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RESEARCH MEMORANDUM

EVALUATION OF GUST AND DRAFT VELOCITIES FROM FLIGHTS OF
P-61C AIRPLANES WITHIN THUNDERSTORMS JUNE 2, 1947
TO JUNE 7, 1947 AT CLINTON COUNTY
ARMY AIR FIELD, OHIO

By

Jack Funk

Langley Memorial Aeronautical Laboratory
Langley Field, Va.

January 2, 1948

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EVALUATION OF GUST AND DRAFT VELOCITIES FROM FLIGHTS OF

P-61C AIRPLANES WITHIN THUNDERSTORMS JUNE 2, 1947

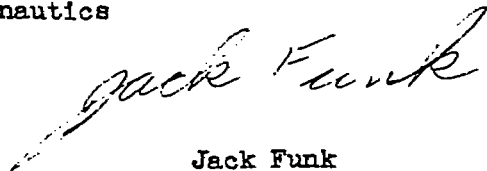
TO JUNE 7, 1947 AT CLINTON COUNTY

ARMY AIR FIELD, OHIO

By Jack Funk

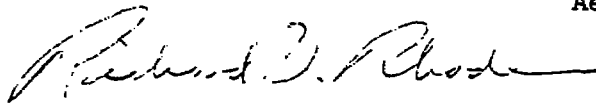
The results obtained from measurements of gust and draft velocities within thunderstorms at Clinton Army Air Field, Ohio, for the period of June 2, 1947 to June 7, 1947 are presented herein. These data are summarized in tables I and II, respectively, and are of the type presented in reference 1 for previous flights.

Langley Memorial Aeronautical Laboratory
National Advisory Committee for Aeronautics
Langley Field, Va.



Jack Funk
Aeronautical Engineer

Approved:



Richard V. Rhode
Chief of Aircraft Loads Division

MLE

REFERENCE

1. Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61C Airplanes within Thunderstorms May 13, 1947 to May 29, 1947, at Clinton County Army Air Field, Ohio. NACA RM No. L7J29, 1947.

TABLE I.- SUMMARY OF GUST MEASUREMENTS FROM FLIGHTS
OF P-61C AIRPLANES WITHIN THUNDERSTORMS

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e,max}$ (fps)		Maximum true gust velocity $U_{t,max}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 2, 1947 - Flight 4								
Airplane 351 - Traverse 1 Length of traverse 844.0 sec, 313,415 ft								
0 - 10	21,000	4.1	-4.4	5.4	-7.1	94	28	3
10 - 20		6.6	-----	-----	-8.5	---	99	2
20 - 30		-----	-----	-----	-5.7	---	71	1
30 - 40		8.2	-----	6.5	-----	159	---	2
40 - 110		-----	-----	-----	-----	---	---	0
110 - 120		6.9	-----	6.7	-----	98	---	1
120 - 140		-----	-----	-----	-----	---	---	0
140 - 150		6.6	-6.3	-----	-8.7	---	179	4
^a 150 - 160		15.2	-2.5	16.0	-18.7	124	180	6
160 - 170		10.4	-9.8	21.2	-16.7	51	268	8
170 - 180		4.1	-6.9	-----	-12.3	---	176	7
180 - 190		2.5	-4.1	7.6	-7.6	52	175	4
190 - 200		9.5	-2.5	-----	-----	---	---	6
200 - 210		9.2	-10.7	9.6	-8.8	237	239	4
210 - 220		9.2	-6.6	-----	-5.9	---	114	6
220 - 230		3.8	-6.0	10.6	-27.8	157	128	6
230 - 240		5.4	-3.8	9.3	-9.5	83	154	3
240 - 250		7.6	-2.5	5.3	-8.7	112	167	12
250 - 260		8.5	-6.9	-----	-10.4	---	69	9
260 - 270	8.8	-3.8	5.0	-9.9	74	96	6	
270 - 280	21,500	4.7	-5.4	9.6	-----	206	---	8
280 - 290	21,000	11.1	-14.5	-----	28.8	---	334	6
290 - 300	7.6	-10.7	-----	-15.5	---	86	12	
300 - 310	15.2	-4.4	-----	-----	---	---	---	9
310 - 320	-----	-7.9	-----	-----	---	---	---	4
320 - 330	-----	-----	-----	-----	---	---	---	0
330 - 340	5.7	-6.3	6.2	-7.6	330	175	4	
340 - 350	8.5	-2.5	11.3	-8.8	246	146	8	
350 - 360	6.3	-6.9	10.5	-----	92	---	8	
360 - 370	10.1	-8.5	-----	-17.6	---	102	12	
370 - 380	6.3	-----	3.8	-----	35	---	3	
380 - 390	14.2	-14.5	10.2	-----	115	---	11	
390 - 400	9.2	-10.7	-----	-16.1	---	263	13	
400 - 410	6.3	-9.2	1.7	-10.2	130	116	9	

^aCloud entry.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e\max}$ (fps)	Maximum true gust velocity $U_{t\max}$ (fps)	Gust gradient distance (ft)	No. of gusts			
June 2, 1947 - Flight 4								
Airplane 351 - Traverse 1 Length of traverse 844.0 sec, 313,415 ft								
410 - 420	21,000	11.4	-8.5	----	-3.5	---	184	5
420 - 430		----	-4.1	----	----	---	---	3
430 - 440		----	----	----	----	---	---	0
440 - 450	21,500	----	-6.0	----	-10.1	---	229	1
450 - 460		6.0	-8.8	7.7	----	74	---	7
460 - 470		4.7	-7.9	12.9	-12.2	72	55	7
470 - 480	21,000	9.8	-4.7	10.1	----	216	---	5
480 - 490		6.0	-6.0	8.9	-13.6	252	151	4
490 - 500		3.2	-2.5	6.0	-5.9	145	173	5
500 - 510		4.4	----	6.0	----	146	---	2
510 - 520		5.7	-3.8	5.8	----	31	---	5
520 - 530		4.4	-6.0	----	-6.2	---	305	4
530 - 540		4.4	----	8.2	----	138	---	1
540 - 550		----	----	----	----	---	---	0
550 - 560		2.5	----	----	----	---	---	1
560 - 570		----	----	----	----	---	---	0
570 - 580	20,500	4.7	-2.5	5.0	-7.7	74	115	7
580 - 590		----	-5.7	----	-10.6	---	140	6
590 - 620	20,000	----	----	----	----	---	---	0
620 - 640	19,500	----	----	----	----	---	---	0
640 - 680	20,000	----	----	----	----	---	---	0
680 - 690	20,500	----	----	----	----	---	---	0
690 - 820	20,000	----	----	----	----	---	---	0
820 - 840	19,500	----	----	----	----	---	---	0
840 - 850	19,000	----	----	----	----	---	---	0
Airplane 360 - Traverse 1 Length of traverse 680.2 sec, 188,292 ft								
0 - 10	6,000	----	----	----	----	---	---	0
^a 10 - 20		----	----	----	----	---	---	
20 - 30		----	-2.2	----	----	---	---	
30 - 40		1.3	----	----	----	---	---	
40 - 50		1.9	----	----	----	---	---	
50 - 60	2.2	----	3.1	----	71	---	2	
60 - 70	2.2	----	----	----	----	---	---	2
70 - 80	2.8	-2.8	----	----	----	---	---	2

