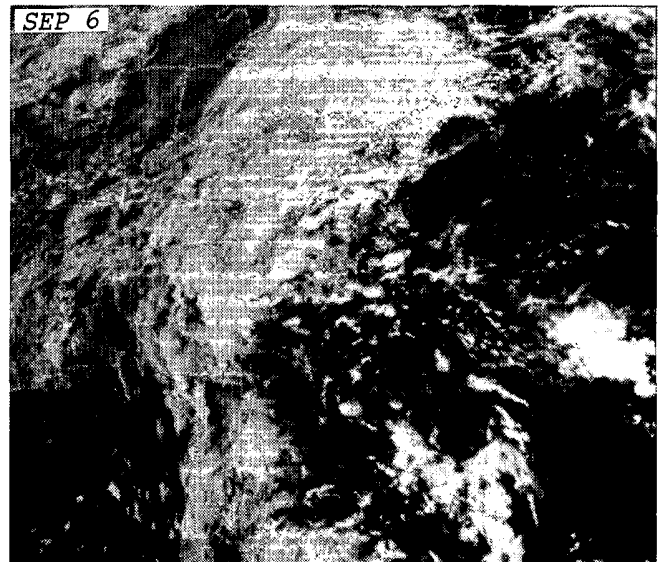
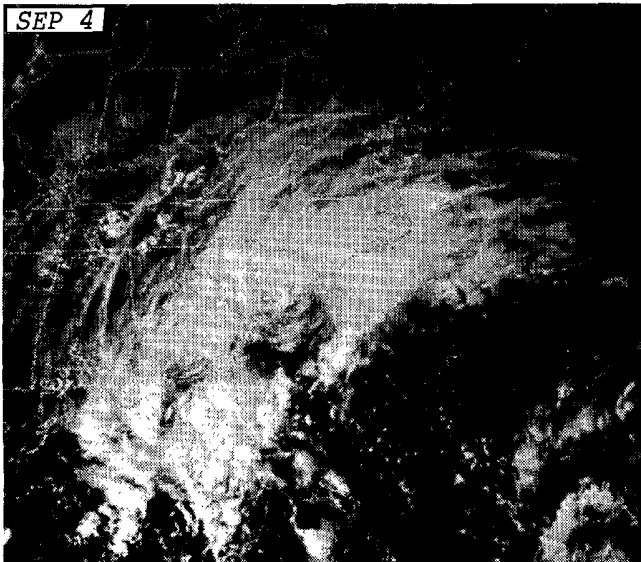
---Map and all photos on pages 12 through 15 by Troy Kimmel, Meteorologist, KVUE-TV.

2. HEAVY RAINS in COASTAL SOUTH CAROLINA on September 3-8, 1987

During the first week of September 1987, a stationary trough positioned along the eastern seaboard and supplied with ample moisture for abundant precipitation was met by a weak low pressure disturbance drifting northwestward through the Atlantic just northeast of the Bahamas. This offshore meeting resulted in the formation of a tropical depression that moved northward into the Carolinas on the 7th and 8th. Concurrent with the evolution of the system, heavy rains deluged coastal areas of South Carolina on a daily basis, but especially on the 6th and 7th. Flooding occurred in many areas, but was most prevalent in the vicinity of Charleston which, with rains that preceded the event, experienced a 10-day rainfall of 18.44 inches. For Charleston, such an event has a return period of 100 years.



---Map by the University of Chicago from data supplied by NCDC.



Daily, GOES 6 satellite, visible images, each taken at 1530EST, show the rain-producing cloud system that persisted over the Southeast U.S. as the tropical depression formed on September 4th through 7th. ---Photos from NESDIS.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
1 ALABAMA									
Baldwin County	08	1800CST			0	0	?	?	TSTM Wind (G70)
	08	1900CST			0	0	?	?	TSTM Wind
	Thunderstorm winds blew down some trees near Mablis at 1800CST. Power lines were also blown down near Elberta in Southern Baldwin County at 1900CST.								
Choctaw County	17	1230CST			0	1	?	?	Lightning
	A man in his mid-40's was injured by lightning in the Scott Mountain Community about 10 miles west of Butler, Alabama. The man was out working in his yard at the time.								
Choctaw County	18	1710CST			0	0	?	?	Lightning
	Lightning struck and ignited three crude oil tanks at Aguilla in Southwest Choctaw County. About 75 families were evacuated as roads leading into the area were closed off.								
2 ARIZONA									
Mohave County Temple Bar 29 NE Kingman	04	1705MST			0	0	3	0	Thunderstorm Wind
	Strong thunderstorms hit the south shore of Lake Mead during the afternoon. Winds were estimated to be gusting to about 60 mph.								
Mohave County Bullhead City	04	2130MST			0	0	3	0	Flash Flood
	Police reported the city was virtually shut down as intense thunderstorms and heavy rains resulted in flooded washes.								
Yuma County 10 NE Yuma	22	1600MST	0.5	10	0	0	0	0	Tornado (F0)
	A very short-lived tornado was sighted near Dome and moved to the northwest, over open land.								
Yuma County 7 NE Yuma	22	1600MST	0.5	10	0	0	3	0	Tornado (F1)
	Damage was limited to part of the Henderson Lettuce Ranch where a corrugated steel roof on a storage shed was torn off and pieces thrown to the northeast. A nearby power pole and transformer was destroyed. An 800 lb. welder on wheels was picked up and thrown against a fence. Hail up to a half-inch diameter was reported nearby.								
Pima County Tucson	22	1730MST			0	0	3	0	Thunderstorm Wind
	Many tree limbs and power lines downed as winds, heavy rains and lightning struck the city. Peak wind gusts were recorded at 49mph at the airport.								
Maricopa County Phoenix Area	22	1745MST			0	0	4	?	Thunderstorm Wind
	Strong thunderstorms struck many areas around the greater Phoenix metropolitan area. Some homes were set on fire from lightning strikes. Winds gusted to 71 mph at KTSP-TV. Power lines were downed in Tolleson on Buckeye Road, between 91st Ave and 99th Ave.								
Coconino County Flagstaff	27	1300MST			0	1	?	?	Lightning
	One person was injured when lightning struck a metal building at Pulliam Airport.								
3 ARKANSAS									
Craighead County	10	1325CST			0	0	3	-	Thunderstorm Wind
	A 100-foot elevator was torn off the side of a grain warehouse in Jonesboro. Also, a large hole was blown out on one of the warehouse walls.								
Desha County	10	1535CST			0	0	?	-	Thunderstorm Wind
	A severe thunderstorm moved through McGehee, shattering windows, breaking tree limbs off, and knocking down power lines.								
Pulaski County	12	2130CST			0	0	3	-	Hail (1.75")
	The State Police reported getting golfball-size hail at their Troop A Headquarters in Little Rock. The University of Arkansas at Little Rock campus also experienced the large hail which damaged a large awning covering a walkway.								
Pulaski County	12	2130CST			0	0	?	-	Thunderstorm Wind
	Winds were clocked at 70 mph in Little Rock at the Sheriff's Office. Power outages resulted from downed wires by the strong gusts.								
4 CALIFORNIA, Northern									
Shasta Co., Shingletown (15 W Redding)	01	1620					3	0	Thunderstorm Wind
	Downdrafts from high bases thunderstorms blew a single-wide mobile home from its foundation.								
California Mountain areas	01-20				8	102	8	?	Lightning
	Southerly flow aloft brought high based thunderstorms to the dry mountain areas of California. From Aug. 29th to Sep. 5th there were over 12,000 strikes reported, which ignited 1200 separate fires, which burned an estimated 760,000 acres of wildlands. They also destroyed 39 homes, 59 other buildings, 1.4 billion board feet of timber and countless acres of watershed. Nearly 7000 people were evacuated, and 5000 firefighters were used in actual fire suppression.								
4 CALIFORNIA, Southern — NONE REPORTED									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
5 COLORADO									
Denver County COZ 011	2	evening	0	2	0	0	0	0	Lightning
Lightning struck two men, aged 18 and 35, who were standing under a tree in downtown Denver. Both were injured seriously and hospitalized.									
Northeast Colo. COZ 011-012	5	aftn, eve.	0	0	0	0	0	0	Hail (1.4)
A thunderstorm complex produced large hail at several spots in Adams and Arapahoe counties, but no damage was reported. Severe weather reports..									
1605	7/8	inch hail just east of Buckley Field in Aurora.. (W. Arapahoe)							
1620	1 3/8	inch hail 2 miles east of Buckley Field (W. Arapahoe)							
1725	1 1/4	inch hail 10 miles NNW of Bennett (C. Adams)							
1835	1 1/4	inch hail 6 miles N. of Byers (E. Adams)							
Prowers County COZ 017	6		0	0	0	0	0	0	Hail (1.0)
1 inch hail fell in Lamar.									
Lincoln County COZ 012	7	1845	0	0	0	0	0	0	Hail (1.75)
Hail up to golfball size piled up a foot deep 10 miles east of Hugo; there was local flooding that closed highway 287 for about an hour.									
El Paso County COZ 014	10	1550	0	0	0	0	0	0	Hail (1.0)
1 inch hail fell in the northern part of Colorado Springs.									
Weld County COZ 011	10	1655	0	0	0	0	0	0	Hail (1.75)
Golfball size hail fell in Eaton.									
Mesa County COZ 003	13	1415	0	0	3	3			Tstm. winds (G48)
Thunderstorm microbursts blew down some power lines just west of Grand Junction, causing a power outage that affected 3000 people and lasted almost four hours. Apples were blown off trees at some orchards in the area.									
Clear Creek Cy. COZ 004	14-15		0	0	0	0	0	0	Snow, wind
8 inches of snow fell on the summit of Mount Evans, over 14 thousand feet above sea level. The snow was accompanied by temperatures as low as 8 degrees, and by winds that gusted to 61 mph.									
Otero County COZ 016	17	aftn.	0	0	3	0	0	0	Hail (1.5)
Walnut size hail fell just south of Fowler, breaking windows at a ranch. Drapes and blinds were shredded.									
Pueblo County COZ 016	20	1401	0	0	0	0	0	0	Hail (0.75)
3/4 inch hail fell at the Pueblo airport from 1401 till 1411.									
Otero County COZ 016	20	aftn	0	0	0	0	0	0	Hail (2.0)
Egg sized hail fell in Fowler.									
Kiowa County COZ 017	20	1410	0	0	0	0	0	0	Hail (1.5)
1 1/2 inch hail fell at Sheridan Lake.									
Larimer County COZ 011	26	2015	0	0	3	0	0	0	Tstm. winds
Strong winds, probably thunderstorm microbursts, blew a patio roof off of a mobile home in Fort Collins. Debris also caused light damage to an adjacent mobile home.									
6 CONNECTICUT ————— NONE REPORTED									
7 DELAWARE									
New Castle Co	8	2015EST	0	0	3	0	0	0	Flash Flood
Thunderstorms produced locally heavy rainfall, resulting in minor flooding along Smalleys Dam Road. Water levels receded below bankful around midnight.									
New Castle Co	22	1426EST	0	0	?	0	0	0	Hail (0.75)
Pea and marble sized hail were reported in Pike Creek Valley. At 1501EST, 3/4 inch hail occurred in Penny Hill, and Beaver Brook had pea size hail about 1620EST.									
8 FLORIDA									
Osceola Co., Kissimmee(14 mi W)	01	1540EST	1.0	30	0	3	5	0	Tornado (F1)
A tornado went through a recreational vehicle park and caused minor injuries to three people. Fifty vehicles were damaged by the tornado and 18 were destroyed.									
Flagler Co., Palm Coast	02	1300EST			0	6	0	0	Lightning
Six men on a bridge construction crew were injured when lightning struck the piling platform on which they were standing.									
St. Lucie Co., Port St. Lucie	02	1415EST			0	1	0	0	Lightning
A 69 year old man was injured when lightning struck a nearby tree. It was not raining at the time.									
Columbia Co., Lake City	05	1530EST	1.0	30	0	0	0	0	Tornado (F0)
The sheriff's office and the public reported a tornado.									
De Soto Co., Arcadia	09	1740EST			0	0	3	0	TSTM wind (50)
High wind destroyed a garage and uprooted a large pine tree.									
Escambia Co., Pensacola	08	1930CST			0	0	3	0	TSTM wind (55)
08	1930CST				0	1	0	0	Lightning
A man was injured by lightning while talking on the telephone. High wind blew over a semi trailer truck.									
Lee Co., Eastern Lee Co.	10	1540EST			0	0	3	0	TSTM wind (55)
High wind blew a shuffle board court roof on to a mobile home.									
St. Johns Co., Hastings	11	1530EST			0	0	4	0	TSTM wind (65)
High wind blew over and destroyed a tied down mobile home. Many trees were downed.									
Broward Co., Fort Lauderdale	15	1600EST			0	0	0	0	TSTM wind (50)
A wind gust of 50 knots was recorded at Fort Lauderdale airport.									
Broward Co., Fort Lauderdale	17	1530EST			1	0	0	0	Lightning
A 12 year old male was killed when lightning struck a nearby tree. It was not raining at the time. M120									
Brevard Co., Melbourne	20	1730EST			0	1	0	0	Lightning
A 29 year old male was injured when lightning struck nearby in a parking lot.									
Broward Co., Coral Springs	22	1545EST			0	2	0	0	Lightning
Two men working on a roof were injured when lightning struck nearby. It was not raining at the time.									
Palm Beach Co., Delray Beach	23	1345EST	0.5	10	0	0	0	0	Waterspout
A waterspout was photographed over the Atlantic east of Delray Beach.									
Dade Co., Miami Beach	26	1440EST	0.5	10	0	0	0	0	Waterspout
Lifeguards reported a waterspout near the beach.									
Monroe Co., Key West	27	0619EST			0	0	0	0	TSTM wind (50)
A wind gust to 50 knots was recorded at Key West Airport.									
Lee Co., Sanibel	27	1630EST			1	0	0	0	Lightning
A 35 year old female was struck and killed by lightning while riding a bicycle on Sanibel Causeway. It was not raining at the time. F350									
Sumter Co., St. Catherine	27	1720EST			0	0	3	0	TSTM wind (50)
High wind uprooted several trees and damaged a mobile home.									
Dade Co., Coral Gables	28	1430EST			0	0	0	0	Waterspout
A waterspout was sighted from the WSFO Miami.									
Dade Co., Miami	30	2225EST			0	0	0	0	TSTM wind (50)
A wind gust of 50 knots was recorded at the South Miami Beach Coast Guard Station.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

