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Supplement to

STATISTICS OF U.S. TORNADOES BASED ON THE
DAPPLE (Damage Area Per Path Length) TORNADO TAPE

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U.S. Nuclear Regulatory Commission
Washington, D.C.

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The results presented in this supplement were prepared jointly by:

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Robert F. Abbey, Jr., U.S. Nuclear Regulatory Commission, and
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TOUCHDOWN COUNTS OF U.S. TORNADOES (1916 - 1978)

Tabulated by Fujita and Tecson with McDonald and Abbey

- (A) Counts in Climatological Data, National Summary of 1978, the NOAA's latest counts (entire U.S.)
 (B) Counts in Climatological Data, National Summary of the year in which tornadoes occurred
 (C) Counts from the DAPPLE Tape as of June 1979 (contiguous U.S.)
 (D) Counts from the NSSFC Tape made by McDonald in September 1979

Year	NOAA's Official Counts			From DAPPLE Tape		From NSSFC Tape	
	(A)	(B)	(B-A)	(C)	(C-A)	(D)	(D-A)
1916	90	90	0	86	-4		
17	121	121	0	147	+26		
18	81	81	0	90	+9		
19	64	65	+1	68	+4		
1920	87	87	0	93	+6		
21	105	106	+1	115	+10		
22	108	108	0	122	+14		
23	102	102	0	100	-2		
24	130	130	0	131	+1		
25	119	119	0	125	+6		
26	111	111	0	116	+5		
27	163	164	+1	176	+13		
28	203	203	0	209	+6		
29	197	197	0	204	+7		
1930	192	192	0	205	+13		
31	94	94	0	103	+9		
32	151	152	+1	156	+5		
33	258	260	+2	273	+15		
34	147	147	0	149	+2		
35	180	182	+2	196	+16		
36	151	159	+8	166	+15		
37	147	133	-14	164	+17		
38	213	200	-13	219	+6		
39	152	138	-14	161	+9		
1940	124	126	+2	129	+5		
41	118	80	-38	121	+3		
42	167	169	+2	175	+8		
43	152	171	+19	162	+10		
44	169	160	-9	172	+3		
45	121	136	+15	138	+17		
46	106	114	+8	113	+7		
47	165	161	-4	177	+12		
48	183	195	+12	192	+9		
49	249	290	+41	269	+20		
1950	200	209	+9	202	+2	220	+20
51	262	300	+38	270	+8	271	+9
52	240	270	+30	270	+30	269	+29
53	421	532	+111	432	+11	488	+67
54	550	690	+140	574	+24	604	+54
55	593	870	+277	579	-14	622	+29
56	504	823	+319	532	+28	565	+61
57	856	924	+68	886	+30	919	+63
58	564	565	+1	569	+5	601	+37
59	604	589	-15	605	+1	620	+16
1960	616	618	+2	639	+23	641	+25
61	697	682	-15	707	+10	671	-26
62	657	658	+1	656	-1	765	+108
63	464	461	-3	494	+30	492	+28
64	704	713	+9	729	+25	755	+51
65	906	898	-8	933	+27	992	+86
66	585	570	-15	593	+8	604	+19
67	926	912	-14	962	+36	966	+40
68	660	660	0	681	+21	710	+50
69	608	604	-4	638	+30	648	+40
1970	653	649	-4	699	+46	699	+46
71	888	888	0	930	+42	955	+67
72	741	741	0	753	+12	774	+33
73	1,102	1,109	+7	1,110	+8	1,204	+102
74	947	945	-2	966	+19	1,118	+171
75	920	918	-2	932	+12		
76	835	835	0	849	+14		
77	852	852	0	852	0		
78	788	788	0	782	-6		
1916-78 (in %)	24,263 (100 %)	25,216 (103.9)	+953 (+3.9 %)	25,046 (103.2)	+783 (+3.2 %)	---	---
1950-74 (in %)	15,948 (100 %)	16,880 (105.8)	+932 (+5.8 %)	16,409 (102.8)	+461 (+2.8 %)	17,173 (107.7)	+1,225 (+7.7 %)
NOAA's Official Counts				From DAPPLE Tape		From NSSFC Tape	