^aCloud entry.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e,max}$ (fps)	Maximum true gust velocity $U_{t,max}$ (fps)	Gust gradient distance (ft)	No. of gusts	
June 2, 1947 - Flight 4						
Airplane 360 - Traverse 1 Length of traverse 680.2 sec, 188,292 ft						
80 - 90	6,000	3.5	----	----	1	
90 - 100		5.4	-2.8	----	4	
100 - 110		6.6	-6.0	----	4	
110 - 120		2.8	-2.8	----	4	
120 - 150		----	----	----	0	
150 - 160		3.2	-2.2	----	2	
160 - 170		1.9	-3.8	3.2	64	3
170 - 180		2.2	-3.2	----	----	3
180 - 190		----	-4.7	----	----	3
190 - 200		----	----	----	----	0
200 - 210		----	-1.6	----	----	1
210 - 230		----	----	----	----	0
230 - 240		2.2	-3.5	----	----	3
240 - 250		3.2	-2.5	5.9	157	3
250 - 270		----	----	----	----	0
270 - 280		4.4	-4.7	----	----	2
280 - 290		4.4	-5.4	8.4	172	9
290 - 300		1.9	-2.8	5.0	97	4
300 - 310		6.3	-6.0	7.9	94	4
310 - 320		8.5	-8.2	----	----	7
320 - 330		6.9	-3.5	----	----	5
330 - 340		4.7	-3.2	3.3	48	9
340 - 350		----	----	----	----	0
350 - 360	1.9	-5.0	5.0	73	8	
360 - 370	3.8	-6.6	----	----	5	
370 - 380	8.8	-9.5	----	----	8	
380 - 390	7.9	-9.8	----	----	5	
390 - 400	6.3	-5.0	11.8	82	9	
400 - 410	6,500	9.5	-9.2	8.5	58	5
410 - 420		9.5	-15.5	----	----	5
420 - 430		8.5	-2.5	6.3	73	5
430 - 440		5.4	-5.4	3.9	113	8
440 - 450		3.2	-7.9	----	----	7
450 - 460		6.3	-4.4	----	----	7
460 - 470		7.3	-8.2	----	----	11
470 - 480	6,000	8.5	-4.4	----	----	8
480 - 490		7.6	-6.0	----	----	9

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts			
June 2, 1947 - Flight 4								
Airplane 360 - Traverse 1 Length of traverse 680.2 sec, 188,292 ft								
490 - 500	6,000	4.7	-5.4	5.9	---	31	---	5
500 - 510		11.0	-5.0	14.4	-4.1	111	36	6
510 - 520		9.8	-2.5	---	---	---	---	7
520 - 530		9.8	-18.9	---	---	---	---	11
530 - 540		7.3	-14.2	---	-14.2	---	241	7
540 - 550		12.3	-7.9	---	---	---	---	8
550 - 560		7.3	-12.6	---	-7.4	---	185	7
560 - 570	5,500	7.9	-6.9	---	---	---	---	9
570 - 580	6,000	8.5	-3.2	---	---	---	---	7
580 - 590		6.3	-5.0	5.9	---	163	---	6
590 - 600	6,500	2.8	-6.9	---	---	---	---	3
600 - 610		3.2	-3.2	3.9	---	126	---	6
610 - 620	6,000	9.5	-4.4	---	---	---	---	5
620 - 630		---	---	---	---	---	---	0
630 - 640		4.1	-7.9	---	---	---	---	2
^b 640 - 650		5.7	-4.1	---	---	---	---	8
650 - 660		---	---	---	---	---	---	0
660 - 670		3.5	-1.6	---	---	---	---	2
670 - 680		2.5	---	---	---	---	---	2
June 2, 1947 - Flight 5								
Airplane 351 - Traverse 1 Length of traverse 264.4 sec, 74,120 ft								
0 - 40	6,000	---	---	---	---	---	---	0
^a 40 - 50		6.0	---	8.8	---	54	---	1
50 - 60		2.8	-3.8	---	---	---	---	2
60 - 70		5.7	---	13.5	---	56	---	1
70 - 80		---	-5.8	---	-13.2	---	292	2
80 - 90		2.8	---	---	-5.1	---	40	2
90 - 100		5.1	---	---	-8.5	---	---	2
100 - 110		3.5	-5.1	---	-7.5	---	57	3
110 - 120		---	-2.2	---	---	---	---	1
120 - 130		3.5	-2.2	---	-3.6	---	71	3
130 - 140		4.7	---	4.3	-9.4	55	69	3

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 2, 1947 - Flight 5					
Airplane 351 - Traverse 1 Length of traverse 264.4 sec, 74,120 ft					
140 - 150	6,000	7.9	6.4	165	6
150 - 160		5.7	-11.4	110	5
160 - 170		5.4	-10.7	56	7
170 - 180		6.6	-5.7	27	6
^b 180 - 190		---	-4.4	98	1
^a 190 - 200		---	-2.2	---	1
200 - 230		---	---	---	0
230 - 270	6,500	---	---	---	0
Airplane 351 - Traverse 2 Length of traverse 739.2 sec, 210,082 ft					
0 - 60	6,000	---	---	---	0
60 - 90	6,500	---	---	---	0
^a 90 - 100		3.8	-4.1	41	2
100 - 110	6,000	6.0	-2.8	75	2
110 - 120		6.9	-3.5	88	5
120 - 130		---	-3.5	101	3
130 - 140		6.9	-8.2	24	7
140 - 150		6.0	-6.0	110	4
150 - 160		8.2	-9.1	156	4
160 - 170		8.2	-6.0	171	3
170 - 180		5.0	-4.1	95	7
180 - 190		8.8	-5.3	31	8
190 - 200		2.8	-9.4	31	6
200 - 210		5.9	-9.7	60	9
210 - 220		5.6	---	66	7
220 - 230		3.5	-3.5	125	3
230 - 240		2.5	-5.3	78	5
240 - 250		5.0	-3.5	---	6
250 - 260		5.3	-2.2	137	3
260 - 270		---	---	---	0
270 - 280		---	-3.1	---	1
280 - 290		2.8	-6.3	---	4
290 - 310		---	---	---	0