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					KILLED	INJURED	PROPERTY	CROPS	
9 GEORGIA									
Oglethorpe Co. 3N Lexington	06	2100EST			4	2	4	0	Flash Flood
		A narrow band of thunderstorms produced 5 to over 7 inches of rain during the late afternoon and early evening. This produced a flash flood on Mills Stone Creek in northeast Georgia. Three couples attempted to cross Mills Stone Creek at Echols Mill in a small car several hours after the end of rain. Shortly after their car stalled in mid stream a surge of water, probably due to the collapse of beaver and/or trash dams just upstream from the old mill site, swept the car downstream. The six people clung to a rock until the very rapidly rising water swept them downstream. Four of the six drowned, one was able to save himself and the other was rescued from a tree. The car was destroyed. F43V F34V M34V F42V							
Murray Co. 3N Chatsworth	08	1530EST			1	0	0	0	Tstm Wind (30)
		Gusty winds, estimated at no more than 30 mph, caused a dead elm tree to fall in a yard 3 miles north of Chatsworth. A 4 year old boy playing in the yard was killed by the falling tree. M40							
Dekalb Co, Chamblee	08	2005EST			0	0	5	0	Tstm Wind
	08	2005EST			0	0	3	0	Hail (1.0)
	08	2015EST			0	0	0	0	Tstm Wind (50)
		An apparent microburst downed many trees, several onto homes, in a one by three mile area centered near Murphy Candler Park. Utility lines were downed by falling trees and tree limbs. A few cars were also damaged by the falling debris. One inch hail fell with the storm which broke a few windows in homes. Winds were measured at 58 mph at 2015EST at Peachtree/DeKalb Airport.							
Thomas Co, Thomasville	09	1800EST			0	0	?	0	Tstm Wind
		Thunderstorm winds downed or snapped off several trees in southern Thomasville. A few power lines were downed when trees fell on them. One house was damaged by a falling tree.							
Stephens Co, 1W Toccoa	10	2115EST			0	0	?	?	Tstm Winds
		Thunderstorm winds downed several trees a mile west of Toccoa.							
Laurens Co, Dublin	11	0040EST			0	0	4	0	Tstm Wind
		Thunderstorm winds downed several trees in Dublin. Falling trees damaged a house and a car. Large advertising signs were also damaged. A plate glass window was blown out of a showroom.							
Suiter Co, Americus	13	1800EST			0	0	4	0	Tstm Wind
		Thunderstorm winds downed a few trees and power lines at scattered locations in and around Americus. A car was damaged by a falling tree.							
10 IDAHO									
Boundary, Bonner Kootenai, Benewah, Shoshone, Latah counties	2	1100 PST (0900-1700 PST)			0	0	0	4	C High Wind
		Strong gradient winds between 20 and 40 mph with gusts to 50 mph produced numerous downed limbs and power lines in these counties. In addition, blowing dust from eastern Washington farms and smoke from forest fires in Oregon and near Spokane coated the area with a layer of grime and held much of the area under a "yellowish fog of dust and smoke". Wind gusts to around 50 mph were estimated on Pend Oreille Lake in Bonner County and on the Palouse Prairie in Latah County. Spokane, Washington airport reported a peak wind gust of 47 mph.							
11 ILLINOIS ————— NONE REPORTED									
12 INDIANA									
Clinton Co Frankfort	30	2717 BST			0	0	3	0	Twind
		Strong thunderstorm winds downed 4 large trees in Frankfort. One tree fell onto a house.							
13 IOWA									
Montgomery County Red Oak	05	1657 CST			0	0	3	1	Tstm Winds (50)
	05	1657 CST			0	0	0	0	Funnel Cloud
		Trees were reported down at Red Oak where winds gusted to 58 MPH. A funnel cloud was also reported at Red Oak.							
Dickinson County Montgomery Milford	14	1105 CST			0	0	3	4	Hail (1.50)
	14	1105 CST			0	0	3	4	Hail (1.50)
	14	1121 CST			0	0	4	5	Hail (1.75)
	14	1121 CST			0	0	4	5	Hail (1.75)
Emmet County Estherville	14	1237 CST			0	0	4	5	Hail (1.75)
Osceola County Sibley	14	1240 CST			0	0	3	0	Lightning
Clay County Spencer	14	1247 CST			0	0	4	5	Hail (1.75)
Osceola County Ocheyedan	14	1247 CST			0	0	3	0	Lightning
	14	1247 CST			0	0	4	5	Hail (2.0)
Dickinson County Lake Minniewashta	14	1315 CST			0	0	4	5	Hail (2.0)
Emmet County Wallingford	14	1355 CST			0	0	3	4	Hail (1.50)
Buena Vista County Marathon	14	1535 CST			0	0	3	4	Hail (.75)
Pocahontas County Laurens	14	1540 CST			0	0	4	5	Hail (1.75)
	14	1540 CST			0	0	4	3	Tstm Winds (70)
	14	1607 CST			0	0	4	3	Tstm Winds (60)
Pocahontas Wright County Eagle Grove	14	1606 CST			0	0	4	3	Tstm Winds (60)
Pocahontas County Pocahontas	14	1620 CST			0	0	3	4	Hail (.75)
Webster County Moorland Clare	14	1700 CST			0	0	4	6	Hail (1.00)
	14	1700 CST			0	0	5	6	Hail (1.50)
Black Hawk County LaPorte City	14	1715 CST			0	0	4	5	Hail (2.75)
Hamilton County Webster City	14	1715 CST			0	0	3	5	Hail (1.00)
Benton County 3NW Vinton	14	1715 CST			0	0	4	5	Hail (1.75)
	14	1715 CST			0	0	3	3	Tstm Winds (50)
	14	1715 CST			0	0	3	5	Hail (1.75)
	14	1720 CST			0	0	3	4	Hail (1.00)
	14	1720 CST			0	0	3	5	Hail (1.75)
	14	1725 CST			0	0	4	4	Hail (1.75)
	14	1725 CST			0	0	3	5	Hail (1.00)
	14	1735 CST			0	0	3	5	Hail (1.00)
Urbana Sac County Wall Lake	14	1758 CST			0	0	3	3	Tstm Winds (50+)
		A line of thunderstorms developed over Northwest and North Central Iowa during the early afternoon hours. This line later extended into the Northeast Iowa Counties. It drifted slowly south during the afternoon. Crop damage was extensive due to hail. Numerous reports of 1 to 2-inch diameter hail were received. Crop damage was well over \$10 Million. Reports of the ground completely covered with hail were numerous. Up to 6 inches of hail accumulated along roadsides at Spencer and near Vinton. The largest hail was at LaPorte City, in Black Hawk County, with baseball sized hail reported. Several reports of wind gusts of 60 to 70 MPH were received. Eighty MPH winds destroyed a barn at Laurens. Building damage also occurred in Pocahontas. Lightning struck a house and the power plant at Sibley. A house was struck by lightning at Ocheyedan.							
	16	All Day			0	0	5	5	Flooding
	20	Evening							
		Heavy rains of 3 to 6 inches fell over Western Iowa between September 14th and the 16th. They caused flooding along the Little Sioux, Chariton, North Raccoon and Lower Nishnabotna Rivers. The flooding was relatively minor.							
		IAZ001-005-009-012-013-NEZ010 -							
14 KANSAS									
Smith Co Lebanon	09	1550CST			0	0	2	4	Hail (.75)
Jewell Co Burr Oak	09	1550CST			0	0	2	4	Hail (1.0)
Wankato	09	1622CST			0	0	2	4	Hail (1.0)
Osborne Co Osborne	09	1642CST			0	0	2	3	Hail (1.0)
Downs	09	1644CST			0	0	3	3	Hail (2.0)
Mitchell Co Cawker City	09	1650CST			0	0	2	3	Hail (.75)
Glen Elder	09	1719CST			0	0	2	3	Hail (.75)
Beloit	09	1738CST			0	0	2	3	Hail (.75)
		A cluster of severe thunderstorms moved across Smith and Northern Osborne Counties into Jewell and Mitchell Counties. Large hail damaged mto and corn throughout the storms' path, and it also damaged roofs and cars around Downs.							

STORM DATA AND UNUSUAL WEATHER PHENOMENA

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					KILLED	INJURED	PROPERTY	CROPS	
KANSAS									
Saline Co 8E Salina	09	2000CST			0	0	2	3	Hail (1.75)
	A thunderstorm dropped golfball size hail that damaged crops east of Salina.								
Kearny Co Lakin	10	1815CST			0	0	3	5	Hail (1.75)
Haskell Co Sublette	10	1825CST			0	0	3	5	Hail (1.0), TSTM Wind (61)
Seward Co Liberal	10	1828CST			0	0	3	4	Hail (.75), TSTM Wind (61)
	A line of thunderstorms dropped large hail and produced wind gusts estimated at 70mph in spots from Lakin to Sublette and Liberal. Severe crop damage was done in a strip 8-10 miles wide from 10 miles north of Lakin to Sublette. Hail covered the ground several inches deep in some spots. Hail also killed nearly a thousand ducks northeast of Lakin at Lake McKinney.								
Washington Co Hanover	14	0706CST			0	0	4	5	Hail (1.5)
Marshall Co Bremen	14	0803CST			0	0	4	5	Hail (1.75)
Herkimer Herkimer	14	0820CST			0	0	4	5	Hail (1.75)
Nemaha Co Baileyville	14	0927CST			0	0	4	5	Hail (1.75)
Jefferson Co Valley Falls	14	1125CST			0	0	4	3	Hail (1.75)
Oskaloosa Oskaloosa	14	1145CST			0	0	4	3	Hail (1.75)
Leavenworth Co Tonganoxie	14	1208CST			0	0	3	3	Hail (1.0)
Wyandotte Co Kansas City	14	1230CST			0	0	3	0	TSTM Wind (61)
	A cluster of severe thunderstorms formed near Washington and moved east through Marysville to Seneca. The storms then turned southeast and moved through Oskaloosa and Kansas City. Golfball size hail fell over a good share of Marshall and Western Nemaha Counties; and again later around Oskaloosa.								
	The Bremen and Herkimer communities, northwest of Marysville, caught the worst of the storm. Five and a half inches of rain fell in just an hour. Hail stripped crops, broke out windows and damaged roofs. Runoff took out two bridges on rural roads north of Herkimer.								
Chautauqua Co Sedan	15	1731CST			0	0	2	2	TSTM Wind (61), Hail (.75)
	A thunderstorm produced wind gusts estimated at 70 mph and dropped 3/4 inch hail at Sedan.								
Butler Co Cassoday	15	1752CST			0	0	2	2	Hail (.75)
	Three quarter inch hail fell for a short time at Cassoday.								
Montgomery Co Coffeyville	15	1815CST			0	0	3	0	TSTM Wind Dmg
	A wind gust from a thunderstorm tore part of the roof off a youth center in Coffeyville.								
Saline Co Salina Airport	15	1904CST			0	0	0	0	TSTM Wind (51)
	Outflow thunderstorm winds produced a gust measured at 59 mph at the Salina Airport. No damage resulted.								
Riley Co Manhattan Arpt	15	2000CST			0	0	2	0	Hail (.75)
	A thunderstorm dropped 3/4 inch hail briefly at the Manhattan Airport. Little damage resulted.								
Rice Co 4E Lyons	28	0100CST			0	0	4	0	Lightning
	Lightning killed 11 head of cattle in a pasture east of Lyons.								
	SPECIAL HAIL SUMMARY								
	Kansas-Oklahoma Hail Loss Service reports indicate hail was especially damaging to crops in the listed counties on the following dates:								
	09	Brown, Ford, Jewell, Smith							
	10	Finney, Haskell, Stevens							
	11	Kearny							
	14	Marshall, Nemaha, Washington							
	15	Edwards, Stafford							
	27	Grant							
15 KENTUCKY ————— NONE REPORTED									
16 LOUISIANA									
Morehouse Parish	09	0250CST			0	0	4	0	Lightning
	Lightning struck a house near Gallion. The lightning started a fire which burned the house to the ground.								
Red River Parish	10	1335CST			0	0	0	0	Hail (.88)
Bienville Parish	10	1355CST			0	0	0	0	Hail (1.75)
DeSoto Parish	10	1430CST			0	0	?	0	TSTM wind
Jackson Parish	10	1445CST			0	0	0	0	Hail (.88)
Natchitoches Parish	10	1455CST			0	0	?	0	Lightning
Union Parish	10	1455CST			0	0	?	0	TSTM wind, Hail (1.75)
Vernon Parish	10	1458CST			0	0	4	0	TSTM wind
	Severe thunderstorms developed over north and central Louisiana during the afternoon producing strong gusty winds and hail. Nickel size hail fell near Womack and Chatam while golfball size hail fell 10 miles west of Bienville and in Farmersville. Strong wind gusts downed trees and signs in Farmersville, damaged outbuildings in Logansport, and toppled a tree onto a house trailer near Anacoco. In Natchitoches, a lightning strike shattered a tree causing falling debris to damage five automobiles.								
Orleans Parish	11	0830CST			0	0	0	0	Waterspout
	A waterspout was observed over Lake Ponchartrain north of Lakefront Airport (NEW) in New Orleans.								
Calcasieu Parish	12	1340CST			0	0	?	0	TSTM wind
Beaugarde Parish	12	1400CST			0	0	?	0	TSTM wind
Calcasieu Parish	12	1400CST			0	0	?	0	TSTM wind
Calcasieu Parish	12	1405CST			0	0	0	0	TSTM wind (57)
Calcasieu Parish	12	1406CST			0	0	0	0	TSTM wind (50)
Jefferson Davis Parish	12	1445CST			0	0	4	0	TSTM wind
Acadia Parish	12	1500CST			0	0	?	0	TSTM wind
Jefferson Davis Parish	12	1500CST			0	0	0	0	Funnel Cloud
	Severe thunderstorms developed over east Texas then moved rapidly southeast across southwest Louisiana during the afternoon producing very strong wind gusts. Trees were blown onto an auto in Vinton and trees were toppled in Deridder. At 1400 CST, the sheriff's office reported power lines downed in Moss Bluff and near Westlake. An amateur meteorologist in Sulphur recorded wind gusts of 66 mph (57 kt) on an anemometer and measured 2 inches of rain in 45 minutes. The National Weather Service Office in Lake Charles clocked wind gusts to 58 mph (50 kt) as thunderstorms moved through the area. Strong wind gusts damaged a barn and trailers 5 miles west of Jennings and power lines were downed near Iota. A funnel cloud, a quarter mile in diameter, was observed moving rapidly east near the Interstate 10 interchange at Jennings.								
Orleans Parish	12	1500CST			0	60	0	0	Heat
	Approximately 130,000 people attended the outdoor, papal mass in New Orleans during the afternoon. Around 60 people were taken to area hospitals due to heat related illnesses with only about 10 cases considered serious. The temperature was around 90 during the early afternoon with a heat index of 95 to 100 before thunderstorms dropped temperatures into the mid 70s by late afternoon.								
Point Coupee Parish West Feliciana Parish	17	1900CST			0	0	?	0	TSTM wind
	17	1900CST			0	0	?	0	TSTM wind
	State Police reported thunderstorm wind gusts damaged trees and downed power lines near near Batchelor, LaCour, and Tunica.								
Cameron Parish	17	1910CST			0	0	0	0	Funnel Cloud
	A funnel cloud was sighted just south of Cameron.								
Caddo Parish	18	1130CST			0	0	?	0	TSTM wind
Bossier Parish	18	1145CST			0	0	?	0	TSTM wind
Bossier Parish	18	1150CST			0	0	?	0	TSTM wind
Webster Parish	18	1155CST			0	0	?	0	TSTM wind
	Severe thunderstorms moved across northwest Louisiana producing property damage due to strong wind gusts. Wind damaged a house near Keithville and tore off part of an apartment building roof in southeast Shreveport. At 1145 CST, several trees were blown down and two car windows were shattered by flying debris in Bossier City while wind gusts toppled trees southeast of Benton. Several trees were also blown down west of Sibley (26 miles east of Shreveport).								
St. Bernard Parish	18	1335CST			0	0	0	0	Funnel Cloud
	A pilot reported a funnel cloud 15 miles east of Chalmette.								
Terrebonne Parish	18	1445CST			0	0	0	0	Funnel Cloud
	A funnel cloud was sighted just south of Houma.								