1950-78

$$\bar{x} = 683.59$$

$$29 \bar{x} = 19824$$

71-78

$$\bar{x} = 896.75$$

$$\bar{x}(29) = 26,006$$

unreported

$$26,006 - 19824$$

6182

$$26,006 = 1.31$$

3190 Not

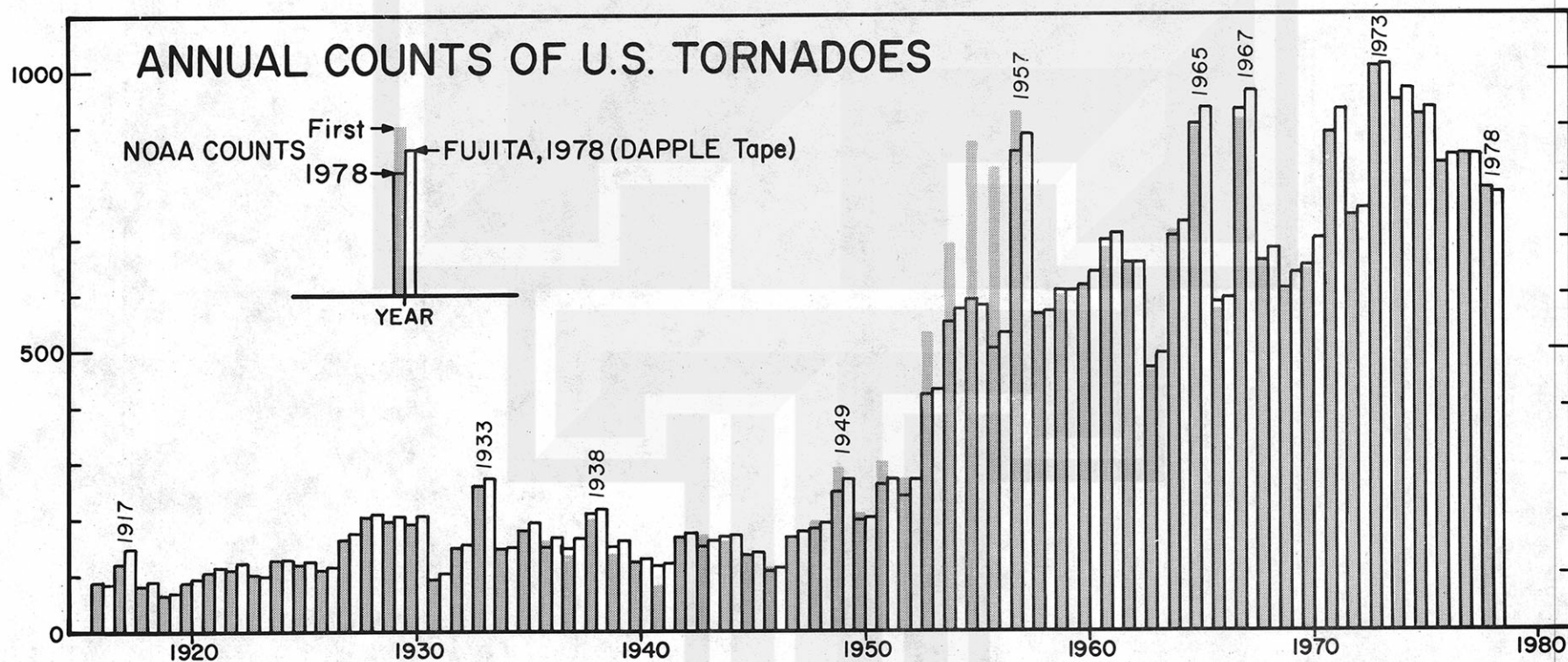


Figure 1. Annual counts of U.S. tornadoes, 1916-1978.

Three counts in each year are presented in this bar graph. The left-side bar in the key diagram shows the first-year count (shaded portion) and the count in the Climatological Data, National Summary, 1978 by NOAA. The right-side bar denotes the count from the DAPPLE tornado tape as of June 1979.

The total count by NOAA as of December 1978 is 24,263 while the count from the DAPPLE tape is 25,046. For details of the difference in each year, refer to the table on the first page of this handout.