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts	
June 2, 1947 - Flight 5						
Airplane 351 - Traverse 2 Length of traverse 739.2 sec, 210,082 ft						
310 - 320	6,000	3.5	5.9	63	2	
320 - 330		6.3	4.2	65	7	
330 - 340		5.3	10.7	135	8	
340 - 350		5.6			4	
350 - 360		6.0	-10.0	-17.9	64	6
360 - 370		6.9	-4.1	4.0	242	3
370 - 380		10.7		15.0	138	4
380 - 390		9.4	-4.4			4
390 - 400			-11.0			3
400 - 410		7.8	-5.0			7
410 - 420		3.5	-5.6	-8.7	143	4
^b 420 - 430		5.3		6.4	106	3
430 - 440				-4.7	64	1
440 - 450			-3.8	-3.5	85	2
450 - 460						0
460 - 470			-2.8	-7.3	70	1
470 - 480			1.9	4.4	100	3
480 - 520						0
^a 520 - 530			5.6	5.6	84	5
530 - 540			2.5	-5.0		5
540 - 550		5.3			2	
550 - 560		2.5	3.9	136	2	
560 - 570		6.6	-8.2		5	
570 - 580	6,500	6.3	12.2	31	4	
580 - 590		5.0	4.1	82	4	
590 - 600		5.6		127	5	
600 - 610			-10.3	43	3	
^b 610 - 620	6,000				0	
620 - 630			-2.8		1	
630 - 640				-8.3	182	2
640 - 660						0
^a 660 - 670			-4.1	94	1	
670 - 710					0	
^b 710 - 720	6,500				0	
720 - 740		7,000				0

^aCloud entry.
^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e\max}$ (fps)	Maximum true gust velocity $U_{t\max}$ (fps)	Gust gradient distance (ft)	No. of gusts			
June 2, 1947 - Flight 5								
Airplane 351 - Traverse 3 Length of traverse 575.2 sec, 171,750 ft								
0 - 10	11,000	----	-2.8	----	-6.3	---	248	1
10 - 20		----	-2.2	4.1	-6.6	51	69	3
20 - 30		----	-2.8	5.4	-----	42	---	4
30 - 40		----	-2.8	-----	-----	---	---	1
40 - 50		1.9	-----	4.0	-----	31	---	1
50 - 60		----	-2.8	-----	-----	---	---	1
60 - 70		----	-4.3	----	-4.6	---	30	1
70 - 120		----	-----	-----	-----	---	---	0
^a 120 - 130		9.0	-9.0	9.0	-14.9	40	185	8
130 - 140		----	-2.8	3.7	-----	42	---	2
140 - 150		6.2	-3.7	5.7	-8.6	210	274	4
150 - 160		5.0	-3.7	4.8	-----	88	---	5
160 - 170		7.1	-5.0	10.8	-----	147	---	2
170 - 180	11,500	5.9	-5.9	11.5	-----	43	---	8
180 - 190		4.3	-4.0	5.9	-3.7	31	120	4
^b 190 - 200		----	-----	-----	-----	---	---	0
200 - 270		----	-----	-----	-----	---	---	0
270 - 340	11,000	----	-----	-----	-----	---	---	0
340 - 350		----	-----	----	-5.7	---	50	1
^a 350 - 360		2.2	-3.1	----	-----	---	---	3
360 - 380		----	-----	----	-----	---	---	0
380 - 390		4.3	-----	----	-----	---	---	1
390 - 400		3.7	-9.0	----	-12.2	---	136	7
400 - 410		4.0	-7.7	----	-9.4	---	211	4
410 - 420		----	-7.4	----	-12.5	---	208	1
420 - 430		15.2	-4.6	25.4	-8.0	300	78	4
430 - 440		5.3	-5.3	----	-8.9	---	102	5
440 - 450		5.6	-4.0	4.1	-6.9	139	81	7
^b 450 - 460		5.9	-----	8.0	-----	78	---	2
460 - 470		----	-----	----	-----	---	---	0
470 - 490	11,500	----	-----	----	-----	---	---	0
490 - 500		----	-4.0	----	-6.6	---	144	1
^a 500 - 510		6.2	-4.0	----	-6.8	---	97	6
510 - 520	11,000	7.1	-----	----	-9.0	---	249	2

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e,max}$ (fps)		Maximum true gust velocity $U_{t,max}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 2, 1947 - Flight 5								
Airplane 351 - Traverse 3 Length of traverse 575.2 sec, 171,750 ft								
520 - 530	11,000	4.6	-6.5	7.6	-----	128	---	5
530 - 540		4.0	-7.4	7.8	-9.1	94	87	8
540 - 550		3.7	-2.5	-----	-4.2	---	193	7
550 - 560		4.3	-1.9	-----	-----	---	---	3
560 - 570		-----	-2.8	-----	-6.8	---	91	1
^b 570 - 580	-----	-----	-----	-----	---	---	0	
Airplane 351 - Traverse 4 Length of traverse 525.2 sec, 158,645 ft								
^a 0 - 10	11,000	-----	-3.1	-----	-----	---	---	1
10 - 20		-----	-----	-----	-3.5	---	111	1
20 - 30		-----	-9.5	-----	-----	---	---	2
30 - 60	11,500	-----	-----	-----	-----	---	---	0
60 - 70		-----	-----	-----	-----	---	---	0
70 - 80		6.8	-----	9.7	-----	184	---	1
80 - 90		-----	-4.6	4.8	-----	93	---	2
90 - 100		8.9	-9.5	-----	-----	---	---	4
100 - 110	11,000	8.0	-7.4	-----	-7.6	---	166	4
110 - 120		6.4	-8.9	-----	-4.1	---	163	6
120 - 130		5.5	-----	-----	-3.3	---	53	2
130 - 140	10,500	3.1	-7.4	-----	-----	---	---	4
140 - 150		8.0	-6.1	-----	-----	---	---	13
150 - 160		8.3	-4.3	3.6	-2.5	87	155	7
160 - 170		4.6	-7.4	-----	-----	---	---	4
170 - 180		11,000	-----	-----	-----	-----	---	---
180 - 190	2.5		-----	-----	-----	---	---	1
190 - 200	-----		-4.9	-----	-----	---	---	1
200 - 220	-----		-----	-----	-----	---	---	0
220 - 230	3.4		-----	-----	-----	---	---	1
230 - 240	10,500	-----	-2.8	4.6	-----	171	---	1
240 - 250		3.1	-----	6.7	-----	216	---	1
^b 250 - 270		-----	-----	-----	-----	---	---	0
270 - 300	10,500	-----	-----	-----	-----	---	---	0

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts	
June 2, 1947 - Flight 5						
Airplane 351 - Traverse 4 Length of traverse 525.2 sec, 158,645 ft						
^a 300 - 310	10,500	4.3	-----	-----	-----	2
310 - 320		2.5	-2.5	7.8	-----	3
320 - 330		5.2	-4.6	-----	57	9
330 - 340		-----	-9.2	-----	-----	3
^b 340 - 350		-----	-----	-----	53	0
350 - 400	11,000	-----	-----	-----	26	0
^a 400 - 410		-----	-4.3	-----	-----	0
410 - 420		6.1	-3.7	10.1	-----	1
420 - 430		3.4	-4.9	-----	138	4
430 - 440		5.5	-5.2	10.0	-----	5
440 - 450	11,500	5.2	-6.4	-----	351	6
450 - 460		6.8	-6.1	6.5	-----	6
^b 460 - 480	11,000	-----	-----	-----	74	7
^a 480 - 490		7.1	-3.7	3.4	-----	0
490 - 500		3.4	-3.1	8.4	-----	2
500 - 510		-----	-----	-----	51	0
510 - 520		-----	-----	-----	41	1
^b 520 - 530		-----	-----	-----	-----	0
Airplane 353 - Traverse 1 Length of traverse 237.4 sec, 63,364 ft						
0 - 30	6,000	-----	-----	-----	-----	0
30 - 40		-----	-2.4	-----	-8.5	1
40 - 50		3.7	-----	-----	-----	1
50 - 60		6.3	-3.2	12.7	-4.7	3
60 - 70		4.2	-4.4	6.9	-3.7	2
^a 70 - 80		5.6	-----	-----	-----	1
80 - 90		-----	-----	-----	-----	0
90 - 100		3.4	-2.4	-----	-7.3	3
100 - 110		5.1	-5.0	-----	-6.3	4
110 - 120		4.4	-2.5	-----	-6.3	3
120 - 130		-----	-----	-----	-----	0
130 - 140		6.2	-4.1	7.5	-----	6