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					KILLED	INJURED	PROPERTY	CROPS	
17 MAINE ————— NONE REPORTED									
18 MARYLAND and D.C.									
MDE005-006-007 Central and Northern MD	6	1000EST			0	0	4	7	Urban Flooding.
Rain began on the 6th and continued through the Labor Day weekend. Rainfall amounts averaged 2 to 5 1/2 inches. The heaviest rains were on the 8th, with Deer Creek receiving 6.55 inches in 22 hours. Many roads were under water for several hours with water reported 3 feet deep in parts of Baltimore. In Montgomery County, six people were rescued from a creek, and a bridge collapsed.									
Anne Arundel Co	17	1500EST			0	0	3	0	Thunderstorm Wind G35
Thunderstorms produced winds of 35 knots in the area. Some trees knocked over power lines, and marble size hail was reported.									
19. MASSACHUSETTS ————— NONE REPORTED									
20 MICHIGAN									
MIC091- MORENCI AND HUDSON, LENAWEE CO.	10	1907EST			0	2	2		LIGHTNING
A MAN STANDING BY AN ELECTRIC STOVE, AND ANOTHER LEANING AGAINST A METAL DESK, WERE INJURED.									
MIC149- THREE RIVERS, ST. JOSEPH CO.	10	2030EST			0	0	3		TSTM WIND
1 W THREE RIVERS	10	2040EST			0	0	0		HAIL (.75)
ABOUT A DOZEN LARGE TREES WERE BLOWN DOWN, POWER WAS OUT.									
STEVENSVILLE, BERRIEN CO.	21	1235EST			0	0	0		TORNADO(FD)
A TORNADO TOUCHED DOWN BRIEFLY AT GLENLORD ROAD AND RED ARROW HIGHWAY, TEARING LIMBS FROM TREES.									
MIC093-125-099- 161-163-115 PINKNEY, LIVINGSTON CO.	30	1423EST			0	0	0		HAIL(1.00)
OAKLAND CO.	30	1434EST			0	0	4		T WIND
WASHTENAW CO.	30	1438EST			0	0	4		T WIND
WARREN, MACOME CO.	30	1445EST			0	0	4		T WIND
CANTON, WAYNE CO.	30	1451EST			0	0	0		HAIL(.0.75)
LIVONIA, WAYNE CO.	30	1510EST			0	0	0		HAIL(.0.75)
MANY TREES WERE BLOWN DOWN THROUGHOUT THE AREA. A SHOW TENT COLLAPSED IN WARREN DAMAGING SEVERAL VEHICLES. A HANGAR WAS UNROOFED AT YPSILANTI.									
ALLEN PARK, WAYNE CO.	30	1510EST			0	0	0		HAIL(.0.75)
WYANDOTTE, WAYNE CO.	30	1526EST			0	0	3		T WIND(.59)
MONROE CO.	30	1534EST			0	0	3		T WIND
21 MINNESOTA									
Lake Co. 20 N Two Harbors	05	1602- 1608CST	2	20	0	0	3	0	Tornado (F1)
A tornado knocked down trees and damaged cabins along Thomas Lake. The roof of an airplane hangar was lifted and turned 180 degrees									
22 MISSISSIPPI									
Simpson County, 2NW Harrisville	08	1530CST			0	0	4	0	Thunderstorm Winds
A roof was blown off a double wide house trailer by strong winds 2NW of Harrisville in Northwest Simpson County.									
Copiah County, 5W Hazlehurst	08	1535CST			0	0	4	?	Thunderstorm Winds Hail (2.00)
Strong winds uprooted trees and blew down power lines 5W Hazlehurst. Hail up to size of eggs was also observed.									
Lauderdale County, Meridian	09	1550CST			0	0	4	0	Thunderstorm Winds
Strong winds at a furniture store blew out 8 windows. Damage to the windows and contents was valued at 10,000 dollars. A 3 foot diameter oak tree was blown down behind the store.									
Bolivar County, Cleveland	10	1645CST			0	0	?	?	Hail (.75)
Eastern Lafayette County	10	1830CST			0	0	?	?	Thunderstorm Winds
Strong winds caused extensive damage to power lines in Eastern Lafayette County.									
Hinds County, Jackson	10	1853CST			0	0	?	0	Thunderstorm Winds
High winds blew down several trees in Jackson.									
Hinds County, Pocahontas	10	2000CST			0	0	5	0	Lightning
Lightning struck a church in Pocahontas and burned it to the ground.									
Benton County, 8SE Ashland	15	1530CST			0	1	4	0	Lightning
A man was out picking peanuts when a storm came up from the west. A bolt of lightning struck a pine tree. A bolt shot off the tree and struck the man. The man experienced numbness, chest pains, sore feet, but survived. Another bolt from the pine tree struck the house and damaged a television antenna, 2 televisions, a clock, a telephone and even cracked the wallpaper.									
Pike County 3E McComb	17	1415CST			0	0	?	?	Thunderstorm Winds
Trees and power lines were blown down 3E McComb.									
Walthall County, Lexie and Tylertown	17	1455CST			0	0	?	?	Thunderstorm Winds
Numerous trees and power lines were blown down in Lexie and Tylertown.									
Warren County, 14NW Vicksburg	18	1325CST			0	0	5	0	Thunderstorm Winds (670)
Winds estimated near 80 mph ripped through the Eagle Lake area 14NW Vicksburg. Several mobile homes, roofs and porches were damaged mainly from fallen trees.									
Lawrence County, 2W Silver Creek	18	1515CST			0	0	?	?	Thunderstorm Winds
Trees were blown down on Highway 84 2W Silver Creek.									
23 MISSOURI									
....All times CST....									
Platte (KCI Airport)	14	1219			0	0	0	0	TSTM WND
Wind gust to 54 knots at Kansas City International Airport.									
Platte	14	1231			0	0	0	0	TSTM WND
Winds to 60 mph 8 miles ESE of Kansas City International Airport.									
Platte (Kansas City)	14	1235			0	0	3	0	TSTM WND
Wind damage to building at 104th and Prairie View. South of MCI.									
Clay (Kansas City)	14	1239			0	0	3	0	TSTM WND
Wind to 54 knots at downtown airport. Some damage.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS	
MISSOURI										25 NEBRASKA									
Jackson (Kansas City)	14	1247			0	0	4	0	TSTM WND	Scottsbluff Co. Lyman, Scottsbluff	04	1520CST-1600CST			0	0	3	6	Thunderstorm Wind (51) Hail (0.75)
Jackson (Kansas City)	14	1250			0	0	3	0	TSTM WND										Three-quarter inch hail and strong winds damaged crops from around Lyman through Scottsbluff. Wind gusts to 59 m.p.h. were measured at the Scottsbluff airport at 1556CST.
Jackson (Kansas City)	14	1250			0	0	4	0	TSTM WND	Morrill Co. Bayard	04	1630CST			0	0	3	6	Hail (0.75)
Clay (Missouri City)	14	1304			0	0	0	0	TSTM WND										Three-quarter inch hail driven by estimated wind gusts to 50 m.p.h. damaged crops around Bayard and Bridgeport.
Ray (Orrick)	14	1320			0	0	2	0	TSTM WND	Thomas Co. Seneca	08	2045CST			0	0	2	0	Thunderstorm Wind
St. Clair (Appleton City)	14	1310			0	0	4	0	TSTM WND										Winds blew a large shed onto railroad tracks near Seneca.
Ray (Richmond)	14	1342			0	0	0	0	TSTM WND	Howard Co. Elba	09	1050CST			0	0	4	5	Hail (1.75)
Jackson	14	1315			0	0	3	0	TSTM WND										One and three-quarter inch hail did extensive damage to crops and dented several vehicles from Elba to the St. Paul area.
Lafayette (Odessa)	14	1345			0	0	4	0	TSTM WND	Clay Co. Harvard	09	1430CST			0	0	4	5	Hail (2.00)
Lafayette	14	1345			0	0	6	0	TSTM WND										Two inch hail damaged crops, broke car windows and damaged houses in and around Harvard. Ten skylights were broken at a school. Area crops also suffered heavy damage.
Pettis (Green Ridge)	14	1358			0	0	3	0	TSTM WND	York Co. 8W York	09	1430CST			0	0	4	4	Hail (1.75)
Pettis (Sedalia)	14	1402			0	0	0	0	TSTM WND										One and three-quarter inch hail damaged crops and a number of vehicles 8 miles west of York.
Lafayette (Concordia)	14	1410			0	0	5	0	TSTM WND	Richardson Co. Falls City	09	1810CST			0	0	3	0	Thunderstorm Wind
Saline (Marshall)	14	1430			0	0	0	0	TSTM WND										Wind gusts broke tree limbs at Falls City.
Cooper (Pilot Grove)	14	1445			0	0	3	0	TSTM WND	Seward Co. Goehner	10	1600CST			0	0	3	3	Hail (1.00)
Cooper (Bunceton)	14	1500			0	0	0	0	TSTM WND										One inch hail damaged crops and property in the Goehner area.
Morgan (Stover)	14	1512			0	0	0	0	HAIL	Chase Co. 17NE Imperial	14	1400CST			0	0	4	4	Hail (0.75)
Greene (Springfield)	15	1420			0	0	5	0	TSTM WND										Three-quarter inch hail driven by strong winds damaged crops 17 miles northeast of Imperial. The hail also damaged the paint and siding on a farm home.
Greene Christian (Springfield area)	15	1425			0	0	0	0	HAIL	Chase Co. 17NE Imperial	14	1400CST			0	0	3	4	Flash Flood
Christian	15	1435			0	0	0	0	HAIL										Rainfall up to 4.75 inches fell 17 miles northeast of Imperial eroding crops and causing lowland flooding. Stinking Creek was forced out of banks for a time in the area.
Ozark and Taney (Bull Shoals Lk)	15	1610			0	0	0	0	HAIL	Madison Co. Madison	14	2100CST			0	0	4	4	Flash Flood
Adair County (Kirksville)	16	1545CST	1/8	50	0	0	4	0	Tornado (F1)										Heavy rain estimated up to 6 to 7 inches pushed Union and Taylor Creeks out of banks around and west of Madison flooding lowlands which damaged crops. Some damage was also reported to park bridges. Union Creek crested 0.9 feet over flood stage the morning of the 15th.
Pike (Bowling Green)	16	1700			0	0	3	0	TSTM WND	Buffalo Co. 5N Shelton	15	1330CST			0	0	0	0	Funnel Cloud
																			The public reported a funnel cloud 5 miles north of Shelton.
										Webster Co. 2N Blue Hill	15	1545CST			0	0	3	4	Hail (0.75)
																			Three-quarter inch hail 2 miles north of Blue Hill damaged crops and caused some property damage.
										Adams Co. Ayr	15	1600CST			0	0	4	4	Hail (1.00)
																			One inch hail damaged vehicles and crops at Ayr.
										Clay Co. Fairfield	15	1625CST			0	0	4	0	Thunderstorm Wind (56)
																			Wind gusts to around 65 m.p.h. damaged trees and power lines at Fairfield.
										Hamilton Co. Giltner	15	1650CST			0	0	3	0	Thunderstorm Wind (52)
																			At Giltner wind gusts estimated to around 60 m.p.h. caused minor damage to trees and a few utility lines.
										Saunders Co.	16	0200CST			0	0	2	3	Flash Flood
																			4.3 inches of rain fell at Prague forcing minor lowland flooding along Sand Creek downstream through the Wahoo area. Some damage reported to crops.
										Richardson Co.	16	1100CST			0	0	3	4	Flood
																			Overnight basin rainfall of 3 to 5 inches pushed the Big Nemaha River 1 foot over flood stage at Falls City with some damage to bottomland crops.
24 MONTANA																			
Garfield Co.	02	2020MST			0	0	1	0	Thunderstorm Wind										
Granite Co.	27	1400MST			1	2	0	0	Lightning										

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

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					KILLED	INJURED	PROPERTY	CROPS			
26 NEVADA											
Clark Co.	01	2130PST			0	0	5	0	TSTM WIND(48)	High based thunderstorms producing winds estimated to 55 mph by the National Park Service caused extensive damage to boats and docks in the Callville Bay Marina on Lake Mead. The same thunderstorm outbreak also produced numerous power outages around the Las Vegas area through the evening.	
Clark Co.	04	1515PST			0	0	3	0	TSTM WIND(50)	A line of thunderstorms associated with a cold front moving through southern Nevada produced gusty winds, locally heavy rain and unofficial reports of golf-ball sized hail in the area east and south of Las Vegas and over Lake Mead. Winds of 58 mph were reported in Henderson and some street intersections were flooded and impassable. Also power was out for a time in the downtown area. Other flooding was reported along U.S. 95 south of Boulder City with the road being washed out in one spot. The National Park Service reported winds to 60 mph in the Temple Bar area of Lake Mead as the line of thunderstorms crossed that area later in the evening. No major damage resulted from any of this activity.	
	04	1520PST			0	0	?	0	Flash Flood		
	04	1700PST			0	0	?	0	TSTM WIND(52)		
Washoe Co.	08	1430PST			0	1	4	0	TSTM WIND(46)	Gusty winds associated with high based thunderstorms produced roof damage to buildings in an industrial park in southeast Sparks. Peak winds of 53 mph were recorded at the Reno-Cannon Int'l. Airport two miles to the southwest at about the same time. On one building, some parts of a ventilation system fell through the roof into unoccupied offices below. The only reported injury was a cut finger sustained by a man while trying to close a door in the wind.	
Douglas Co.	13	1645PST			0	0	3	0	TSTM WIND(55)	A microburst from dissipating thunderstorms in the Zephyr Cove area of Lake Tahoe estimated at 60 to 70 mph damaged a few sailboats.	
27 NEW HAMPSHIRE ——— NONE REPORTED											
28 NEW JERSEY, Northern											
Sussex, Morris and Passaic Co.	13	Morning-Afternoon			0	0	?	0	Flood	A slow moving weather system dumped over 6 inches of rain across parts of northern New Jersey. At Greenwood Lake in Passaic Co. 6.37 inches fell. Other rainfall reports generally ranged between 3 to 5 inches. Flooding was reported along the Rockaway River at Dover, Wharton and Randolph in Passaic Co. Elsewhere flooding was reported across sections of Sussex and Morris Counties.	
Bergen Co.	22	1554EST			0	0	0	0	Hail (1.0)	Hail one inch in diameter was observed 3 miles west northwest of Teterboro Airport.	
Middlesex Co.	22	1600EST			0	0	0	0	Hail (0.75)	Hail 3/4 inch in diameter was observed in Woodbridge, New Jersey.	
28 NEW JERSEY, Southern											
Mercer County Trenton	17	2000 EST			1	0	0	0	Lightning	A 14 year old boy was killed by lightning in Trenton.M140	
Atlantic County Ventnor	10	2018 EST			0	0	3	0	TSTM Wind	Thunderstorm winds brought down large trees. Hail the size of quarters also fell.	
					0	0	?	?	Hail (1.00)		
Cape May County Belleplain Ocean City	18	2020 EST			0	0	3	0	TSTM Wind	Thunderstorm winds brought down large limbs and branches in both Belleplain and Ocean City.	
					0	0	3	0	TSTM Wind		
NEW JERSEY, Southern											
Cumberland County 8 S Millville	22	1004 EST			0	0	?	?	TSTM Wind (52)	Thunderstorm winds estimated a 60 MPH or more occurred 8 miles south of Millville. Hail 3/4 inch in diameter fell 8 miles south of Millville, near Dividing Creek (9 miles south of Millville) and near Heislerville (10 miles south of Millville).	
9 S Millville	22	1007 EST			0	0	?	?	Hail (0.75)		
10 S Millville	22	1009 EST			0	0	?	?	Hail (0.75)		
Atlantic County Pleasantville	22	1100 EST			0	0	?	?	TSTM Wind (52)	Thunderstorm winds estimated at 60 MPH occurred in Pleasantville.	
Salem County Pennsgrove Pennsgrove	22	1506 EST			0	0	?	?	Hail (0.75)	Hail 3/4 inch in diameter fell at Pennsgrove.	
	22	1510 EST			0	0	?	?	Hail (0.75)		
Gloucester County Hurffville	22	1544 EST			0	0	?	?	Hail (0.75)	Hail 3/4 inch in diameter fell at Hurffville.	
Camden County 4 SE Atco	22	1600 EST			0	0	?	?	Hail (0.75)	Hail 3/4 inch in diameter fell in Waterford Township near Atco.	
Mercer County Trenton	22	1605 EST			0	0	?	?	Hail (0.75)	Hail 3/4 inch in diameter fell in this Chambersberg section of Trenton.	
Salem County Pennsville Pennsville	22	1645 EST			0	0	?	?	Hail (0.75)	Hail 1/2 to 3/4 inch in diameter fell in Pennsville.	
		1650 EST			0	0	?	?	Hail (0.75)		
Ocean County 3 NW Lakehurst	22	1708 EST			0	0	?	?	Hail (0.75)	Hail 3/4 inch in diameter fell in Jackson Township northwest of Lakehurst.	
29 NEW MEXICO											
Santa Fe, Rio Arriba Counties-NM2002-003	11	???? MST			0	0	?	?	Flash Flood Hail(1.00)	Heavy rainfall washed out several roadways in and to the east of Espanola to around Chimayo. Many houses around the area received flood damage. Crops in the region were damaged from the hail. Damage estimates were not estimated by civil defense personnel.	
Santa Fe County-NM2002	7	1200 MST			0	0	0	0	Funnel Cloud	Funnel cloud sighted by Santa Fe airport personnel on southwest side of town.	
Lea County-NM2013	7	1702 MST			0	0	?	?	Hail(1.00)	Lea county airport reported one inch hail at Hobbs.	
Lea County-NM2013	7	1820 MST			0	0	?	?	Hail(1.75)	Sheriff's office reported golfball-size hail two miles south of Eunice.	
Curry County-NM2009	9	2005 MST			0	0	4	?	Hail(1.75)	Marble to golfball-size hail was reported near Malrose.	
Eddy County-NM2013	10	1320 MST			0	0	0	0	Funnel Cloud	Weather spotter observed funnel 20 to 25 miles west-southwest of Artesia.	
Eddy County-NM2013	10	1445 MST			?	?	0	0	0	Tornado(F0)	A tornado was reported by state police 12 miles west-southwest of Carlsbad.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

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					KILLED	INJURED	PROPERTY	CROPS	
NEW MEXICO									
Eddy County-NM2013	10	1515 MST			0	0	?	?	Hail(1.75)
		Golfball-size hail reported at Rattlesnake Spring near Carlsbad Caverns National Park.							
Lea County-NM2013	10	1750 MST			0	0	?	?	Thunderstorm Wind(54)
		Gust observed at Lea County airport.							
Lea County-NM2013	10	1750 MST			0	0	?	?	Hail(0.75)
		Hobbs Police reported hail 10 miles north of town.							
Lea County-NM2013	10	1815 MST			0	0	?	?	Hail(1.75)
		KUXX radio station reported hail in Hobbs.							
Guadalupe County-NM2009	11	1820 MST			0	0	0	0	Funnel Cloud
		Spotted by Santa Rosa Police just north of town.							
30 NEW YORK, Coastal ----- NONE REPORTED									
30 NEW YORK, Central									
Delaware County Town/Walton	09	EarlyAM	--	--	0	0	5	3	Flood
Ulster County Town/Phoenicia	09	EarlyAM	--	--	0	0	5	3	Flood
		Heavy rains overnight resulted in two (2) roads and one (1) bridge being washed out during the very early hours.							
		In Ulster County the Esopus Creek rose to near flood stage on the upper reaches. This resulted in road washouts in the town of Phoenicia. Many of these roads were still under repair from the late spring floods of 1987.							
Dutchess County Beacon	11	Late Afternoon	--	--	0	0	3	3	Tstm winds
		Strong gusty winds from powerful thunderstorms took down trees and power lines in the city of Beacon late Friday afternoon.							
Broome County City/Binghamton	22	1900EST	--	--	1	0	0	0	Lightning
		One (1) male was killed by lightning while jogging at the State University.							
Hamilton County Town/Wells	13	1300EST	--	--	0	0	5	0	Flash Flood
Fulton County	13	1300EST	--	--	0	0	4	0	Flood
Montgomery County	13	1430EST	--	--	0	0	4	0	Flood
		Torrential rains fell in Fulton and Hamilton Counties. Flooding was reported along the Cayadutta Creek in the city of Gloversville.							
		In Hamilton County a Penstock Dam was overtopped at the Algonquin Dam in the Town of Wells. Downstream, in the Town of Hope, thirty families were evacuated from their homes as a precautionary measure.							
		Some minor flooding was also reported in Montgomery County near the intersections of Route 67 and Route 5.							
Orange County Town/Monroe	13	1430EST	--	--	0	0	5	0	Flood
		A months worth of rain fell on the community of Monroe in less than eight hours. The rainfall produced flooding along Route 17M between Chester and Monroe.							
30 NEW YORK, Western									
Chautauqua County: Sherman, Dewittville, & Maple Springs	11	1630 EST			0	0	4	0	TS Wind
		Strong winds knocked down trees and power lines.							
Chautauqua County: Sherman & Westfield	11	1655 EST			0	0	4	0	TS Wind
		Trees were toppled over and wires were severed.							
NY202-03-22 Allegany, Yates, & Steuben Counties	13	Early Morning			0	0	6	0	Rain
		Heavy rain since the 12th caused small streams to overflow their banks.							
		Portions of Routes 21, 417, and 244 in Allegany County had to be closed because of road flooding. A few small bridges were damaged. The towns of Andover (\$100,000), Wellsville (\$75,000), and Alfred (\$50,000) suffered from eroded roads and flooded basements.							
		Lakeshore properties in Keuka Lake (Yates County), especially in Penn Yan, sustained moderate damages from lake erosion, flooded basements, sank boats, and damaged docks.							
		In Prattsburg, Steuben County, a dike along a creek gave way, and onion crop (worth \$2 million) that was left on the ground to dry was swept away. Officials estimated the damage in Steuben County to exceed \$2.8 million. The following towns reported damages: Bath (\$50,000), Howard (\$25,000), Canisteo (\$13,000), Hartsville (\$5,000), Fremont (\$41,500), Prattsburgh (\$209,000 non-crop damage) and Wheeler (\$55,500). Clean-up crews spent \$300,000 in overtime pay.							
Chautauqua County: Sherman	17	1330 EST			0	0	3	0	Hail (0.75)
		Hail fell.							
Cattaraugus County: Randolph & Allegany State Park.	17	1511 EST			0	0	3	0	TS Wind & Rain
		Damaging winds uprooted large trees in Randolph. Heavy rains caused small streams to flood roads in the Allegany State Park.							
Wayne County: Wolcott	26	0825 EST			0	1	3	0	Lightning
		A lightning bolt struck a utility pole. Electricity surged through a nearby telephone line, exited through a receiver, and knocked out a woman dialer. She was hospitalized.							
Erie County: Buffalo International Airport.	29	1721 EST			0	0	3	0	TS Wind (54)
		Strong gusts were recorded at the Buffalo International Airport.							
Chautauqua County: Blockville & Chautauqua Lake	29	1740 EST			0	0	3	0	TS Wind
		Strong thunderstorm winds blew down large tree branches along Route 474 near Blockville in Southern Chautauqua County. Boats and docks in Chautauqua Lake were damaged.							
31 NORTH CAROLINA									
Cabarrus Co, All	07	1400EST			0	0	?	?	Flash Flood
Stokes Co, Hanging Rock State Park	07	1630EST			0	4	0	0	Lightning
Stokes Co, King Area	07	1740EST			0	0	0	?	Flash Flood
		Thunderstorms with heavy rain followed severe squalls with other storms and caused some flooding problems in the western Piedmont. No significant damage was reported, but creeks did go out of their banks and caused some bridges and roads to be closed. Rainfall amounts as high as 4 to 5 inches in several hours were observed. Four young people were climbing a mountain and were taking refuge under a rock ledge. Lightning struck, possibly striking one person directly. All four were injured and hospitalized.							