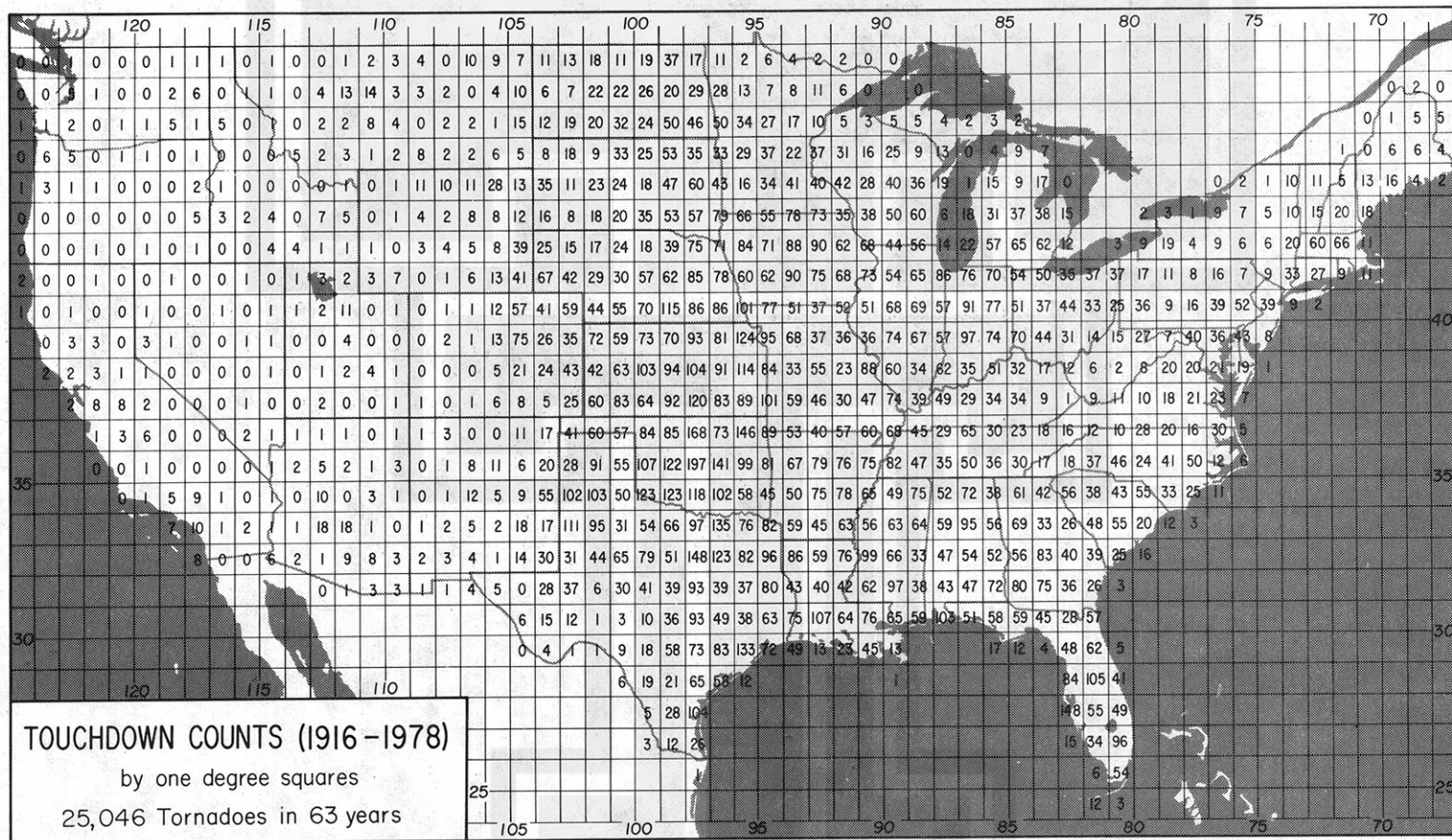


Figure 2. Touchdown counts of 25,046 tornadoes in 1916-1978 by one-degree squares.