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)		Maximum true gust velocity $U_{t_{max}}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 2, 1947 - Flight 5								
Airplane 353 - Traverse 1 Length of traverse 237.4 sec, 63,364 ft								
140 - 150	6,000	4.3	-4.1	----	-9.3	---	208	5
150 - 160		----	-3.9	----	----	---	---	3
160 - 170		8.6	----	----	----	---	---	2
170 - 180		4.0	-7.2	----	----	---	---	3
180 - 190		4.0	-9.8	----	----	---	---	2
190 - 200		3.3	----	----	----	---	---	1
200 - 210		2.8	-4.7	----	-10.8	---	136	2
210 - 230		----	----	----	----	---	---	0
^b 230 - 240		----	----	----	----	---	---	0
Airplane 353 - Traverse 2 Length of traverse 841.8 sec, 214,924 ft								
0 - 120	6,000	----	----	----	----	---	---	0
120 - 130		----	-3.4	----	----	---	---	1
130 - 150		----	----	----	----	---	---	0
^a 150 - 160		----	-6.1	----	----	---	---	1
160 - 170		----	-4.6	----	-7.5	---	38	1
170 - 180		5.9	-2.4	5.4	----	158	---	2
180 - 190		----	-3.3	----	----	---	---	1
190 - 200		2.2	-7.4	----	-13.5	---	271	4
200 - 210		----	----	----	----	---	---	0
210 - 220		5.1	-5.3	----	----	---	---	4
220 - 230		----	----	----	----	---	---	0
230 - 240		2.1	-4.0	7.9	----	118	---	3
240 - 250		3.5	----	9.3	----	106	---	1
250 - 260		4.3	-4.0	7.5	----	66	---	2
260 - 270		----	-3.1	----	----	---	---	1
270 - 280		8.2	-8.7	----	-5.0	---	174	5
280 - 290		10.7	-17.0	19.7	----	71	---	7
290 - 300		8.9	----	----	----	---	---	2
300 - 320		----	----	----	----	---	---	0
320 - 330		7.3	-2.4	----	-9.1	---	122	3

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 2, 1947 - Flight 5					
Airplane 353 - Traverse 2 Length of traverse 841.8 sec, 214,924 ft					
330 - 340	6,000	15.8	-6.4	----	3
340 - 350		10.6	-4.3	15.3	4
350 - 360		8.0	-3.2	----	4
360 - 370		----	-1.6	----	1
370 - 380		----	-10.3	----	2
380 - 390	5,500	7.3	-2.9	11.3	6
390 - 400		7.5	-4.5	-11.6	4
400 - 410	6,000	4.6	-7.0	13.1	4
410 - 420		3.3	-3.8	----	3
420 - 440		----	----	----	0
440 - 450		8.0	----	----	1
450 - 460		7.7	-5.7	----	5
460 - 470		9.3	-2.9	----	2
470 - 480		5.2	-7.8	----	2
480 - 490		5.8	-6.6	----	7
490 - 500		8.0	-6.5	----	4
500 - 530		----	----	----	0
530 - 540		----	-3.1	----	1
540 - 550		4.9	-3.0	----	3
^b 550 - 730		----	----	----	0
730 - 740		----	-4.1	----	1
740 - 750		----	----	----	0
750 - 760		----	-10.5	----	2
760 - 770		5.6	-6.4	----	2
770 - 780		9.8	-5.0	----	3
780 - 800		----	----	----	0
800 - 810		8.6	-2.5	5.6	5
810 - 820		6.1	----	----	1
820 - 850		----	----	----	0
Airplane 353 - Traverse 3 Length of traverse 545.2 sec, 149,900 ft					
0 - 20	11,000	----	----	----	0
20 - 30		5.3	----	----	1
30 - 70		----	----	----	0

^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e,max}$ (fps)	Maximum true gust velocity $U_{t,max}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 2, 1947 - Flight 5					
Airplane 353 - Traverse 3 Length of traverse 545.2 sec, 149,900 ft					
^a 70 - 80	11,000	----	-5.5	----	1
80 - 90	10,500	8.6	-----	20.8	2
90 - 100		7.6	-6.0	-----	6
100 - 110	11,000	4.5	-7.0	14.9	7
110 - 120		14.4	-9.5	-----	4
120 - 130		8.6	-----	13.0	7
130 - 140		5.1	-----	-----	1
140 - 160		----	-----	-----	0
^b 160 - 170		----	-----	-----	0
170 - 260		----	-----	-----	0
260 - 270		5.4	-3.4	-----	3
^a 270 - 280		6.2	-----	-----	1
280 - 290	10,500	5.4	-3.4	7.8	2
290 - 300		----	-----	-----	0
300 - 310	11,000	----	-----	-----	0
310 - 320		4.7	-8.0	-----	3
320 - 330	10,500	----	-5.4	-----	2
330 - 340		11.8	-3.2	-----	4
340 - 350		8.2	-6.2	-----	4
350 - 360		4.8	-7.1	-----	5
360 - 370	11,000	10.2	-6.8	-----	3
370 - 380		5.3	-5.4	-----	5
380 - 390		10.6	-8.6	-----	4
^b 390 - 400		----	-8.0	-----	1
400 - 410		----	-7.6	-----	1
^a 410 - 420		8.3	-2.4	14.5	2
420 - 430		4.4	-----	14.7	1
430 - 440		----	-----	-----	0
440 - 450		7.2	-----	-----	1
450 - 460		13.6	-6.1	19.1	5
460 - 470		----	-3.1	-----	1
470 - 480		6.0	-5.8	14.1	5
480 - 490		4.4	-5.0	-----	2
490 - 500		5.9	-5.0	-----	6