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

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					KILLED	INJURED	PROPERTY	CROPS	KILLED	INJURED	PROPERTY	CROPS		
NORTH CAROLINA														
Shelby Co, Cleveland	09	1400EST			0	0	0	?	Hail(0.88)					
Mecklenburg Co, SE Charlotte	09	1440EST			0	0	4	0	TSTM Winds					
Mecklenburg Co, Matthews	09	1516EST			0	0	4	0	TSTM Winds					
Mecklenburg Co, SE Charlotte	09	1618EST			0	0	3	0	TSTM Winds					
Wayne Co, Dudley	09	1700EST			0	0	0	0	Hail(0.75)					
Wayne Co, 8 East Goldsboro	09	1715EST			0	0	0	?	Hail(0.75)					
<p>Severe thunderstorms erupted violently over the southern Piedmont area of the state, particularly the Charlotte area. The roof was torn off a restaurant, and a construction trailer was blown over. There were numerous reports of power lines, trees, and limbs being blown down until about 1630EST. There were isolated reports of hail and minor flooding in surrounding counties, and unofficial reports of 3 to 5 inches of rain in 24 hours in the Charlotte area. In Wayne county a severe thunderstorm developed just south of Goldsboro and moved through much of the eastern part of the county producing large hail.</p>														
Wilkes Co, Thurmond	10	0100EST			0	0	3	0	TSTM Winds					
Alamance Co, Mebane	10	1600EST			0	2	4	0	TSTM Winds					
Stokes Co, King	10	1610EST			0	0	?	?	Hail(0.75)					
Wilkes Co, Central	10	1830EST			0	0	0	0	TSTM Winds					
Guilford Co, Greensboro	10	1840EST			0	0	3	0	TSTM Winds					
<p>A late night severe thunderstorm caused some localized damage in Wilkes county. Trees were blown onto a house and an old country store was blown off its foundation. Later that afternoon, new storms developed in the western part of the state. At Mebane, a tree was blown onto an apartment building and caused severe damage to one residence. Two occupants suffered scratches and bruises when the tree crashed through. An outbuilding was destroyed by a falling tree in the same storm. Large hail fell near King, and trees were blown across roads in Wilkes county. Trees and power lines were reported blown down in Greensboro causing some power outages.</p>														
Polk Co, Green Creek	11	0250EST			0	0	5	0	Lightning					
Vance Co, Henderson	11	1811EST			0	0	4	0	TSTM Winds					
Warren Co, Axtell	11	1840EST			0	0	0	0	TSTM Winds					
Cabarrus Co, Concord Area	11	1900EST			0	0	4	0	TSTM Winds					
<p>An early morning thunderstorm produced lightning which struck and burned a church in Polk county. A severe storm developed near Henderson and blew down many trees in the town. Among them was a tree that was over 100 years old. Plate glass windows were blown in, and a tractor was damaged by wind blown debris. The same storm crossed into Warren county where it weakened, but was still strong enough to blow some trees and limbs across roads. A powerful storm hit the Concord area. Numerous trees were blown down, some onto homes in the area. Damage was quite heavy to some of the houses.</p>														
Dare Co, Cape Pt to Diamond Light	13	0710EST			0	0	0	0	Waterspouts					
Carteret Co, Atlantic Beach	13	0930EST	.2	20	0	0	5	0	Waterspout-Tornado (F1)					
<p>Waterspouts were reported along the NC coastal waters and sounds. One moved ashore at Atlantic Beach causing property damage. A mobile home was flipped over and several other structures were damaged. Damage was estimated at \$50,000. The waterspout moved from the ocean, across the land to Bogue Sound. Other waterspouts followed in the same general area but apparently no more came ashore.</p>														
Pender Co, Burgaw	14	1309EST			0	0	0	0	Hail(0.75)					
Carteret Co, Near Beaufort	14	1345EST			0	0	0	0	Waterspouts					
Dare Co, N end Ocracoke Island	14	1439EST			0	0	0	0	Waterspouts					
New Hanover Co, 12 S Wilmington	14	1445EST			0	0	0	0	Funnel Cloud					
<p>More waterspouts and funnel clouds were sighted but no damage was reported. The wind gusted to about 45 knots at Topsail Beach. Some large hail was observed near Burgaw.</p>														
32 NORTH DAKOTA ——— NONE REPORTED														
33 OHIO														
Ashtabula County	12	1530EST			0	0	4	0	Thunderstorm Wind					
<p>Thunderstorm winds downed trees and power lines from North Kingsville to Conneaut. One large tree fell onto an unoccupied mobile home in North Kingsville</p>														
Scioto County	13	1400EST			0	7	0	0	Lightning					
<p>Lightning struck seven people on a soccer field. One person was struck in the head and the bolt exited at his left foot. He was revived by CPR.</p>														
Ashtabula County	17	1428EST			0	0	4	0	Thunderstorm Wind					
<p>Thunderstorm winds downed trees and power lines in Geneva, Kingsville Township and in Pierpoint Township. A tree fell onto a mobile home in Harpersfield Township.</p>														
Trumbull County	29	1530EST			0	0	4	0	Thunderstorm Wind					
<p>Thunderstorm winds downed trees and power lines in Niles. Many cars and houses were damaged.</p>														
34 OKLAHOMA														
Grant County Lamont	08	2003CST			0	0	?	?	Hail (0.75)					
<p>A thunderstorm produced 50 mph winds and small hail across Grant and Kay Counties.</p>														
Tulsa County Sand Springs	09	1615CST			0	0	3	?	Twind (56)					
Woods County 6 SE Waynoka	09	1640CST			0	0	?	?	Hail (0.75)					
Major County 15 NNE Chester	09	1657CST			0	0	?	?	Hail (1.75)					
Major County 12 N Orion	09	1730CST			0	0	?	?	Hail (0.75)					
Major County 3 NE Orion	09	1800CST			0	0	?	?	Hail (0.88)					
<p>A thunderstorm produced winds over 60 mph which caused \$15,000 damage to a ball park in Sand Springs. Another thunderstorm produced dime to golfball size hail across portions of the northwest.</p>														
Garfield County 8 E Enid	10	0015CST			0	0	4	?	Lightning					
<p>Lightning caused \$45,000 damage to an oil tank battery.</p>														
Texas County Hooker	11	2000CST			0	7	3	?	Twind (72)					
<p>A thunderstorm produced winds of over 80 mph during half-time of a football game. Flying debris which included sheets of 3/4 inch plywood injured 7 people who were at the game. Damage to cars and the stadium was about \$3500.</p>														
Oklahoma County South Oklahoma City	12	0200CST			0	0	5	?	Lightning					
<p>Lightning caused \$140,000 damage to a house and its contents.</p>														
Bryan County Nrn Durant	14	1400CST			0	0	5	?	Twind (60)					
Marshall County Lebanon	14	1720CST			0	0	?	?	Twind (52)					
Love County Marietta	14	1740CST			0	0	2	?	Twind (52)					
Pontotoc County Ada Airport	14	1840CST			0	0	?	?	Twind (56)					
<p>Thunderstorms produced 60 to 70 mph winds across south central sections. Winds downed 16 power poles along Highway 69 with one pole falling on a truck south of Durant. Winds also took the roofs off a house, 2 barns, and a storage shed near Durant. Heavy rains of 2 to 5 inches fell across Love and Marshall counties causing minor flooding in low lying areas.</p>														

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
OKLAHOMA									
Oklahoma County	15	1605CST			0	0	?	?	Hail (1.75)
Oklahoma City									
Canadian County	15	1605CST			0	0	?	?	Hail (0.75)
Piedmont									
Kingfisher County	15	1610CST			0	0	?	?	Hail (1.50)
Cashion									
Oklahoma County	15	1614CST			0	0	?	?	Hail (0.75)
Edmond									
Logan County	15	1630CST			0	0	4	?	Twind (61)
Guthrie									
Canadian County	15	1645CST			0	0	5	?	Twind (61)
2 E Piedmont									
Oklahoma County	15	1647CST			0	0	?	?	Twind (52)
W Oklahoma City									
Grady County	15	1700CST			0	0	?	?	Twind (52)
6 SW Minco									
Payne County	15	1713CST	5.0	30	0	0	0	0	Tornado (F0)
2 E Perkins to 1 SE Cushing									
Grady County	15	1715CST			0	0	?	?	Hail (1.75)
4 S Minco									
Lincoln County	15	1728CST			0	0	?	?	Hail (0.75)
8 N Carney									
Canadian County	15	1730CST			0	0	?	?	Hail (1.00)
1 S Yukon									
Payne County	15	1735CST			0	0	?	?	Hail (0.75)
8 E Cushing									
Oklahoma County	15	1745CST			0	0	4	?	Hail (1.00)
N Oklahoma City									
Creek County	15	1755CST			0	0	?	?	Hail (0.75)
Oilton									
Oklahoma County	15	1758CST			0	0	?	?	Twind (60)
Will Rogers Arpt									
Oklahoma County	15	1810CST			0	0	?	?	Twind (56)
W Oklahoma City									
Grady County	15	1815CST			0	0	?	?	Hail (0.75)
2 SE Tuttle									
Oklahoma County	15	1825CST			0	0	?	?	Hail (0.75)
Del City									
Lincoln County	15	1830CST			0	0	?	?	Hail (1.00)
Wellston									
Creek County	15	1830CST			0	0	?	?	Hail (0.75)
5 N Sapulpa									
Cleveland County	15	1834CST			0	0	3	?	Twind (61)
NW Norman									
Hughes County	15	1850CST			0	0	3	?	Twind (56)
Holdenville									
Oklahoma County	15	1854CST			0	0	?	?	Twind (52)
SE Oklahoma City									
Hughes County	15	1900CST			0	0	?	?	Twind (55)
Wetumka									
Creek County	15	1915CST			0	0	?	?	Twind (56)
W Bristow									
Cleveland County	15	1920CST			0	0	?	?	Hail (0.75)
Nrn Stella									
Oklahoma County	15	1927CST			0	0	?	?	Twind (52)
Harruh									
Pottawatomie County	15	1940CST			0	0	?	?	Twind (52)
Shawnee Reservoir									
Rogers County	15	1940CST			0	0	?	?	Twind (52)
Oologah									
Tulsa County	15	1950CST			0	0	?	?	Twind (52)
Tulsa									
Ottawa County	15	2020CST			0	0	4	?	Twind (52)
Miami									
Craig County	15	2100CST			0	0	?	?	Twind (52)
Vinita									
<p>Rapidly developing thunderstorms formed over central sections of the state and moved into northeast sections. The storms produced winds up to 70 mph and hail up to golfball size along with heavy rains. A weak tornado set down 2 miles east of Perkins and moved to the northeast, lifting one mile southeast of Cushing and doing no damage. The high winds damaged several buildings in Oklahoma City including two restaurants and blew out many windows. A mobile home was damaged in southern Logan county and a semi trailer was blown over on the Canadian and Oklahoma county line. A large tree was blown over onto a car which was moving south between Oklahoma City and Norman on Highway 77. The winds damaged a business and destroyed a mobile home in Guthrie. Trees and power poles were downed across Creek, Tulsa, Craig, and Rogers counties and 15 houses received minor damage in Miami.</p>									
Canadian County	18	0215CST			0	0	?	?	Twind (52)
El Reno									
Comanche County	18	0300CST			0	0	?	?	Hail (0.75)
Indiahoma									
Carter County	18	0410CST			0	0	4	?	Twind (60)
2 SW Wilson									
Tillman County	18	0415CST			0	0	?	?	Twind (60)
Grandfield									
Leflore County	18	0700CST			2	2	?	?	Lightning
3 W Spiro									
<p>Thunderstorms produced winds up to 70 mph and small hail across portions of the southwest and central sections. \$5,000 damage occurred to a house and barn near Wilson. Two men were killed and two others injured when lightning hit a building while they were working on the roof. The building was about 3 miles west of Spiro in LeFlore County. LIGHTNING M200 M210.</p>									
OKLAHOMA									
Dewey County	20	1240CST			0	0	?	?	Hail (1.75)
Selling									
Canadian County	20	1523CST			0	0	?	?	Heavy Rain Twind (54)
Mustang									
Oklahoma County	20	1534CST			0	9	?	?	Twind (53)
Will Rogers Airport									
Grady County	20	1535CST			0	0	?	?	Twind (52)
7 ESE Tuttle									
McCain County	20	1535CST			0	0	?	?	Twind (52)
2 NW Newcastle									
Cleveland County	20	1612CST			0	0	?	?	Twind (56)
Norman									
Grady County	20	1815CST			0	0	?	?	Hail (0.75)
2 SE Tuttle									
Jackson County	20	2015CST			0	0	?	?	Twind (60)
Altus AFBase									
<p>Thunderstorms developed across western and central sections causing winds up to 70 mph and hail up to golfball size along with very heavy rain in some areas. Hail ranging from pea to golfball size fell in Selling making drifts up to 5 inches high. Three inches of rain also fell in Selling in one hour causing an overload of the storm drains which caused water to get into several businesses. Winds of 60 mph caused a tent to collapse at the state fair which was full of people. Nine people were injured ranging from bruises to a broken leg.</p>									
Kingfisher County	22	1607CST			0	0	4	?	Twind
6 SW Cashion									
<p>Thunderstorm winds destroyed a mobile home southwest of Cashion. Damage estimates were set at \$10,000.</p>									
Blaine County	27	1940CST			0	0	?	?	Hail (0.75)
5 WNW Okeene									
Major County	27	2015CST			0	0	?	?	Hail (0.75)
Nrn Fairview									
Kay County	27	2030CST			0	0	?	?	Hail (0.75)
6 W Newkirk									
Dewey County	27	2106CST			0	0	?	?	Hail (0.75)
Vici									
Ellis County	27	2230CST			0	0	?	?	Hail (0.75)
10 N Gage									
Ellis County	27	2308CST			0	0	?	?	Hail (0.75)
Fargo									
<p>Thunderstorms produced dime to penny size hail across portions of the northwest and north central sections of the state.</p>									
Grant, Kay, and Osage Counties	27-28	2200CST-0400CST			0	0	5	6	Flash Flooding
<p>Rainfall amounts of 3 to 10 inches fell across portions of southern Kansas and northcentral Oklahoma during the evening of the 27th and early morning of the 28th. The runoff caused the Bois d'Arc, Pond Creek and Osage Creeks to overflow their banks. These creeks also flow into the Chikaskia and Salt Fork rivers which flooded portions of Blackwell and Tonkawa. Many other small creeks were out of their banks, washing out roads and closing many others. Flooding is estimated to have eroded and washed out 35,000 acres of wheat. No injuries were reported although several people had to be rescued from automobiles in flooded areas. Farmers reported that the loss of top soil was the worst they had ever seen.</p>									
Garfield County	28	0100CST			0	0	?	?	Twind (52)
Kremlin									
Noble County	28	0115CST			0	0	?	?	Twind (52)
7 E Billings									
Dewey County	28	0129CST			0	0	?	?	Hail (0.88)
Taloga									
Major County	28	0151CST			0	0	?	?	Hail (0.75)
Cleo Springs									
Elaine County	28	0215CST			0	0	?	?	Twind (52)
Okeene									
Kingfisher County	28	0250CST			0	0	?	?	Twind (52)
Dover									
Kingfisher County	28	0320CST			0	0	?	?	Twind (52)
5 SW Cashion									
Kingfisher County	28	0325CST			0	0	5	?	Lightning
2 W Hennessey									
Logan County	28	0330CST			0	0	3	?	Twind (52)
Guthrie									
Oklahoma County	28	0347CST			0	0	?	?	Twind (52)
NW Oklahoma City									
<p>Thunderstorms produced winds up to 60 mph and dime to nickel size hail fell across sections of the north central and central parts of the state. Lightning caused \$75,000 damage to a house near Hennessey. Downed trees and power poles were common in the area.</p>									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
35 OREGON ————— NONE REPORTED									
36 PENNSYLVANIA, Eastern									
Berks, Lehigh Lancaster, Mont- gomery, Carbon, Monroe, Northamp- ton Counties	8	1500 EST							
	9	0300 EST			1	0	8	?	Flash Flood
<p>Extremely heavy down pours which began on the Southern Pennsylvania border around 9AM EDT, gradually spread northeast and did not let up until around midnight EDT over Carbon and Monroe Counties. The heaviest rainfall was around the town of Gibraltar in Berks County, about 5 miles Southeast of Reading. Three rain gages around Gibraltar gave readings of 8.70 inches, 9.80 inches and over 11 inches. Some other rainfall reports were: Reading 6.25 inches, Reading Airport 6.00 inches, Walnutport 5.83 inches, Lancaster 5.68 inches, Honey Brook 5.53 inches, Kresgeville 5.29 inches, Hopewell Furnace 4.95 inches, Blue Marsh Dam 4.88 inches, Geigertown 4.98 inches, Allentown 4.86 inches, Palm 4.67 inches and Conowingo Dam in Maryland 5.67 inches. There was widespread drainage, roadway and basement flooding. There was flash flooding on small streams and even on large streams and rivers. Flooding on rivers occurred rapidly and was only in the areas of heavy rain and did not progress downstream. The Schuylkill River at Pottstown crested at 15.41 ft. at 3AM EDT on the 9th with flood stage being 13 feet. The Lehigh river at Walnutport crested at 8.9 ft. with a flood stage of 8 ft. and the Little Lehigh river at Allentown crested at 7.2 ft. with a flood stage of 6 ft. Birdsboro in Berks County, just southeast of Gibraltar, was the hardest hit by flood damage. They had roads and bridges washed out, many buildings flood and the sewage treatment plant flooded. The bridge approach to one bridge was undermined and collapsed when a fire engine was crossing.</p> <p>Throughout the counties roads and portions of roads were washed out, bridges and bridge approaches were washed out, houses and other buildings were flooded and farm land was flooded. One golf course was flooded and eroded. At least 200 people had to be evacuated in Lehigh County and 120 in Palmerton, Carbon County. Total damage in the seven counties was at least 55 million dollars. The one fatality was a 3 year old boy who was washed into a stream in Whitehall township near Allentown. The flooding in Montgomery County was mainly in the Pottstown area and in Monroe County the damage was confined mainly to road damage. M130</p>									
Cumberland, Perry, Dauphin and Lebanon Counties	12	1730 EST							
	13	1500 EST			0	0	5	?	Flash Flood
<p>Heavy rain fell mainly between 6:30PM and 9:30PM EDT. Some rainfall amounts were: Marysville 7.00 inches, New Kingston 6.65 inches, Inglebrook 5.50 inches, Camp Hill 4.90 inches and Mechanicsburg 4.70 inches. Major flooding occurred at Marysville in Perry County and at Mount Holly Springs in Cumberland County. A trailer park in Marysville had to be evacuated as a small stream flooded the park, damaging 37 mobile homes. Twenty mobile homes were left hanging over the stream as water undermined them. A sewage treatment plant had to be closed in Mount Holly Springs as flood waters threatened to overwhelm it. The Swatara Creek flooded at Fort Indiantown Gap, in the city of Lebanon and in Hershey, all in Lebanon County. Flood waters in some areas did not go below flood stages until well into the 13th in some areas. The Conodoguinet Creek hit a stage of 9.44 ft. at Hogestown where flood stage is 8.0 ft. Additional rainfall on the 13th caused some streams to rise to or remain over flood stage on that day.</p>									
Carbon County	13	1000 EST			0	0	3	0	Flood
<p>Heavy rain over Carbon County caused flooding on the Lehigh River. Some rainfall amounts were: Jim Thorpe 5.71 inches, Long Pond 5.25 inches, Blakeslee 4.40 inches, Tamaqua 4.40 inches, Tobyhanna 4.20 inches, Promised Land 4.00 inches, F.E. Walter Dam 3.61 inches and Tannersville 3.55 inches.</p>									
— PENNSYLVANIA, Eastern									
Lancaster County Quarryville	17	1900 EST			0	0	3	0	TSTM Wind
	Thunderstorm winds caused a large tent to collapse.								
Cumberland County Mount Holly Springs 1 W Mount Holly Springs	17	1940 EST			0	0	3	0	TSTM Wind
	17	2015 EST			0	0	3	0	TSTM Wind
Thunderstorm winds brought down trees in Mount Holly Springs and just to the west.									
Adams County Gettysburg Arendtsville Cashtown	17	2100 EST			0	0	3	0	TSTM Wind
	17	2230 EST			0	0	3	0	TSTM Wind
	17	2230 EST			0	0	3	0	TSTM Wind
Thunderstorm winds brought down trees in the north portion of Gettysburg and also in Arendtsville and Cashtown.									
Lancaster County Lancaster Strasburg	18	1630 EST			0	0	3	0	TSTM Wind
	18	1650 EST			0	0	3	0	TSTM Wind
Thunderstorm winds brought down trees in Lancaster and large trees in Strasburg.									
Bucks County Quakertown Quakertown Quakertown	22	1340 EST			0	0	?	?	Hail (1.75)
	22	1345 EST			0	0	?	?	Hail (0.75)
	22	1401 EST			0	0	?	?	Hail (0.75)
Golf ball size hail and 3/4 inch hail fell in Quakertown.									
Montgomery County Landsdale 1 N Ambler Horsham Flourtown	22	1450 EST			0	0	?	?	Hail (0.75)
	22	1504 EST			0	0	?	?	Hail (0.75)
	22	1508 EST			0	0	?	?	Hail (0.75)
	22	1530 EST			0	0	?	?	TSTM Wind
Hail 3/4 inch in diameter fell in Landsdale and near Ambler. Dime size hail fell at Horsham. Thunderstorm winds brought down large limbs in Flourtown.									
Montgomery County Kulpsville Norristown	22	1539 EST			0	0	?	?	Hail (0.75)
	22	1555 EST			0	0	?	?	Hail (0.75)
Hail 3/4 inch in diameter fell in Kulpsville and Norristown.									
Bucks County Yardley Morrisville Morrisville	22	1540 EST			0	0	?	?	Hail (0.75)
	22	1550 EST			0	0	?	?	Hail (0.75)
	22	1600 EST			0	0	?	?	Hail (1.75)
Hail 3/4 inch in diameter fell in Yardley and Morrisville. Golf ball size hail fell at Morrisville at 5PM EDT.									
36 PENNSYLVANIA, Western									
Westmoreland Co. Lloydsville, 1 E Lat- robe, Latrobe	11	1511 EST			0	0	0	0	Thunderstorm Wind
	Trees down at Lloydsville and Latrobe.								
Indiana Co. Plumville 12 N Indiana	11	1525 EST			0	0	0	0	Thunderstorm Wind
Powerlines and trees down.									
McKean Co. Eldred, 14 NE Smethport	13	0000 EST			0	0	0	0	Flash Flood
Three foot deep water in streets.									
Elk Co.	13	0000 EST			0	0	0	0	Flash Flood
Flooding along Clarion River in Elk County.									
Erie Co. 6 E Erie	17	1305 EST			0	0	0	0	Hail (1.50)
Golf ball size hail east of Erie.									
Beaver Co. Ambridge, 12 S Beaver	17	1400-EST			0	0	0	0	Thunderstorm Wind
Large trees down.									
Allegheny Co. Leets- dale, Edgeworth, 15 NW Pittsburgh	17	1400 EST			0	0	0	0	Thunderstorm Wind
Large trees down.									
Allegheny Co. 12 W Pittsburgh	17	1405 EST			0	0	0	0	Thunderstorm Wind
Large trees and powerlines down.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Western