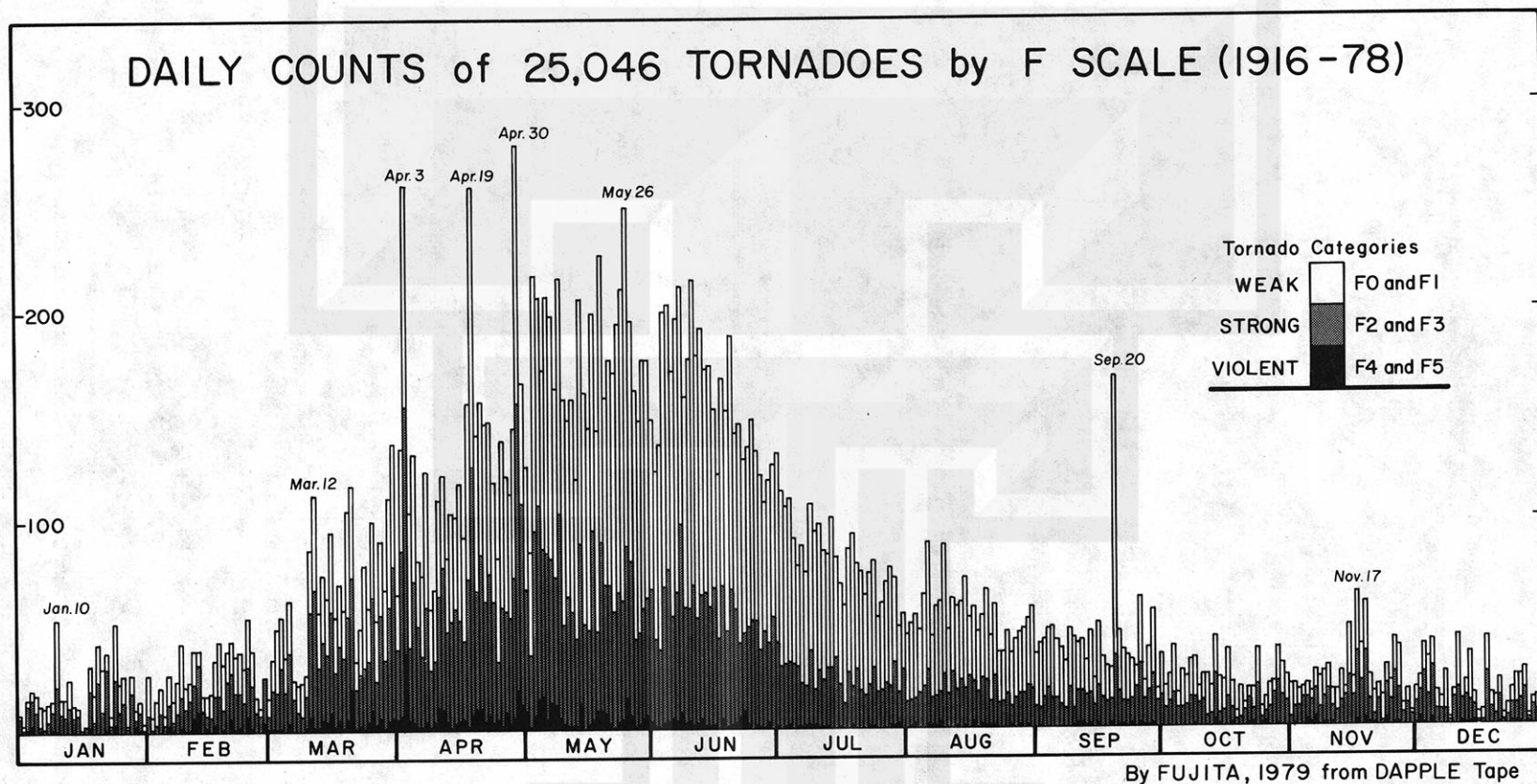


Figure 3. Daily counts of 25,046 tornadoes in 1916-1978 by F scale.

The count on February 29 was normalized by multiplying by a factor of 4. Note that there are peak days such as April 3 (super-outbreak day in 1974), September 20 (hurricane Beulah of 1967), etc. The Palm-Sunday tornado day, April 11, 1965 did not show as a peak.

It should also be noted that the overall peak of the weak (F0 and F1) tornadoes is in the middle of May, the strong (F2 and F3) tornadoes in the middle of April, and the violent (F4 and F5) tornadoes also in the middle of April.

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NOAA's Official Counts

From DAPPLE Tape

From NSSFC Tape