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)		Maximum true gust velocity $U_{t_{max}}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 2, 1947 - Flight 5								
Airplane 353 - Traverse 3 Length of traverse 545.2 sec, 149,900 ft								
500 - 520	10,500	----	----	----	----	----	----	0
520 - 530		3.3	-3.0	----	----	----	----	3
^b 530 - 540		7.7	-3.0	----	-8.7	----	124	5
540 - 550		----	----	----	----	----	----	0
Airplane 353 - Traverse 4 Length of traverse 499.3 sec, 141,704 ft								
0 - 20	11,000	----	----	----	----	----	----	0
^a 20 - 30		6.0	----	----	----	----	----	1
30 - 40		4.4	-3.3	----	----	----	----	2
40 - 50		4.6	----	----	----	----	----	1
50 - 60		8.2	-6.7	8.1	----	71	----	7
60 - 70		4.9	-4.5	----	----	----	----	2
70 - 90		----	----	----	----	----	----	0
90 - 100		5.8	----	9.7	----	109	----	1
100 - 130		----	----	----	----	----	----	0
130 - 140		2.9	----	----	----	----	----	1
140 - 150	----	-5.1	----	----	----	----	1	
150 - 160	----	----	----	----	----	----	0	
160 - 170	4.9	----	----	----	----	----	2	
170 - 180	7.8	-9.1	----	----	----	----	3	
180 - 190	5.6	-6.2	----	----	----	----	4	
190 - 200	10,500	3.4	-12.4	----	----	----	----	3
200 - 210		7.9	-4.6	----	----	----	----	5
210 - 220	11,000	10.6	-6.2	----	----	----	----	5
220 - 230		----	-5.6	----	----	----	----	1
230 - 240		----	----	----	----	----	----	0
240 - 250		5.0	-2.4	----	----	----	----	2
250 - 260		----	-5.6	----	-11.9	----	206	4
260 - 270		4.1	-4.4	----	----	----	----	2
270 - 280		5.6	-5.6	----	----	----	----	3
280 - 290		5.6	-4.2	----	----	----	----	4
290 - 300		----	----	----	----	----	----	0

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)		Maximum true gust velocity $U_{t_{max}}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 2, 1947 - Flight 5								
Airplane 353 - Traverse 4 Length of traverse 499.3 sec, 141,704 ft								
300 - 310	11,000	3.0	-11.0	----	-----	---	---	2
310 - 320		12.4	-4.5	----	-----	---	---	5
320 - 330		5.6	-4.2	----	-----	---	---	4
330 - 340		----	-6.8	----	-----	---	---	1
340 - 400		----	----	----	-----	---	---	0
400 - 410		8.5	-5.1	15.6	-----	213	---	3
410 - 420		4.2	----	----	-----	---	---	2
420 - 430		4.8	-6.5	----	-10.7	---	165	5
430 - 440		9.4	-11.9	----	-----	---	---	5
440 - 450		7.3	-4.1	----	-----	---	---	2
450 - 460		8.3	-9.5	12.4	-6.5	120	261	5
460 - 470		----	-6.1	----	-----	---	---	1
470 - 480		11.4	-3.0	----	-----	---	---	2
480 - 490	----	-5.6	----	-12.1	---	97	1	
^b 490 - 500	----	----	----	-----	---	---	0	
June 6, 1947 - Flight 6								
Airplane 351 - Traverse 1 Length of traverse 147.8 sec, 50,027 ft								
0 - 50	25,500	----	-----	----	-----	---	---	0
^a 50 - 60		----	-----	----	-----	---	---	0
60 - 150		----	-----	----	-----	---	---	0
Airplane 351 - Traverse 2 Length of traverse 97.0 sec, 35,386 ft								
^a 0 - 10	25,500	----	-----	----	-----	---	---	0
10 - 30		----	-----	----	-----	---	---	0
30 - 40	26,000	6.6	-4.4	----	-----	---	---	2
40 - 50		24.1	-21.6	----	-----	---	---	8
50 - 60		14.4	-14.4	----	-----	---	---	3

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 6, 1947 - Flight 6					
Airplane 351 - Traverse 2 Length of traverse 97.0 sec, 35,386 ft					
60 - 70	26,000	15.3	-19.7	67.1	6
70 - 90		----	----	----	0
^b 90 - 100	26,500	----	----	----	0
Airplane 351 - Traverse 3 Length of traverse 326.3 sec, 125,079 ft					
0 - 40	26,000	----	----	----	0
40 - 170	25,500	----	----	----	0
170 - 180	26,000	19.8	-19.2	----	5
^a 180 - 190	25,500	5.6	-12.7	----	5
190 - 200	26,000	20.4	-10.2	----	7
200 - 210	27,000	6.2	-17.0	----	6
210 - 220		----	-13.3	----	2
220 - 230		----	----	----	0
230 - 260	26,500	----	----	----	0
260 - 320	26,000	----	----	----	0
^b 320 - 330		----	----	----	0
Airplane 351 - Traverse 4 Length of traverse 1256.0 sec, 451,757 ft					
^a 0 - 10	25,500	----	----	----	0
10 - 110		----	----	----	0
110 - 120		21.9	-14.8	44.8	2
120 - 130		19.4	-14.2	----	11
130 - 140	26,000	5.9	-7.7	----	5
140 - 1100	25,500	----	----	----	0
1100 - 1110		----	-4.6	----	1
1110 - 1120		10.4	-7.0	----	8
1120 - 1130		4.3	-8.0	5.8	8
1130 - 1140		10.1	-4.6	20.1	6
1140 - 1150	26,000	7.3	-8.0	19.6	5
1150 - 1160		6.4	-11.3	----	6
1160 - 1170		4.6	-4.3	----	2

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)		Maximum true gust velocity $U_{t_{max}}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 6, 1947 - Flight 6								
Airplane 351 - Traverse 4 Length of traverse 1256.0 sec, 451,757 ft								
1170 - 1180	26,000	6.4	-3.7	10.0	-----	123	---	5
1180 - 1190		-----	-10.4	-----	-----	---	---	2
1190 - 1200	25,500	6.7	-3.7	-----	-----	---	---	3
1200 - 1210		6.4	-8.0	12.8	-14.8	251	290	6
1210 - 1220		6.4	-4.3	-----	-----	---	---	4
1220 - 1250		-----	-----	-----	-----	---	---	0
^b 1250 - 1260		-----	-----	-----	-----	---	---	0
Airplane 353 - Traverse 1 Length of traverse 141.3 sec, 47,664 ft								
^a 0 - 10	20,000	7.0	-7.3	15.6	-----	155	---	4
10 - 20	20,500	9.8	-9.5	-----	-----	---	---	4
20 - 30	20,000	7.3	-10.4	10.5	-----	202	---	3
30 - 40	20,500	-----	-----	-----	-----	---	---	0
40 - 50		-----	-3.2	-----	-----	---	---	2
50 - 60		-----	-----	-----	-----	---	---	0
60 - 70		-----	-2.2	-----	-----	---	---	1
70 - 130	20,000	-----	-----	-----	-----	---	---	0
^b 130 - 140		-----	-----	-----	-----	---	---	0
Airplane 353 - Traverse 2 Length of traverse 201.5 sec, 65,297 ft								
0 - 50	20,000	-----	-----	-----	-----	---	---	0
^a 50 - 60		5.6	-----	14.9	-----	453	---	1
60 - 70		2.8	-7.2	-----	-12.1	---	201	5
70 - 80		6.0	-5.0	-----	-11.4	---	65	2
80 - 90		5.3	-9.4	-----	-----	---	---	10
90 - 100		8.5	-8.2	-----	-----	---	---	6
100 - 110		18.5	-9.1	13.1	-19.7	56	209	10
110 - 120	20,500	10.4	-9.1	-----	-17.5	---	325	6
120 - 130		12.5	-16.6	-----	-----	---	---	6
130 - 140		8.5	-14.7	-----	-----	---	---	5
140 - 150		-----	-22.0	-----	-41.4	---	117	1
^b 150 - 190	20,000	-----	-----	-----	-----	---	---	0
190 - 200		-----	-----	-----	-----	---	---	0