Allegheny Co. Wexford 15 N Pittsburgh	17 1435 EST	0 0 0 0	Funnel Cloud	Funnel cloud sighted south of Wexford.
Allegheny Co. Oakland 3 E Pittsburgh	17 1438 EST	0 0 0 0	Hail (0.75)	Three quarter inch hail at Oakland.
Allegheny Co. Wexford 15 N Pittsburgh	17 1500 EST	0 0 0 0	Thunderstorm Wind	Large trees down.
Mercer Co. 3 W Mercer	17 1515 EST	0 0 0 0	Thunderstorm Wind	Trees down.
Allegheny Co. Carnegie, 5 SW Pittsburgh	17 1550 EST	0 0 0 0	Hail (0.75)	Three quarter inch hail at Carnegie.
Westmoreland Co. Derry Township, 15 E Greensburg	17 1600 EST	0 0 0 0	Thunderstorm Wind	Large trees down.
Westmoreland Co. Greensburg	17 1650 EST	0 0 0 0	Thunderstorm Wind	Large trees down.
Westmoreland Co. Latrobe	17 1700 EST	0 0 0 0	Thunderstorm Wind	Powerlines down.
Indiana Co. Homer City, 5 S Indiana	17 1723 EST	0 0 0 0	Thunderstorm Wind	Powerlines down.
Washington Co. Washington	17 1735 EST	0 0 0 0	Thunderstorm Wind	Powerlines down.
McKean Co. Bradford	17 1745 EST	0 0 0 0	Thunderstorm Wind	Fifty eight mph wind at Bradford.
Westmoreland Co. Unity Township, 10 E Greensburg, 6 S Greensburg	17 2200 EST	0 0 0 0	Flash Flood	Flooding on 4 Mile Run Creek in Unity; 20 homes evacuated; basement flooding at Mount Pleasant.

37 RHODE ISLAND ————— NONE REPORTED

38 SOUTH CAROLINA

Beaufort Co. Beaufort	02 1130EST	0 0 2 0	TSTM Winds	Winds to 51 knots reported in Beaufort during thunderstorm. Few limbs broken.
Berkeley Co. Monks Corner	04 2100EST	0 0 3 0	Urban Flooding	Serious flooding in Monks Corner, water in some houses. Water 1 to 1 1/2 feet deep on US 52.
Dorchester Co. Summerville	05 1300EST	0 1 5 0	Flash Flooding	In Summerville several houses were flooded up to 3 feet deep in Northwoods Mall area, 8 families were evacuated. Heavy rains began at 9 a.m. EST with flooding beginning at 1300 EST and continuing into the evening. One person trapped in a flooded car was injured.
Beaufort Co. Hilton Head	05 1500EST	0 0 2 0	Urban Flooding	Heavy rains of more than six inches on the 5-6th caused the worst flooding at Hilton Head in many years. Water 1 to 2 feet deep on many Hilton Head Streets disrupted traffic.

SOUTH CAROLINA

Charleston Co. Charleston Eastern South Carolina SC2005-006-007-008	06 1640EST	1 0 6 3	Urban Flooding	Urban Flooding
Georgetown Co. Georgetown area	4-7	0 0 0 5	Tropical Depression	A tropical depression formed off the Carolina coast causing more than 10 inches of rain along the South Carolina coast from September 4th-7th. These heavy rains caused extensive flooding in the vicinity of Charleston. A 7 year old boy who was wading in a drainage pool on Sprull Avenue stepped into an open culvert and drowned. The roof of a 3 million gallon oil storage tank collapsed under the weight of heavy rains. Also, 16 apartments were flooded at the Dorchester Gardens Complex. Flood water soaked administrative records at the College of Charleston and disrupted electrical power to the College. Rainfall at the Custom House, Charleston during the 10 day period August 30 - September 8th totaled 18.44 inches. A 10 day rainfall of this amount has an average return period of 100 years at Charleston. The protracted period of heavy rains caused considerable damage to the cotton crop. Also, an unusually high incidence of mosquitos were reported.
Lexington Co. Irmo and St. Andrews	6-7	0 0 3 0	Flooding	According to newspaper, 80 highways and streets in Georgetown County were flooded. The Sappit River rose 4 feet above the roadway at the junction of the Penny Royal Road and US 17A near Georgetown. More than 200 families were cut-off by flooding. Highway 17A was blocked by flood waters.
Berkeley Co. Goose Creek Reservoir area	07 1200EST	0 1 5 0	Flash Flooding	Many homes were flooded in the Irmo - St. Andrews area during and immediately following heavy rains of 3 to 5 or more inches within a 2 hour period. The worst flooding was along Rawls Creek, Koon Branch, and Kinley Creek in the Irmo - St. Andrews area.
Union Co. Lockhart	07 1900EST	0 0 4 0	Flooding	Heavy rains caused more than a two foot rise of Goose Creek Reservoir. Twelve families were evacuated and several homes were flooded.
York Co. York County	07 1300EST	0 0 2 0	Urban Flooding	More than seven inches of rain within 3 days caused some damage in the Lockhart area. Rising water threatened 12 homes in Lockhart, but significant damage was averted by prompt relief measures.
York Co. Sharon	09 1836EST	0 0 4 0	Urban Flooding	Flooding following heavy rains up to door level of cars. Some basement flooding.
Orangeburg Co. North	09 2015EST	0 0 2 0	Hail (0.20)	Hail reported in Sharon during thunderstorm.
Chester Co. Chester	09 2205EST	0 0 3 0	Hail (0.75)	Hail reported in North, South Carolina.
York Co. Rock Hill	11 0700EST	0 0 2 0	Urban Flooding	Several homes were flooded in the Frazier Park area.
Beaufort Co. Daufuskie Island	12 1730EST	0 0 2 0	Urban Flooding	Heavy rains caused street flooding four feet deep on King Drive. Flooding was also reported at Cedar Wood Apartments on Riverview Road, and at College Downs on King Drive in southwest Rock Hill.
	19 p.m.	0 1 0 0	Lightning	Troy Weeks, 20, of Forest Cove on Daufuskie Island was injured when lightning hit a golf ball washing machine that he was operating at Melrose.

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					KILLED	INJURED	PROPERTY	CROPS	
39 SOUTH DAKOTA									
Jackson County Pine Ridge	02	1400 CST	-	-	0	0	5	0	Lightning
									Lightning caused about 1500 acres of grasslands and forests to burn.
Gregory County Burke	04	1500 CST	-	-	0	0	0	0	Hail (.75)
Charles Mix Co. Wagner	04	1707 CST	-	-	0	0	0	0	Hail (1.75)
Bon Homme County 11E Wagner Avon	04	1730 CST	-	-	0	0	0	0	Hail (.75)
	04	1808 CST	-	-	0	0	0	0	Hail (.75)
	04	1808 CST	-	-	0	0	?	0	Lightning
Scotland	04	1910 CST	-	-	0	0	0	0	TSTM Wind (52)
McCook County Canistota	04	1924 CST	-	-	0	0	0	0	Hail (1.75)
Minnehaha County Dell Rapids	04	1958 CST	-	-	0	0	0	0	Funnel Cloud
40 TENNESSEE									
Sullivan County	04	??			0	0	4	4	Lightning
									Lightning struck a 100-year old barn setting it on fire and destroying its contents. Lost was thousands of dollars of equipment, 200 sticks of tobacco and 1,000 bales of hay.
Hamilton County	08	Afternoon			0	0	3	0	Thunderstorm Wind
									High wind from thunderstorms downed several trees and power lines in Hamilton County along a line from Signal Mountain and Hixson northward. A marquee in front of a school was destroyed and an awning at the back of the school suffered wind damage.
Rutherford County	29	Afternoon			0	0	4	0	Thunderstorm Wind
									Straight line winds from a thunderstorm slashed a 3-mile path through the Cedar Grove Road/ Gum Community area. Several homes and a church were severely damaged by the storm.
Bedford County	29	1130CST			0	0	3	0	Thunderstorm Wind
									A brief but violent thunderstorm occurred along Taylor Crossroads near Longview Community. Farm buildings and a home sustained some damage while a fuel tank stand and 2 storage tanks were blown down.
41 TEXAS, Northern									
Smith County Tyler	8	1405CST	-	-	0	7	0	0	Lightning
									Seven Robert E. Lee High School junior varsity football players were injured by a bolt of lightning as they were leaving a practice field. One of the players was in critical condition for several days after suffering a full respiratory and cardiac arrest.
Callahan County SNE Baird	11	1630CST	Short	Narrow	0	0	0	?	Tornado (F1)
									A tornado was observed briefly in open country 5 miles northeast of Baird.
Taylor County 3NE Abilene 3N Abilene Jones County BNW Abilene	11	1632CST	-	-	0	0	?	?	Hail (0.75)
	11	1637CST	-	-	0	0	?	?	Hail (1.75)
	11	1642CST	-	-	0	0	?	?	Hail (2.00)
									Dime-size hail fell 3 miles northeast of Abilene at 1632CST. Golf ball-size hail fell 3 miles north of Abilene at 1637CST. Two inch diameter hail fell 8 miles northwest of Abilene at 1642CST.
Stephens County 10SW Breckenridge	11	1635CST	Short	Narrow	0	0	0	?	Tornado (F0)
									A Texas Department of Public Safety officer observed a tornado briefly in open country 10 miles southwest of Breckenridge.
Haskell County Haskell	12	0425CST	-	-	0	0	?	?	TSTM Wind (56)
									Thunderstorm winds gusted to 65 mph at Haskell at 0425CST.
TEXAS, Northern									
Falo Pinto County 1W Mineral Wells Parker County Weatherford Hood County Cresson Erath County Stephenville Tarrant County Arlington Arlington Johnson County Cleburne Dallas County Grand Prairie Dallas KAS Dallas	12	0630CST	-	-	0	0	?	?	Hail (0.88)
	12	0647CST	-	-	0	0	?	?	TSTM Wind
	12	0700CST	-	-	0	0	?	?	TSTM Wind
	12	0705CST	-	-	0	0	?	?	TSTM Wind
	12	0708CST	-	-	0	0	?	?	TSTM Wind (53)
	12	0720CST	-	-	0	0	?	?	Hail (0.75)
	12	0720CST	-	-	0	0	?	?	TSTM Wind
	12	0720CST	-	-	0	0	?	?	Hail (0.75)
	12	0727CST	-	-	0	0	?	?	TSTM Wind (51)
	12	0749CST	-	-	0	0	?	?	TSTM Wind
									A squall line moved through north central Texas producing scattered reports of severe weather. Nickel-size hail fell one mile west of Mineral Wells at 0630CST. Thunderstorm winds downed powerlines at Weatherford at 0647CST. Thunderstorm winds broke limbs off trees at Cresson blowing them onto powerlines at 0700CST. Powerlines were downed and tree limbs broken near Stephenville at 0705CST. Thunderstorm winds gusted to 61 mph at Lake Arlington at 0708CST and dime-size hail fell at Arlington at 0720CST. A camping trailer was overturned by thunderstorm winds at Cleburne at 0720CST. Dime-size hail fell at Grand Prairie at 0720CST. Thunderstorm winds were measured at 59 mph at the Naval Air Station in Dallas at 0727CST and overturned a large cement fountain at Dallas at 0749CST.
McLennan County Waco	12	0819CST	-	-	0	0	?	?	TSTM Wind (50)
									Thunderstorm winds gusted to 58 mph at Waco at 0819CST.
Delta County Cooper	12	0940CST	-	-	0	0	?	?	TSTM Wind
									Thunderstorm winds downed trees at Cooper.
Haskell County Haskell	13	0310CST	-	-	0	0	?	?	TSTM Wind (56)
									Thunderstorm winds of 65 mph were measured at KVRP radio station in Haskell.
Taylor County Abilene Abilene Callahan County 3W Baird	14	0141CST	-	-	0	0	?	?	TSTM Wind (51)
	14	0235CST	-	-	0	0	?	?	TSTM Wind
	14	0215CST	-	-	0	0	?	?	TSTM Wind
									Thunderstorm winds gusted to 59 mph at the National Weather Service office in Abilene at 0141CST. Thunderstorm winds broke large branches off trees at Abilene at 0235CST. Thunderstorm winds downed several powerlines 3 miles west of Baird at 0215CST.
Fannin County Ladonia Ladonia	14	1645CST	-	-	0	0	?	?	TSTM Wind (52) and Hail (0.88)
	14	1645CST	-	-	0	0	?	?	Flash Flooding
									Thunderstorm winds gusted to 60 mph and nickel-size hail fell at Ladonia at 1645CST. Rainfall of up to 6 inches by 1645CST flooded roadways at Ladonia.
Hunt County Commerce Fairlie	14	1947CST	-	-	0	0	3	?	TSTM Wind
	14	2040CST	-	-	0	0	?	?	Flash Flooding
									Thunderstorm winds uprooted a tree and downed a powerline at Commerce at 1947CST. Rainfall of 4.05 inches in little more than two hours flooded roadways at Fairlie.
Somervell County 4N Glen Rose	15	0715CST	-	-	2	8	4	?	TSTM Wind (56)
									A construction crane toppled onto two temporary office buildings during a thunderstorm at the Comanche Peak nuclear power plant, killing two people and injuring eight others. An anemometer near the site measured winds up to 65 mph. M54M, M46M
Fannin County Gober	15	1430CST	-	-	0	0	4	?	TSTM Wind and Hail (0.88)
									Thunderstorm winds damaged a mobile home and grain elevator and destroyed two barns at Gober. Nickel-size hail fell at the same time.
Hopkins County 4W Sulphur Springs	15	1535CST	-	-	0	0	?	?	Hail (0.75)
									Dime-size hail fell 4 miles west of Sulphur Springs.
Anderson County Elkhart	15	1830CST	-	-	0	0	3	?	TSTM Wind
									Thunderstorm winds downed powerlines at Elkhart.
Angelina County Lufkin	16	0800CST	-	-	0	0	?	?	Flash Flooding
									Rainfall of up to 4.30 inches in about three hours produced considerable street flooding at Lufkin.

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					KILLED	INJURED	PROPERTY	CROPS		
TEXAS, Northern										
Grayson County Denison	18	0500CST	-	-	0	0	3	?	TSTM Wind	
Fannin County Bonham	18	0545CST	-	-	0	0	3	?	TSTM Wind	
Hunt County Commerce	18	0730CST	-	-	0	0	?	?	Flash Flooding	
Hopkins County Sulphur Springs	18	0740CST	-	-	0	0	4	?	TSTM Wind (56) Flash Flooding	
Fannin County Bonham	18	0800CST	-	-	0	0	?	?	Flash Flooding	
Morris County Lone Star	18	0815CST	-	-	0	0	3	?	TSTM Wind	
	Thunderstorm winds downed trees at Denison at 0500CST. Thunderstorm winds downed trees at Bonham at 0545CST. Rainfall of up to 2.50 inches in one hour produced widespread street flooding at Commerce at 0730CST. Thunderstorm winds of up to 65 mph toppled a carnival ferris wheel and uprooted trees at Sulphur Springs at 0740CST. Rainfall of over two inches in a brief time flooded many streets at Sulphur Springs. Rainfall of up to 4.50 inches at Bonham produced widespread street flooding at 0800CST as Pig Branch overflowed its banks. Thunderstorm winds uprooted several trees at Lone Star at 0815CST.									
Jones County LW Noodle	27	1700CST	-	-	0	0	?	?	TSTM Wind (61) and Hail (1.75)	
Taylor County Tye	27	1745CST	-	-	0	0	?	?	Hail (1.00)	
Abilene	27	1800CST	-	-	0	0	?	?	TSTM Wind (60)	
	Thunderstorm winds gusted to 70 mph and golf ball-size hail fell one mile west of Noodle at 1700CST. One inch diameter hail fell at Tye at 1745CST. Thunderstorm winds gusted to 69 mph at KTAB-TV in Abilene at 1800CST.									
41 TEXAS, Southern										
Bexar County	07	1634-1650CST			0	10	6	0	Tstm Wind (70)	
	High winds from a thunderstorm knocked over a 300 foot communications tower in San Antonio. The tower fell onto an apartment complex damaging 10 of the units. 5 persons were injured in the incident. 5 other persons were injured in a restaurant on the north side of the city when high winds blew in a plate glass window. One car dealer in the city reported damage to 85 cars from fallen utility poles and light standards. Many trees and signs and fences were downed across the city. Several aircraft were damaged at Stinson Field on the south side of the city. The FAA at the San Antonio International Airport recorded a wind gust to 68 MPH.									
Jefferson County	09	1400CST			0	3	0	0	Tstm Wind (?)	
	High winds from a thunderstorm downed trees, broke windows, damaged boats in and around Nederland. 3 persons received cuts from a broken plate glass window in a supermarket.									
Llano County	10	1510CST			0	0	0	0	Hail (0.75)	
	Three quarter inch hail fell 6 miles west of Llano. Damage was not reported.									
Travis, Williamson Counties	10	1536-1556CST			0	0	6	0	Tstm Wind (70)	
	High winds from a thunderstorm hit the north and northeast side of the City of Austin. There was extensive aircraft damage at the Austin Airport. Numerous aircraft suffered major damage along with minor damage to several hangars in the area. Many trees and power lines were downed on the northside of the city. Other aircraft were damaged at a small airport on the north side of the city. In Roundrock, the high wind blew part of a roof off of a elementary school.									
Bexar County	10	1738CST			0	0	5	0	Tstm Wind (?)	
	High winds from a thunderstorm toppled tower structures at the papal site on the west side of the City of San Antonio. Winds were estimated to be less than 50 MPH.									
Austin County	10	1900CST			0	0	0	0	Hail (1.00)	
	One inch diameter hail fell west of Bellville. Damage not reported.									
Polk County	12	1115CST			0	0	0	0	Tstm Wind (?)	
	High winds from a thunderstorm knocked down power lines and trees near Corrigan in the northern part of the county.									
San Jacinto County	12	1140CST			0	0	?	0	Tstm Wind (?)	
	High winds from a thunderstorm damaged a garage and a double-wide trailer in the Bear Creek area in the southeast part of the county.									
TEXAS, Southern										
Harris County	12	1230CST			0	0	?	0	Tstm Wind (?)	
	High winds from a thunderstorm blew the roof off of a restaurant in Pasadena. The top of a carport was also blown off. Trees and power lines were also downed.									
Newton County	12	1310CST			0	0	0	0	Tstm Wind (?)	
	High winds from a thunderstorm toppled trees in the town of Friendship.									
Real County	15	0500CST			2	6	4	0	Flash Flooding	
	Up to 6 inches of rain fell over the northern portions of the county sending creeks and draws on rampage. At one low water crossing on Camp Wood Creek, between Camp Wood and Leahey, a car with 8 occupants was swept into the creek. 2 of the passengers drowned in the incident. M20V, F24V.									
Williamson County	16	1700CST			0	0	5	0	Tstm Wind (52)	
	High winds from a thunderstorm gusted to 60 MPH at the Georgetown Airport. There was extensive damage to 2 aircraft.									
Brazos County	16	1845CST			0	0	0	0	Tstm Wind (?)	
	High winds from a thunderstorm gusted to 64MPH at the College Station Airport. No damage reported.									
Burnet County	18	0100CST			0	0	4	0	Tstm Wind (?)	
	High winds from a thunderstorm toppled 50 to 100 oak trees in the northern part of the county. One barn was destroyed and several outbuilding damaged.									
Travis County	27	1550CST			0	0	4	0	Tstm Wind (?)	
	High winds from a thunderstorm ripped down power lines and blew over outbuildings in and around Pflugerville. One barn was destroyed. Some windows in the area were blown out by the wind.									
Galveston, Montgomery Counties	28	1055CST			0	0	0	0	Flooding	
	Over 5 inches of rain fell around the Woodlands area of southern Montgomery County. High water and flooding was reported along Panther Creek and the low areas around Oak Ridge North and Timber Ridge sub-divisions. Over 5 inches also fell on the western end of Galveston Island with some minor flooding.									
41 TEXAS, Western										
Terrell County	6	1645CST			0	0	?	?	Hail (0.75)	
	The public reported 0.75-inch hail 23 miles east-northeast of Sanderson.									
Andrews County	6	1830CST			0	0	?	0	TSTM WIND (64)	
	The public reported thunderstorm wind three miles south of Andrews on U. S. Highway 385 gusted to 64 knots, blowing a 4.5-ton oilfield truck off its block.									
Tom Green County	6	1835CST 1845CST			0	0	0	0	Flash Flooding Lightning	
	Street flooding in San Angelo occurred in response to over six inches of rain, with a number of autos swept from roadways. The heaviest rain occurred in the 1400 block of Van Buren in the central part of the city. In addition to the heavy rainfall and flooding, lightning struck a main underground power line near Angelo State University, knocking out power to much of the town for a period of three hours.									
Midland County	6	2255CST			0	0	0	0	TSTM WIND (52)	
	The public reported thunderstorm wind estimated at 52 knots near the intersection of Farm Road 1788 and County Road 150W.									
Howard County	6	Est 2345CST			0	0	4	0	Lightning	
	Lightning struck and set fire to a house in Big Spring, resulting in extensive damage to the house and interior furnishings. Residents of the house were in bed when the bolt struck. It apparently traveled down television cable wiring, exploding the television and setting fire to the curtains. The residents were able to escape the residence without injury.									
Howard County	7	0217CST			0	0	4	0	Lightning	
	Lightning set fire to a Big Spring residence, the second such fire in less than three hours. According to the Fire Chief, lightning struck the adjacent power pole, followed the power line to an interior room and ignited fabric.									

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					KILLED	INJURED	PROPERTY	CROPS	
TEXAS, Western									
Castro County	9	1630CST							Funnels
									Several funnel clouds were reported in the Dimmitt area between 1630 and 1640 CST.
Hockley, Lamb, Lubbock, Lynn, and Terry Counties	9	1700CST			0	0	?	0	Hail (1.75)
		1733CST			0	0	?	0	Hail (1.75)
		1733CST							Funnels
		1750CST	0.9	100	0	0	4	3	Tornado (F1)
		1818CST			0	0	0	4	Hail (1.75)
		1835CST	0.5	60	0	0	0	0	Tornado (F0)
		1846CST							Funnel
		1900CST			0	0	0	4	Hail (2.75)
		1903CST			0	0	0	0	Hail (0.75)
		1918CST			0	0	0	0	TSTM WIND (70)
									A pair of massive supercell thunderstorms developed over Lamb County during the late afternoon. Originally moving southeast, both made a 45-degree right turn to the south as they began to produce severe weather.
									The stronger of the two storms, Storm #1, was located in the southern part of Lamb County when it began to drop golf ball sized hail along Highway 84 five miles northwest of Anton, in southeast Lamb County, at 1700 CST. Hail up to golf ball in size was sporadically encountered by Skywarn Spotters near Anton, in far northeast Hockley County, and funnels were intermittently observed near Shallowater, in far northwest Lubbock County, for the next half hour.
									At about 1735 CST, Storm #1 made its right turn and became tornadic. The first spotter report of a tornado was made at 1750 CST. The tornado touched down 3.5 miles north of Snyder on County Road 168 in eastern Hockley County. It remained on the ground for just under a mile, with its 100-yard wide path resulting in broken power poles, a heavily damaged older residence, and some damage to crops. The very slow movement of the parent storm allowed the tornado to be observed for the next fifteen minutes. A second tornado, a dust whirl, inflicted no discernible damage about two miles south-southwest of Snyder at around 1835 CST.
									Storm #1 continued to produce large, between golf ball and baseball sized hail, as it churned south through eastern Hockley County during the next one and a half hours. In addition, 70-knot winds raked the Ropesville area in the southern part of the county. The hail produced a swath of severe crop damage measuring eight miles long and three miles wide from eastern Hockley into northeast Terry and northwest Lynn Counties, according to the Agricultural Extension Service.
									Storm #2 developed in northern Lamb County and made its right turn as it began producing funnel clouds six miles northwest of Olton at 1846 CST. With moisture and energy depleted by Storm #1 to its south, Storm #2 only produced one additional report of severe weather: dime-sized hail at 1903 CST five miles north of Olton.
Briscoe County	9	1915CST			0	0	0	0	Hail (1.00)
									The Sheriff's Department reported one-inch hail about two miles northeast of Silverton.
Dawson County	9	2110CST	10.0	120	0	0	0	0	Tornado (F1)
		2200CST			0	0	0	0	Hail (1.75)
									The O'Donnell Police Department observed a tornado 12 miles north of Lamesa at 2110 CST. The parent storm was Storm #1 (above) that produced the Hockley County tornadoes. The Lamesa Police Department reported seeing the tornado three or four times as it passed to the east of town. Their last sighting was at 2200 CST. Golf ball sized hail fell in Lamesa at around 2200 CST.
Dawson County	9	2240CST	2.0	80	0	0	0	0	Tornado (F0)
									As Storm #1 continued through Dawson County, the public reported a tornado southeast of Lamesa between Lamesa and Ackerly off of Highway 87. The twister was in open farmland and caused no apparent damage.
Howard County	10	0000CST			0	0	0	0	TSTM WIND (51)
		0010CST			0	0	4	4	Hail (0.75)
		0015CST							Funnel
									Storm #1 moved through Dawson County and finally passed through Howard County, striking the Big Spring area. A combination of wind gusting to 51 knots and dime-sized hail broke out skylights at Big Spring Mall. The broken skylights allowed 1.5 inches of rain in one hour to soak ceiling tiles and interior furnishings in portions of the mall. In addition, hail damage to crops resulted in the loss of about 25 percent of the area's crop value.
Ector County	10	1945CST			0	0	4	0	TSTM WIND (52)
									Large glass windows were blown out of businesses and billboards were blown down by thunderstorm wind gusts estimated at 52 knots.
TEXAS, Western									
Midland County	10	1946CST			0	0	0	0	TSTM WIND (55)
									Thunderstorm wind gusted to 55 knots at the Weather Service Office, Midland Regional Airport.
Hansford County	11	2140CST	0.1	40	0	0	0	0	Tornado (F0)
									A tornado touched ground briefly 2.5 miles northeast of Spearman. No damage was reported.
Armstrong County	12	0022CST			0	0	0	0	TSTM WIND (61)
									A Department of Public Safety Officer encountered thunderstorm wind gusts to 61 knots at Goodnight, in the eastern part of the county.
Floyd County	13	0015CST	1.0	60	0	0	0	0	Tornado (F0)
									The Floydada Police Department reported a tornado to have touched down on Highway 70 about halfway between Floydada and Lockney. No damage was noted.
Hale County	13	0040CST			0	0	0	0	Hail (1.75)
									A thunderstorm flanking the Floyd County tornadic storm produced golf ball sized hail at Petersburg in the southeast part of Hale County, according to the Sheriff's Office.
Castro County	13	0115CST			0	0	0	3	Hail (1.75)
									The Sheriff reported golf ball sized hail five miles north of Dimmitt.
Hale County	13	0207CST			0	0	0	0	Hail (1.75)
					0	0	0	0	TSTM WIND (52)
									The Hale County Civil Defense Director reported wind gusts to 52 knots and golf ball sized hail at Edmonson, in the extreme northern part of the county.
Pecos County	13	1700CST			0	0	0	0	Hail (0.75)
									The public reported dime-sized hail and strong wind 16 miles southwest of Fort Stockton.
El Paso County	13	1830CST			0	3	4	0	TSTM WIND
									An apparent thunderstorm microburst struck the community of San Elizario in the southern part of the county, resulting in the overturning of an anchored mobile home. The mobile home was a total loss, and all three family members sustained minor injuries. Other structures in the area sustained damage ranging from collapsed unreinforced walls to toppled unfinished structures.
Dawson County	13	1845CST			0	0	4	6	Hail (2.50)
									A Deputy Sheriff encountered golf ball sized hail from east of Welch to the northern part of Lamesa. The hail was devastating to the county's cotton crop, thought to have been the finest in years. About 45,000 acres of cotton was pulverized by the combination of large hail, strong wind and between three and four inches of rain. Areas sustaining the worst damage were from west of Munger to near Punkin Center and Highway 179, and from near Patricia through Klondike to Highway 137. The hail fell for about 25 minutes and resulted in losses of near 100 percent. The hail three miles southwest of Punkin Center was the size of tennis balls and struck a ranch house with such force that bricks were broken.
Borden County	13	2030CST			0	0	?	?	Hail (1.00)
									The public reported hail the size of quarters 18 miles east of Lamesa in western Borden County.
Scurry County	13	2130CST			0	0	5	0	TSTM WIND
		2130CST			0	0	3	5	Lightning
									Thunderstorm wind of unknown speed broke out windows, knocked down telephone lines and shattered plate glass windows throughout Snyder. Two power poles were also downed. In addition, several transformers in town were struck and burned by lightning, and no fewer than five grass fires started by lightning in adjacent ranchland.
Gaines County	14	1240CST			0	0	4	0	TSTM WIND (57)
									A half-dozen power poles were downed in and around the Seminole area by thunderstorm wind.
Martin County	14	1345CST			0	0	0	0	Hail (1.00)
									Skywarn Spotters reported one-inch hail two miles south of Patricia in the extreme northern part of the county.
Martin County	14	1400CST			0	0	0	0	Hail (1.75)
									Skywarn Spotters reported golf ball sized hail two miles south of Ackerly in northeast Martin County.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
TEXAS, Western									
Tom Green County	17	Est 2200CST Est 2215CST			0	0	3	0	TSTM WIND Lightning
A strong thunderstorm moved slowly across the San Angelo vicinity, bringing intense lightning and strong straightline winds. The lightning struck a number of transformers, causing small fires, and hit several chimneys. Some of the chimneys exploded.									
Tom Green County	18	0835CST			0	0	3	3	TSTM WIND
Thunderstorm wind accompanied very heavy rains in excess of two inches in the San Angelo area. The wind blew out store windows in the downtown area, resulting in water damage to interior furnishings. Some trees sustained substantial damage to limbs and branches.									
Moore County	20	1555CST			0	0	0	3	Hail (1.75)
Golf ball sized hail fell at Sunray. The hail fell for a period of an hour and inflicted scattered crop damage.									
Hutchinson County	20	1615CST			0	0	0	3	Hail (1.75)
Golf ball sized hail struck Borger and resulted in scattered damage to crops and home gardens.									
Potter County	20	1654CST			0	0	0	0	TSTM WIND (52)
Thunderstorm wind gusted to 52 knots at the Weather Service Office in Amarillo.									
Gray County	20	1710CST 1715CST			0	0	0	0	Hail (1.75) TSTM WIND (54)
Golf ball sized hail was noted by the Sheriff's Department three miles north of Pampa. The storm produced wind gusts to 54 knots that knocked out power to part of the town.									
Hemphill County	20	1710CST 1710CST			0	0	4	5	Hail (1.75) TSTM WIND
Golf ball sized hail, driven by thunderstorm wind of unknown speed, downed high tension electrical lines, uprooted trees, and rolled a mobile home in Canadian.									
Gray County	20	1720CST			0	0	0	2	Hail (0.75)
Hail about the size of a dime inflicted only minor damage to crops in the Pampa vicinity.									
Lubbock County	20	1940CST			0	0	0	0	TSTM WIND (52)
Thunderstorm wind gusted to 52 knots at Idalou in the eastern part of the county.									
42 UTAH									
Beaver County	03	1340MST			0	0	1	0	Thunderstorm Wind (650)
A thunderstorm wind gust to 50 mph was reported at the Milford Weather Service Office.									
Cache County	08	1636MST			0	0	1	0	Thunderstorm Wind (655)
A thunderstorm moved across the Logan Airport and produced a wind gust to 63 mph. The wind was accompanied by small hail.									
43 VERMONT ————— NONE REPORTED									
44 VIRGINIA									
VAZ008-009-010 Central and Southern Va	5	0700EST			0	0	7	6	Flood
Rain began Saturday continuing through the Labor Day weekend. Rainfall amounts averaged 6 to 14 inches. The heaviest downpours occurred Monday with amounts reaching 4 to 8 inches in a 3 to 6 hour time period. The Staunton River crested at 34.44 feet in Altavista the afternoon of the 8th, the highest there since 1940. The James, Dan and Roanoke Rivers also went above flood stage in many locations. Many smaller rivers and streams flooded rapidly, causing considerable damage. Damage estimates ranged from \$156,000 in Goochland County to \$7 million in Bedford, Henry and Franklin.									
VAZ001-002 Southeastern Va	5	0000EST			0	0	3	0	Urban Flooding
Showers began early Sunday morning with some of the heaviest rain in the early afternoon. Thunderstorms with torrential downpours dropped 5.52 inches in about 2 hours in the Ghent section of Norfolk. Many streets were under 3 to 5 feet of water until late on the 6th.									
Prince William Co	17	1730EST			0	0	?	0	Hail (1.35)
Thunderstorms moving through extreme northern Virginia dropped hail of 1 3/8 inch. Quantico Marine base reported wind gusts to 38 knots. The public reported sighting a funnel cloud.									
45 WASHINGTON ————— NONE REPORTED									
46 WEST VIRGINIA ————— NONE REPORTED									
47 WISCONSIN									
Siren, Burnett Co.	05	1515CST			0	0	0	0	Hail (0.75)
A severe thunderstorm deposited hail up to 3/4 inch in diameter at Siren.									
Cumberland, Barron Co.	09	1643CST			0	0	0	0	Funnel Cloud
A funnel cloud was sighted 4NW of Cumberland.									
Cumberland, Barron Co.	10	1630CST	0.1	25	0	0	0	0	Tornado (F0)
A small tornado touched down briefly in a rural area 7NW of Cumberland and damaged a grove of pine trees.									
New Glarus, Green Co.	10	1555CST			0	0	0	0	Funnel Cloud
	10	1555CST			0	0	0	0	Thunderstorm Wind
A severe thunderstorm generated a funnel cloud 3SW of New Glarus. Strong winds from the storm downed several large trees.									
Sullivan, Jefferson Co.	19	1612CST			0	0	0	0	Cold Air Funnel Cloud
A cold air funnel cloud dipped very close to the ground 4N of Sullivan. The winds whipping around the funnel blew some leaves off nearby trees and shook a car along Interstate 94.									
Lake Michigan, Sheboygan Co.	21	1453CST			0	0	0	0	Funnel Cloud
A funnel cloud was spotted over Lake Michigan just off the northeast Sheboygan County shoreline.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1987