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e,max}$ (fps)	Maximum true gust velocity $U_{t,max}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 6, 1947 - Flight 6					
Airplane 353 - Traverse 3 Length of traverse 281.8 sec, 88,875 ft					
^a 0 - 10	20,000	----	-----	----	0
10 - 90		----	-----	----	0
90 - 100		19.1	-13.4	----	3
100 - 110		20.3	-5.9	----	2
110 - 120		22.2	-21.3	----	8
120 - 130	20,500	13.8	-9.1	----	2
130 - 140	21,000	----	-9.7	----	1
140 - 150		9.7	-3.4	----	3
150 - 160	20,500	11.3	-8.4	----	5
160 - 170		7.2	-3.1	16.8	5
170 - 180		3.4	-2.2	14.1	3
180 - 190		----	-4.4	----	5
190 - 200	20,000	9.1	-5.9	----	4
200 - 210		----	-4.1	-10.8	2
210 - 270		----	----	----	0
^b 270 - 280		----	----	----	0
Airplane 327 - Traverse 1 Length of traverse 315.3 sec, 89,400 ft					
0 - 30	15,500	----	-----	----	0
30 - 70	16,000	----	-----	----	0
70 - 80	15,500	12.9	-6.9	----	7
80 - 90		6.3	-5.6	14.8	3
90 - 100		20.1	-9.1	10.3	8
^a 100 - 110		13.5	-16.6	----	8
110 - 120	16,000	16.3	-13.2	----	4
120 - 130		8.8	-10.7	----	4
130 - 190		----	----	----	0
^b 190 - 200		----	----	----	0
200 - 320	15,500	----	-----	----	0

^aCloud entry.
^bCloud exit.

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TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e,max}$ (fps)	Maximum true gust velocity $U_{t,max}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 6, 1947 - Flight 6					
Airplane 327 - Traverse 2 Length of traverse 201.5 sec, 58,435 ft					
0 - 40	16,000	----	----	---	0
40 - 50	15,500	3.7	-6.5	252	2
50 - 60		5.6	-5.6	104	3
^a 60 - 70		17.1	-10.9	---	6
70 - 80		14.0	-8.7	---	7
80 - 90		10.6	-5.6	---	5
90 - 100	16,000	6.8	-11.8	---	7
100 - 110		19.0	-11.5	132	3
110 - 120		6.2	-28.0	---	3
120 - 190	16,500	----	----	---	0
^b 190 - 210	16,000	----	----	---	0
Airplane 327 - Traverse 3 Length of traverse 326.8 sec, 97,035 ft					
0 - 50	16,000	----	----	---	0
^a 50 - 60		12.7	-7.1	---	2
60 - 70		8.4	-11.5	---	3
70 - 80	15,500	10.2	-6.8	---	2
80 - 90	16,000	2.5	-7.8	---	4
90 - 100		11.5	-10.9	---	4
100 - 110		8.1	-5.3	81	5
110 - 120		4.3	-9.3	71	6
120 - 130	15,500	5.6	-6.2	---	2
130 - 140		7.4	----	---	1
140 - 150		----	----	---	0
150 - 160	16,000	7.8	----	---	1
160 - 170		3.4	----	76	1
170 - 180		----	----	---	0
180 - 190		5.3	----	---	1
190 - 240		----	----	---	0
240 - 250		----	-5.3	---	1
250 - 270	15,500	----	----	---	0
270 - 280		4.0	----	---	1
280 - 330	16,000	----	----	---	0

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)		Maximum true gust velocity $U_{t_{max}}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 6, 1947 - Flight 6								
Airplane 327 - Traverse 4 Length of traverse 164.7 sec, 44,594 ft								
0 - 10	15,500	----	----	----	----	---	---	0
10 - 60	16,000	----	----	----	----	---	---	0
^a 60 - 70		19.5	-7.4	10.0	----	104	---	5
70 - 80	16,500	17.3	-24.1	38.1	----	257	---	10
80 - 90		18.8	-29.0	----	----	---	---	4
90 - 100		4.9	-5.3	----	----	---	---	3
100 - 110		6.8	-10.8	10.6	-9.9	110	51	7
110 - 120		7.1	-12.0	----	----	---	---	2
120 - 170	16,000	----	----	----	----	---	---	0
Airplane 327 - Traverse 5 Length of traverse 779.9 sec, 225,785 ft								
0 - 60	16,000	----	----	----	----	---	---	0
^a 60 - 70		13.2	-10.4	17.6	----	39	---	3
70 - 80		14.4	-10.1	----	----	---	---	10
80 - 90		4.3	-5.8	----	-6.5	---	160	8
90 - 100	15,500	4.3	-5.2	----	----	---	---	4
100 - 110	16,000	7.1	----	10.2	----	56	---	1
110 - 120		4.0	-3.7	7.7	-4.9	105	150	3
120 - 130		4.6	-4.9	6.4	-10.4	70	106	6
130 - 140		----	-2.8	----	-6.0	---	180	2
140 - 150		2.5	-2.8	4.5	-5.0	97	99	2
150 - 200	15,500	----	----	----	----	---	---	0
200 - 620	16,000	----	----	----	----	---	---	0
620 - 630		2.5	----	----	----	---	---	1
630 - 640		11.4	-10.8	----	----	---	---	8
640 - 650	15,500	8.0	-9.8	15.6	----	93	---	7
650 - 660	16,000	8.6	-8.0	----	----	---	---	6
660 - 670		5.8	-5.2	----	----	---	---	5
670 - 680		5.5	-2.8	----	----	---	---	2
680 - 690		5.5	-4.3	8.7	----	112	---	3
690 - 700		5.2	-5.5	6.6	----	104	---	2
700 - 710		----	-5.2	----	----	---	---	1

^a Cloud entry.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 6, 1947 - Flight 6					
Airplane 327 - Traverse 5 Length of traverse 779.9 sec, 225,785 ft					
710 - 720	15,500	7.4	-----	-----	2
720 - 780	16,000	-----	-----	-----	0
^b 780 - 790		-----	-----	-----	0
Airplane 348 - Traverse 1 Length of traverse 315.4 sec, 86,876 ft					
0 - 50	10,500	-----	-----	-----	0
50 - 60		2.7	-----	3.0	68
60 - 90		-----	-----	-----	0
90 - 100		2.2	-----	-3.1	126
100 - 110		1.1	-----	-----	1
110 - 130		-----	-----	-----	0
130 - 140		2.2	-----	4.5	213
140 - 150		3.3	-3.6	-9.0	143
150 - 160		5.9	-3.7	4.1	79
160 - 170		5.8	-----	-----	5
170 - 180		5.1	-4.5	-----	5
180 - 190		8.7	-6.6	-10.0	122
^a 190 - 200		11.0	-12.3	6.3	83
200 - 210		14.2	-7.0	-19.1	213
^b 210 - 220	11,000	8.1	-13.9	-23.0	137
^b 220 - 230		-----	-2.8	-----	1
230 - 240		3.6	-----	-----	1
240 - 250		5.4	-6.1	-----	3
250 - 260		4.0	-6.2	12.9	275
260 - 270		2.2	-3.0	-----	4
270 - 280		3.2	-6.4	-11.3	332
280 - 290		2.5	-1.8	-----	3
290 - 300		7.1	-6.6	-----	6
300 - 310		4.3	-2.9	5.3	124
310 - 320		-----	-----	-----	0