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED ¹ DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
48 WYOMING									
Converse Co, Douglas	03	1730MST		0	0	4	0		Thunderstorm Wind
A powerful thunderstorm swept through Douglas about 1730MST with damaging winds. The damage by the strong winds caused falling tree limbs to down power lines. These downed power lines produced blackouts to a section of downtown Douglas and a section about 8 miles long, east of the city. Thunderstorm winds also demolished a barn and blew off a roof in the Douglas area.									
Niobrara Co, Lusk	03	1930MST		0	0	4	0		Thunderstorm Wind
Strong thunderstorm winds blew through the Lusk area about 1930MST. These winds caused numerous tree limbs to pop or snap off. One tree limb crashed into a pickup truck and caused about \$1,000 in damages. A camper top was flipped over and stretches of a fence were blown down on the west side of Lusk.									
Albany Co Rock River	04	1212MST		0	0	0	0		Thunderstorm Wind (52)
Jelm	04	1255MST		0	0	?	0		Thunderstorm Wind (52)
Strong thunderstorm winds raked through Albany County with wind gusts to 60 miles an hour.									
Platte Co, Chugwater	04	1310MST		0	0	?	0		Thunderstorm Wind (52)
A severe thunderstorm which developed west of Chugwater moved east over the town by 1310MST. This thunderstorm produced wind gusts to 60 miles an hour along with one-half inch diameter hail.									
Goshen Co 3N Hawk Springs	04	1345MST		0	0	3	4		Hail (1.75)
Yoder	04	1335MST		0	0	3	3		Hail (.50)
Huntley	04	1400MST		0	0	4	4		Hail (1.75)
8N Hawk Springs	04	1405MST		0	0	3	4		Hail (.75)
Severe thunderstorms plummeted the south section of Goshen County with one-half inch to one and three-quarters inch diameter hail. The hailstorm broke all windows on the west side of Huntley Elementary School. Windows were also broken in homes and damage was done to roofs and car tops between Yoder and Huntley. About 2500 acres of sugar beets were badly damaged due to the hail between Yoder and Huntley. Crops of corn and beans were also reduced to stubble due to the hail. Military personnel about 8 miles north of Hawk Springs reported three-quarter inch diameter hail which accumulated to a depth of about 2 inches.									
Laramie Co 18W Cheyenne	10	1515MST		0	0	?	0		Hail (1.75)
A severe thunderstorm dropped one and three-quarter inch diameter hail about 18 miles west of Cheyenne.									
Teton Co Jackson	25	1810MST		0	0	0	0		Thunderstorm Wind (50)
Thunderstorms swept through northwest Wyoming around 1810MST with strong gusty winds and heavy rain. Winds gusted to 58 miles an hour at the Jackson Hole Airport due to thunderstorm winds.									
49 ALASKA, Northern ————— NO REPORT RECEIVED									
49 ALASKA, Southern									
COOK INLET	06	1600AST		0	0	3	0		High Wind
Chinook winds to 60 mph were observed on the upper hillside of east Anchorage.									
NORTH GULF COAST	17	1000AST		0	0	?	0		Heavy Rain
A strong southerly flow ahead of an advancing occluded front in the Gulf of Alaska brought 6.69 inches of rain to Yakutat in 24 hours. There was local urban type flooding.									
ALEUTIANS	20- 21			0	0	4	0		High Winds
An extratropical low spawned from typhoon Freda brought high winds to all of the Aleutian chain. Peak reported winds were 84 mph at Adak, 70 mph at Cold Bay and 61 mph at Shemya AFB.									
49 ALASKA, Southeastern									
Southern SE Alaska	8/30/87-9/1/87			0	0	2	0		High wind, heavy rain
A series of strong storms crossed the southern Southeast Alaska panhandle from August 30 to September 1 bringing local flooding and near hurricane force winds to especially the Ketchikan Area.									
50 HAWAII									
Oahu	2	late Afternoon		0	0	3	0		Flash flooding
A heavy thunderstorm in the Pearl City and Waipahu area caused localized street flooding and some damage to contents of stores. Farrington Highway closed for a short period as pavement was under 2 feet of water.									
51 PUERTO RICO ————— NONE REPORTED									
52 VIRGIN ISLANDS ————— NONE REPORTED									
53 PACIFIC ————— NONE REPORTED									

STORM SUMMARY

SEPTEMBER 1987

TYPE	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA	COLORADO	CONNECTICUT	DELAWARE	FLORIDA	GEORGIA	IDAHO	ILLINOIS	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND & DC	MASSACHUSETTS	MICHIGAN	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE	
TORNADOES						0					0				0		0		0								0	
Number		2						2												1	1							
Days		1						2												1	1							
Deaths		0						0												0	0							
Injuries		0						3												0	0							
Property Damage		3						5												0	0							
Crop Damage		0						0												0	0							
HAIL																												
Deaths			0		0		0		0				0	0		0						0				0		
Injuries			0		0		0		0				0	0		0						0				0		
Property Damage			3		3		3		3				5	5		3						0				5		
Crop Damage			0		0		0		0				7	6		0						3				6		
THUNDERSTORM WINDS																												
Deaths	0	0	0	0	0		0	0	1			0	0	0		0		0		0	0	0	0	0	0	0	0	
Injuries	0	0	0	0	0		0	0	0			0	0	0		0		0		0	0	0	0	0	0	0	0	
Property Damage	3	4	4	3	4		4	4	5		3	5	4	4		5		3		4	5	5	6	1	5	6	6	
Crop Damage	3	2	0	0	3		0	0	?		0	4	0	0		0		0		0	3	3	0	0	0	0	0	
HIGH WINDS																												
Deaths													0	0														
Injuries												0	4	4														
Property Damage																												
Crop Damage																												
LIGHTNING																												
Deaths	0	0	0	0	0		2						0	0		0				0	0	0				1		
Injuries	1	1	1	0	2		11						0	0		0				2	2	1				2		
Property Damage	?	?	5	?	?		0						4	4		?				2	2	5				0		
Crop Damage			0	?	0		0						0	0		0				0	0	0				0		
FLASH FLOODS																												
Deaths		0	0				0		4																0	0	0	
Injuries		0	0				0		2																0	0	0	
Property Damage		3	?				3		4																4	4	?	
Crop Damage		0	0				0		0																4	4	0	
FLOODS																												
Deaths													0	0				0								0	0	
Injuries													0	5				0								0	0	
Property Damage													5	5				4								3	3	
Crop Damage													5	5				?								4	4	
HEAVY SNOWSTORMS AND BLIZZARDS @																												
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
ICE STORMS #																												
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
HURRICANES AND TROPICAL STORMS																												
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
ALL OTHERS																												
Deaths				8																								
Injuries				102																								
Property Damage				8																								
Crop Damage				?																								

SEE REFERENCE NOTES FOR STORM DAMAGE CATEGORIES

STORM SUMMARY

SEPTEMBER 1987

TYPE	NEW JERSEY	NEW MEXICO	NEW YORK	NORTH CAROLINA	NORTH DAKOTA	OHIO	OKLAHOMA	OREGON	PENNSYLVANIA	RHODE ISLAND	SOUTH CAROLINA	SOUTH DAKOTA	TENNESSEE	TEXAS	UTAH	VERMONT	VIRGINIA	WASHINGTON	WEST VIRGINIA	WISCONSIN	WYOMING	ALASKA	HAWAII	PACIFIC	PUERTO RICO	VIRGIN ISLANDS	NATIONAL DEATH & INJURY TOTALS
TORNADOES					0			0		0						0		0	0					0	0	0	
Number		1		1			1							8						1							
Days		1		1			1							3						1							
Deaths		0		0			0							0						0							0
Injuries		0		0			0							0						0							3
Property Damage		0		0			0							4						0							
Crop Damage		0		0			0							3						0							
HAIL																											
Deaths	0	0	0	0			0		0		0			0			0					0					
Injuries	0	0	0	0			0		0		0			0			0					0					
Property Damage	?	5	3	?			4		?		3			5			?					4					
Crop Damage	?	?	0	?			?		?		0			6			0					4					
THUNDERSTORM WINDS																											
Deaths	0	0	0	0		0	0		0		0		0	2	0							0					3
Injuries	0	0	0	2		0	16		0		0		0	24	0							0					42
Property Damage	4	?	5	5		5	6		5		2		4	7	1							4					
Crop Damage	0	?	3	0		0	?		?		0		0	4	0							0					
HIGH WINDS																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
LIGHTNING																											
Deaths	1		1	0		0	2				0	0	0	0													7
Injuries	0		1	4		7	2				1	0	0	7													43
Property Damage	0		3	5		0	5				0	0	4	5													
Crop Damage	0		0	0		0	?				0	0	0	5													
FLASH FLOODS																											
Deaths		0	0	0			0		1		0			2									0				7
Injuries		0	0	0			0		0		2			6									0				10
Property Damage		6	6	?			5		8		6			4									3				
Crop Damage		?	0	?			6		?		0			?								0					
FLOODS																											
Deaths	0		0				0		0		0						0										
Injuries	0		0				0		0		0						0										
Property Damage	?		6				?		3		4						7										
Crop Damage	0		4				?		0		0						6										
HEAVY SNOWSTORMS AND BLIZZARDS @																											
Deaths																											
Injuries																											
Property Damage																											
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ICE STORMS #																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
HURRICANES AND TROPICAL STORMS																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
ALL OTHERS																											
Deaths											1																9
Injuries											0																162
Property Damage											6																
Crop Damage											5																

SEE REFERENCE NOTES FOR STORM DAMAGE CATEGORIES

REFERENCE NOTES

STORM DAMAGE CATAGORIES

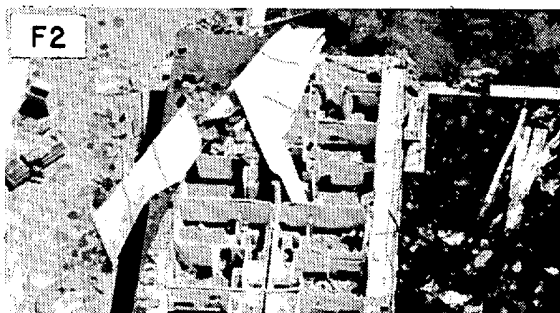
- 1 Less than \$50
- 2 \$50 to \$500
- 3 \$500 to \$5,000
- 4 \$5,000 to \$50,000
- 5 \$50,000 to \$500,000
- 6 \$500,000 to \$5 Million
- 7 \$5 Million to \$50 Million
- 8 \$50 Million to \$500 Million
- 9 \$500 Million to \$5 Billion

- 0/Blank None reported.
* Miles instead of yards.
** Yards instead of miles.
@ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
≠ Report incomplete.
≠≠ Report not received.
o/c Indicates Crop Damage amount is included in the value given for property damage.

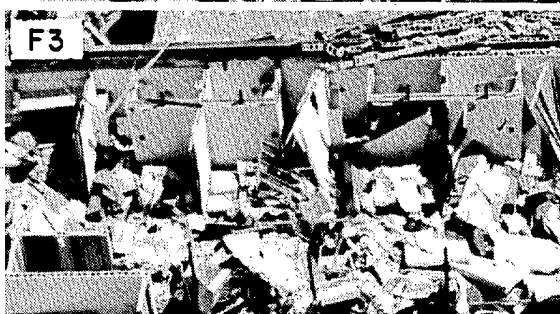
When reports are not received or are incomplete, the Storm Summary National Death and Injury totals may also be incomplete.

Definition of Fujita Tornado Scale (F scale)

(F0) Gale tornado (40-72 mph): Light damage
Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage sign boards.



(F1) Moderate tornado (73-112 mph): Moderate damage
The lower limit (73 mph) is the beginning of hurricane wind speed; peel surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads.



(F2) Significant tornado (113-157 mph): Considerable damage
Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.

(F3) Severe tornado (158-206 mph): Severe damage
Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off ground and thrown.



(F4) Devastating tornado (207-260 mph): Devastating damage
Well-constructed houses leveled; structure with weak foundation blown off some distance; cars thrown and large missiles generated.