^aCloud entry.
^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e\max}$ (fps)		Maximum true gust velocity $U_{t\max}$ (fps)		Gust gradient distance (ft)	No. of gusts	
June 6, 1947 - Flight 6								
Airplane 348 - Traverse 2 Length of traverse 178.9 sec, 49,730 ft								
0 - 10	10,500	4.9	-4.3	----	-7.3	---	252	5
10 - 20		4.4	-5.4	----	----	---	---	4
20 - 30		----	----	----	----	---	---	0
30 - 40		----	-3.6	----	----	---	---	1
40 - 60		----	----	----	----	---	---	0
60 - 70		----	-1.9	----	-4.3	---	76	1
70 - 80		----	-2.5	----	-3.1	---	124	1
80 - 90		----	----	----	----	---	---	0
^a 90 - 100		3.8	----	6.2	----	133	---	3
100 - 110		4.9	-5.9	4.5	----	96	---	12
110 - 120	10,000	5.0	-6.4	----	----	---	---	6
120 - 130		5.4	-8.4	----	-24.4	---	266	4
130 - 140	9,500	14.3	-7.3	----	----	---	---	8
140 - 150		9.9	-9.7	17.8	----	263	---	9
150 - 160		11.6	-6.9	----	----	---	---	10
^b 160 - 170		1.5	-3.2	----	-2.7	---	151	3
170 - 180		----	----	----	----	---	---	0
Airplane 348 - Traverse 3 Length of traverse 198.1 sec, 52,851 ft								
0 - 10	10,500	3.0	----	----	----	---	---	1
10 - 20		3.0	-2.1	4.8	----	102	---	4
20 - 30		2.9	----	----	----	---	---	1
^a 30 - 40		16.6	-11.5	----	----	---	---	13
40 - 50		8.7	-11.8	3.8	----	34	---	12
50 - 60		9.5	-8.0	----	----	---	---	12
60 - 70		7.2	-11.5	----	----	---	---	9
70 - 80		13.5	-19.6	----	-17.6	---	68	10
80 - 90		12.6	-8.8	----	----	---	---	8
90 - 100		8.2	-10.7	12.0	----	98	---	8
100 - 110		12.5	-12.8	----	----	---	---	8
110 - 120		7.6	-9.9	----	----	---	---	9
120 - 130		4.3	-3.6	----	----	---	---	4
^b 130 - 140		8.3	-7.2	----	----	---	---	6

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)		Maximum true gust velocity $U_{t_{max}}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 6, 1947 - Flight 6								
Airplane 348 - Traverse 3 Length of traverse 198.1 sec, 52,851 ft								
140 - 150	10,500	4.4	-5.9	----	-13.5	---	297	6
150 - 160		5.4	-5.9	----	-----	---	---	5
160 - 170		4.5	-7.4	9.3	-----	152	---	4
170 - 180		5.4	-6.2	12.2	-9.3	81	170	6
180 - 190		8.7	-3.7	16.7	-9.4	234	121	7
190 - 200		5.2	-----	-----	-----	---	---	1
Airplane 348 - Traverse 4 Length of traverse 164.4 sec, 44,858 ft								
0 - 10	10,500	4.0	-2.8	----	-2.1	---	62	2
10 - 20		5.0	-----	----	-----	---	---	3
20 - 30		4.6	-----	----	-----	---	---	2
30 - 40		-----	-----	----	-8.5	---	284	1
^a 40 - 50	11,000	5.7	-----	3.5	-----	108	---	2
50 - 60		22.3	-4.6	15.7	-8.8	94	199	7
60 - 70		11.3	-19.7	-----	-----	---	---	12
70 - 80		3.4	-6.1	----	-9.8	---	75	8
80 - 90		4.9	-6.6	-----	-----	---	---	8
90 - 100		3.4	-6.2	----	-13.0	---	182	3
^b 100 - 110		3.8	-1.9	----	-----	---	---	2
110 - 120		6.8	-4.8	10.4	-3.4	106	69	7
120 - 130	4.3	-2.9	3.6	-----	25	---	5	
130 - 140	7.9	-4.3	-----	-----	---	---	5	
140 - 150	4.3	-4.3	-----	-----	---	---	7	
150 - 160	4.3	-5.4	-----	-----	---	---	6	
160 - 170	1.6	-4.8	-----	-----	---	---	2	
Airplane 348 - Traverse 5 Length of traverse 273.0 sec, 79,113 ft								
0 - 20	11,000	----	-----	----	-----	---	---	0
20 - 30		2.7	-----	3.9	-----	67	---	1
30 - 40		----	-2.9	----	-----	---	---	1

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	Nc. of gusts
June 6, 1947 - Flight 6					
Airplane 348 - Traverse 5 Length of traverse 273.0 sec, 79,113 ft					
40 - 50	10,500	2.6	4.3	133	4
50 - 60		2.6			4
60 - 70		5.0			2
^a 70 - 80	11,000	14.3			13
80 - 90		32.5			11
90 - 100		11.3	11.7	162	6
100 - 110	11,500	10.7			16
110 - 120	12,000	7.8			10
120 - 130		4.9		-8.3	4
130 - 190					0
^b 190 - 200					0
200 - 210	11,500				0
210 - 220	11,000				0
220 - 240	11,500				0
240 - 250		1.9	6.3	169	3
250 - 260	11,000	1.8			5
260 - 270		3.4			4
270 - 280					1
Airplane 348 - Traverse 6 Length of traverse 205.4 sec, 57,885 ft					
0 - 10	11,000				1
10 - 20		2.5	6.9	78	2
20 - 30		2.0			3
30 - 40		5.1		-5.4	5
40 - 50		2.5	5.3	88	3
50 - 60		2.6	5.3	130	6
^a 60 - 70		6.9			6
70 - 80		11.6			12
80 - 90		16.3			9
90 - 100		8.0		-10.4	7
100 - 110		4.3			4
110 - 120		3.4	2.8	48	4
120 - 130					0