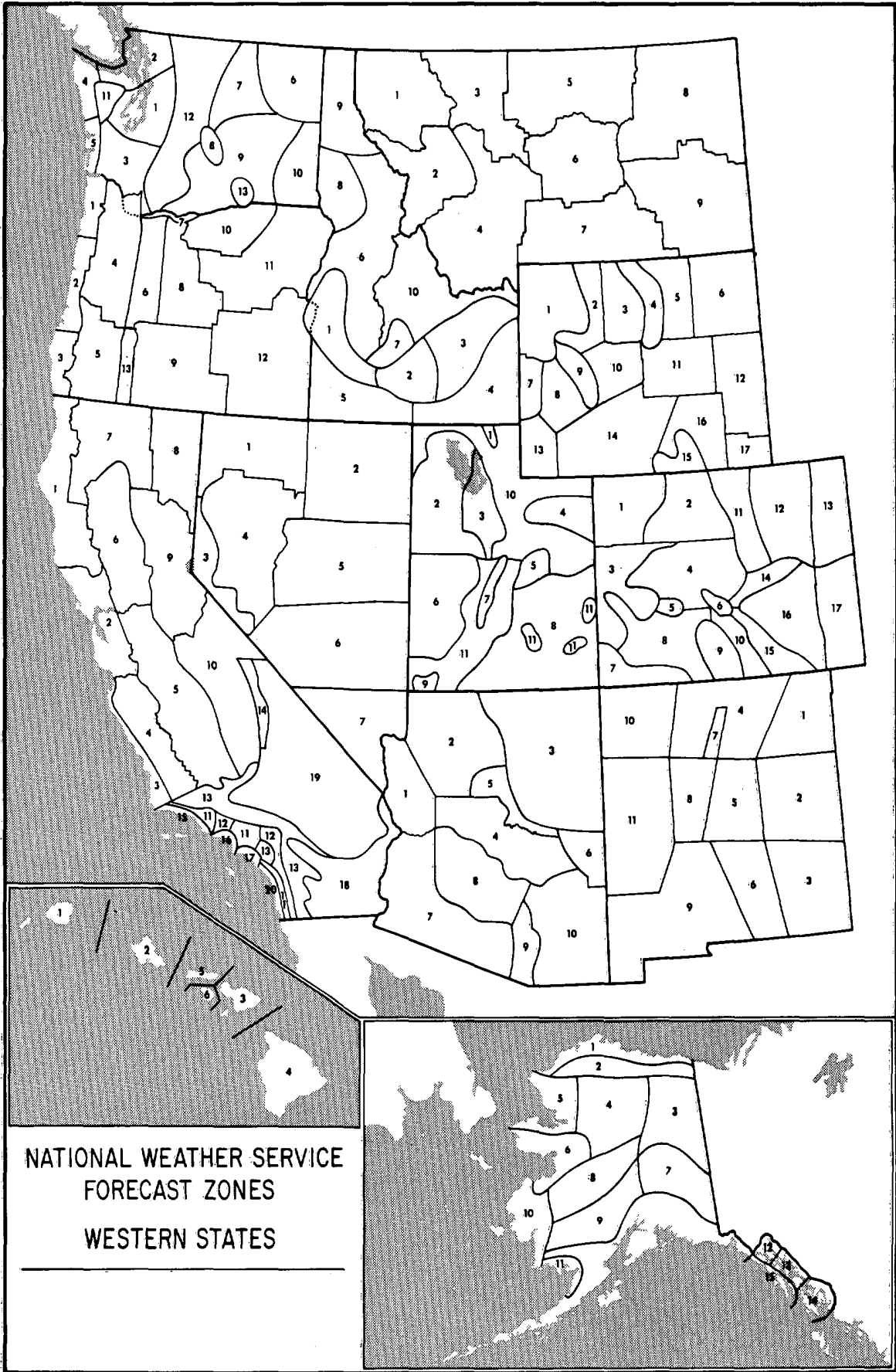
(F5) Incredible tornado (261-318 mph): Incredible damage
Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100 m; trees debarked; incredible phenomena will occur.

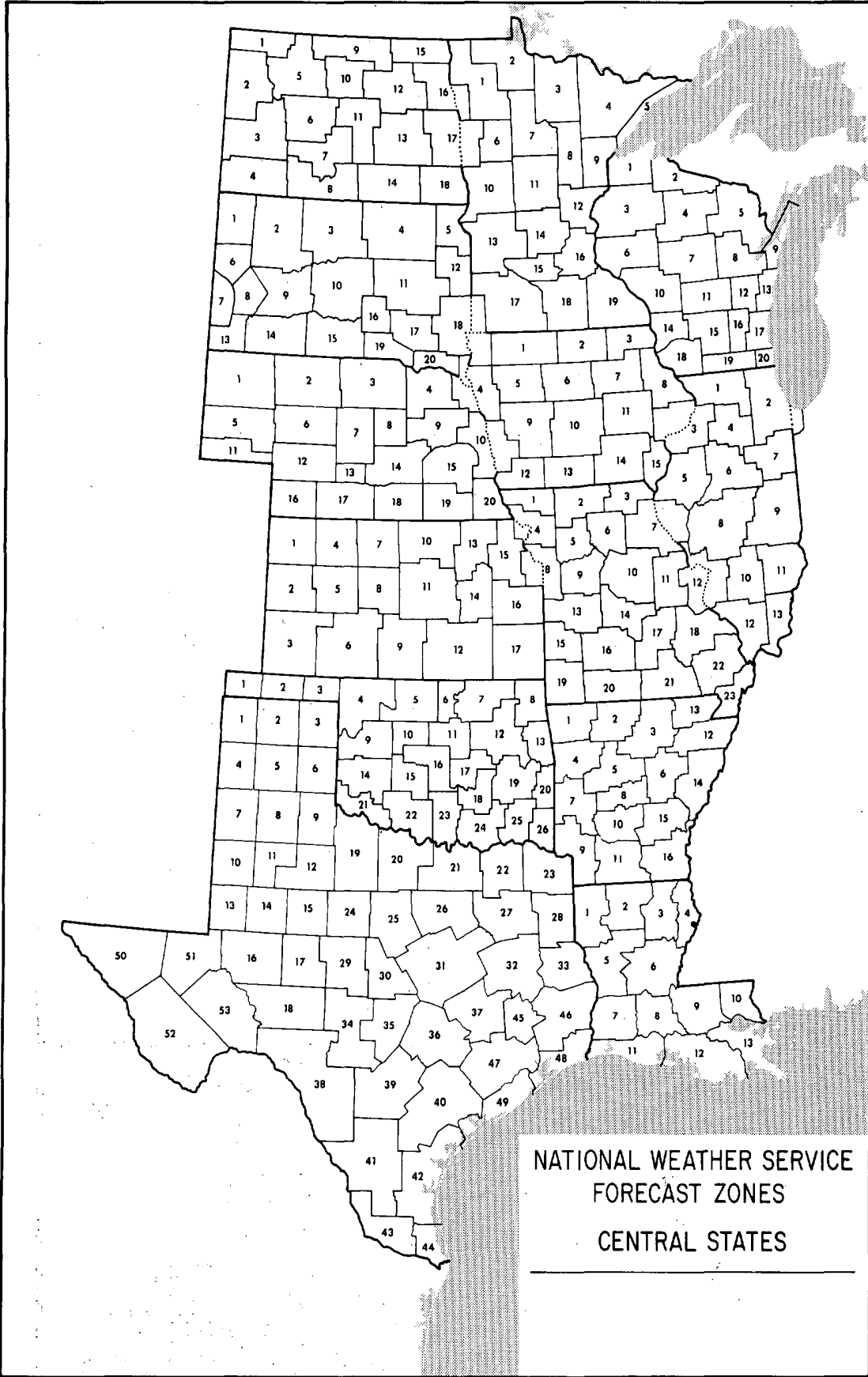


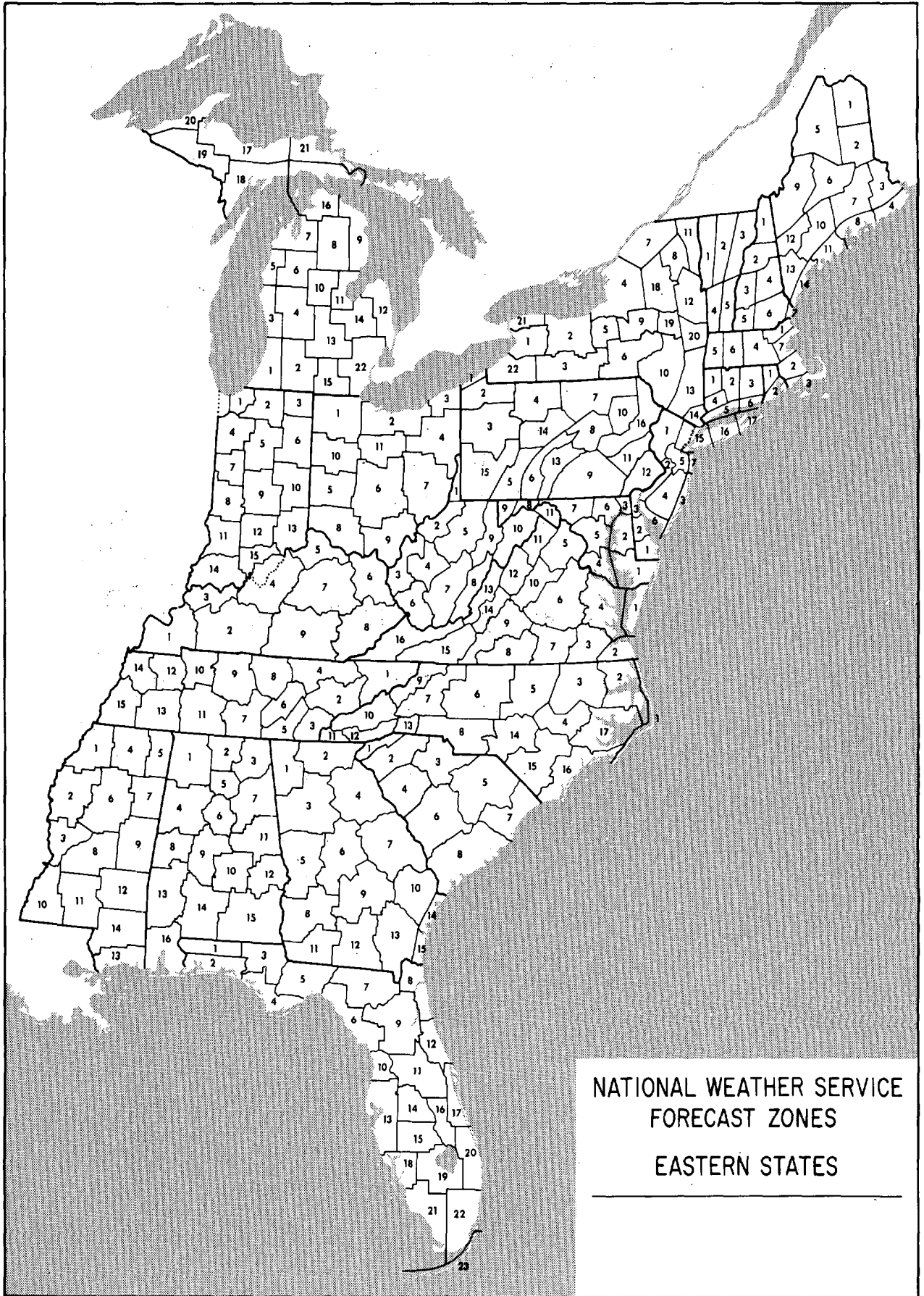
(F6-F12) (319 mph to Mach 1, the speed of sound):
The maximum wind speeds of tornadoes are not expected to reach the F6 wind speeds.

(F0+F1) *Weak Tornado*
(F2+F3) *Strong Tornado*
(F4+F5) *Violent Tornado*

From J. Atmos. Sci., August 1981, p. 1517-1519







NATIONAL WEATHER SERVICE
FORECAST ZONES
EASTERN STATES

National Oceanic and Atmospheric Administration

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WHY DO YOU NEED WEATHER DATA?



- *Litigation*
- *Insurance Claims*
- *Environmental Studies*
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WHAT TYPE OF INFORMATION DO YOU NEED?



- *Station Records*
- *Monthly/Annual Summaries*
- *Long Term Climatic Studies*
- *Surface or Upper Air Charts*



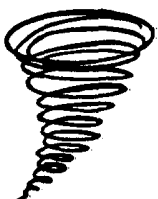
WHICH OUTPUT MEDIA IS BEST FOR YOU?



- *Publications*
- *Paper Copies*
- *Charts*
- *Microfiche/Microfilm*
- *Floppy Disk*
- *Computer Tape*



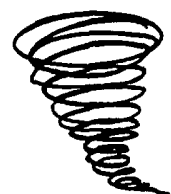
Call or write NCDC and explain your weather related problem.
Our meteorologists will provide the best possible solution.



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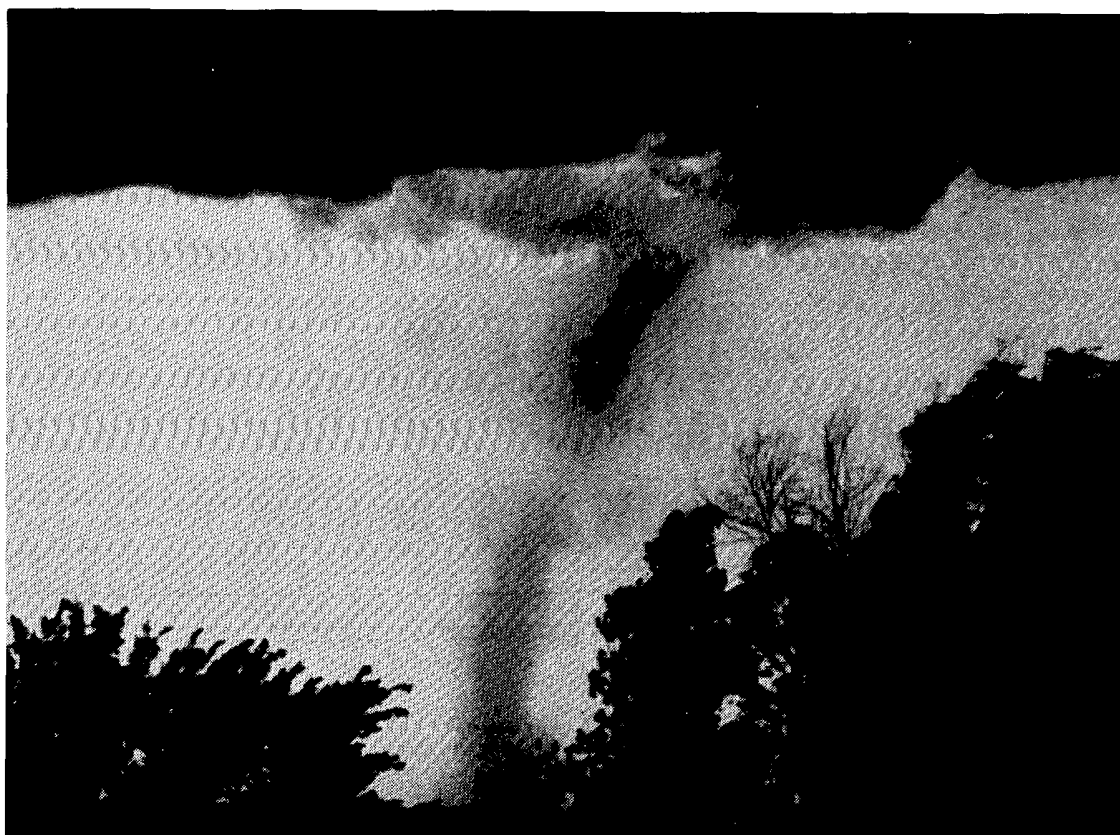
Federal Building, Asheville, N. C. 28801-2696

Phone (704) 259-0682 or (704)-CLIMATE



STORM DATA

CORRECTED COVER

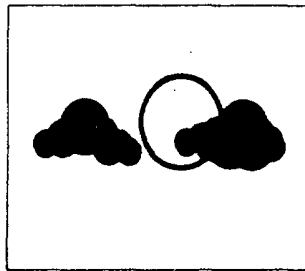


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Kenneth D. Hadlee

DIRECTOR
NATIONAL CLIMATIC DATA CENTER

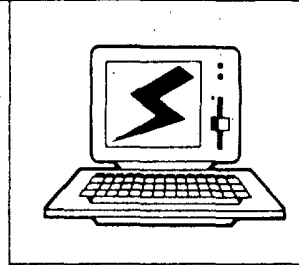
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COMPUTATIONAL
HYDROLOGY
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COMPUTATIONAL HYDROLOGY 88

*Second International Symposium on Computational Methods
In Flood Control Hydrology & Hydraulics, Surface &
Subsurface Hydrology, and Water Resources Engineering*

San Diego, California
July 10 - 13, 1988

Chief among the concerns of environmental impacts are the effects of storm runoff on existing and urbanized watersheds. Such concerns as stormwater management, surface runoff pollution, and methods for hydraulic and hydrologic modeling are only a few of the many problems faced by today's private engineering concerns and public agencies. This international conference, COMPUTATIONAL HYDROLOGY 88, aims at providing a forum for presenting the latest innovative and applied computational methods in flood control hydrology and hydraulics, surface and subsurface hydrology, and water resources engineering.

Objectives

The major objective of COMPUTATIONAL HYDROLOGY 88 is the creation of a proper forum of discussion among managers, scientists, and engineers involved in the creation, development of application of computer software to hydrologic problems. COMPUTATIONAL HYDROLOGY 88 will present the most recent developments and practical implementations in the theoretical, numerical and applicable aspects of computer analysis, simulation modeling, control and forecasting for hydrologic applications. The conference aims at the establishment of a useful connection between originators of hydrologic software programs and their possible users, thus reducing the present large duplication of effort in software development.

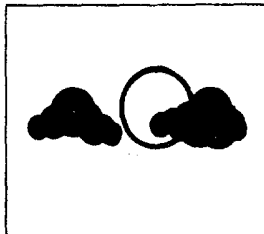
Conference Chairmen

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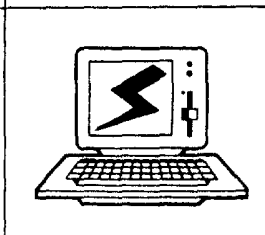
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Subsurface Hydrology, and Water Resources Engineering*

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DETAILS ON PAGE REVERSE

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