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts	
June 6, 1947 - Flight 6						
Airplane 348 - Traverse 6 Length of traverse 205.4 sec, 57,885 ft						
130 - 140	11,000	----	-3.2	----	1	
140 - 150		----	----	----	0	
150 - 160		3.9	----	----	3	
^b 160 - 170		4.0	-2.3	----	3	
170 - 180		3.6	-6.9	7.5 -7.6	98 168	
180 - 190		5.8	-4.5	----	8	
190 - 200		5.8	----	---- -7.5	216	
200 - 210		4.1	-2.8	5.6	69	3
June 7, 1947 - Flight 7						
Airplane 327 - Traverse 1 Length of traverse 194.2 sec, 53,404 ft						
0 - 50	16,000	----	----	---	0	
50 - 60	15,500	----	-4.7	----	1	
^a 60 - 70		3.1	-6.3	6.2 -10.8	52 70	
70 - 80		8.2	-10.1	19.6	87	7
80 - 90		6.6	-3.5	5.0	103	4
90 - 100		7.6	-6.0	16.4 -6.5	202 40	
100 - 110		7.6	-6.9	----	----	7
110 - 120		12.9	-18.0	----	-20.4	279
120 - 130		10.1	-13.5	23.4	244	8
130 - 140	16,000	12.9	-11.3	11.9	89	9
140 - 150		6.0	-5.4	7.7	158	6
150 - 160		3.1	-7.9	7.5 -7.3	295 241	4
160 - 170		----	-4.7	----	----	3
170 - 180		2.5	-4.7	----	----	2
^b 180 - 190		----	----	----	----	0
190 - 200		----	----	----	----	0
Airplane 327 - Traverse 2 Length of traverse 960.0 sec, 272,321 ft						
0 - 520	16,000	----	----	---	0	
520 - 530		----	-2.2	---	1	

^aCloud entry.
^bCloud exit.

TABLE 1.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts			
June 7, 1947 - Flight 7								
Airplane 327 - Traverse 2 Length of traverse 960.0 sec, 272,321 ft								
530 - 550	16,000	----	-----	----	-----	---	---	0
550 - 560		----	-3.7	----	-----	---	---	2
560 - 570		2.2	-----	----	-----	---	---	1
570 - 580		2.2	-3.4	----	-----	---	---	3
580 - 590		5.9	-----	7.0	-----	72	---	3
590 - 600		4.7	-5.6	7.6	-----	44	---	4
600 - 610		3.7	-6.6	7.3	-----	57	---	4
610 - 630		----	-----	----	-----	---	---	0
630 - 640		----	-2.2	----	-4.2	---	65	2
640 - 650		3.7	-3.1	----	-5.7	---	86	4
650 - 660		3.7	-3.1	7.1	-----	62	---	4
660 - 670		----	-----	----	-----	---	---	0
670 - 680		6.2	-10.3	----	-18.8	---	88	4
680 - 690		5.3	-3.7	----	-8.0	---	89	7
690 - 700		----	-3.7	----	-----	---	---	2
700 - 710		3.1	-3.1	11.3	-----	88	---	4
710 - 720		9.1	-5.9	----	-----	---	---	5
720 - 730		2.5	-5.3	----	-----	---	---	4
730 - 740		5.3	-3.7	----	-----	---	---	6
740 - 750		5.9	-2.2	8.3	-----	117	---	3
750 - 760		----	-----	----	-----	---	---	0
760 - 770		3.7	-3.4	----	-----	---	---	3
770 - 790		----	-----	----	-----	---	---	0
790 - 800		2.8	-5.0	----	-----	---	---	5
^a 800 - 810		13.1	-9.7	27.0	-----	55	---	9
810 - 820		8.7	-4.7	7.8	-----	67	---	5
820 - 830		4.7	-----	14.8	-----	202	---	3
830 - 840	4.4	-6.6	----	-----	---	---	4	
840 - 850	3.7	-5.6	----	-----	---	---	5	
850 - 860	2.2	-3.1	4.4	-----	56	---	4	
860 - 870	----	-5.0	----	-----	---	---	3	
^b 870 - 880	16,000	2.8	-5.3	----	-----	---	7	
880 - 890	8.7	-4.1	----	-----	---	---	4	
890 - 900	15,500	3.4	-2.8	----	-----	---	2	
900 - 960	----	-----	----	-----	---	---	0	

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 7, 1947 - Flight 7					
Airplane 327 - Traverse 3 Length of traverse 645.6 sec, 272,321 ft					
0 - 20	15,500	----	----	---	0
20 - 30		2.8	----	---	1
30 - 40		6.2	-12.7	---	7
40 - 50		4.9	-8.3	---	9
50 - 60		10.5	-12.4	32.0	8
60 - 70		6.5	-6.5	13.2	9
70 - 80		7.4	-16.1	8.5 -10.9	5
80 - 90		15.1	-12.4	---	14
90 - 100	16,000	9.9	-13.3	13.1	11
100 - 110		4.9	-20.7	13.2	11
110 - 120	15,500	12.0	-12.7	14.5	7
120 - 130		12.4	-9.6	---	12
130 - 140		18.5	-12.4	12.8 -14.7	12
^a 140 - 150		11.1	-6.8	---	10
150 - 160	16,000	12.7	-13.6	---	8
160 - 170	16,500	3.7	-9.9	---	6
170 - 180	16,000	10.8	-16.4	---	8
180 - 190		11.4	-9.3	---	9
190 - 200		15.8	-16.4	---	10
200 - 210		13.3	-15.4	---	8
210 - 220		9.9	-7.1	16.4 -17.8	8
220 - 230		10.5	-14.5	---	11
230 - 240	16,500	10.8	-5.3	---	12
240 - 250	17,000	8.3	-13.0	---	5
250 - 260		17.6	-22.9	---	6
260 - 270	17,500	13.0	-28.7	27.1	6
270 - 280		21.9	-18.2	---	6
^b 280 - 300		----	----	---	0
300 - 310	17,000	----	----	---	0
310 - 320		----	----	---	0
320 - 330		----	-3.4	---	1
330 - 340		----	-2.2	---	1
340 - 360		----	----	---	0
360 - 370		3.4	----	---	1
370 - 460		----	----	---	0

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e\max}$ (fps)	Maximum true gust velocity $U_{t\max}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 7, 1947 - Flight 7					
Airplane 327 - Traverse 3 Length of traverse 645.6 sec, 272,321 ft					
460 - 470	17,000	4.9	-----	-----	1
470 - 500	16,500	-----	-----	-----	0
500 - 530	16,000	-----	-----	-----	0
530 - 580	15,500	-----	-----	-----	0
580 - 590		1.9	-----	4.4	1
590 - 650		-----	-----	-----	0
Airplane 356 - Traverse 1 Length of traverse 2551.6 sec, 728,553 ft					
0 - 100	10,500	-----	-----	-----	0
100 - 110		3.5	-2.2	-----	4
110 - 120		3.5	-----	-----	1
^a 120 - 130		3.5	-2.2	-----	2
130 - 140		4.1	-----	-----	2
140 - 150		5.6	-2.8	-----	4
150 - 160		4.7	-2.2	-----	5
160 - 170		3.8	-3.8	-----	4
170 - 180		3.8	-----	-----	3
180 - 190		5.3	-5.6	-----	11
190 - 200		11.0	-8.5	-----	11
200 - 210		6.6	-9.4	-----	10
210 - 220		10.4	-6.6	-----	10
220 - 230		13.2	-7.8	-----	9
230 - 240		9.7	-15.4	-----	13
240 - 250		17.9	-11.9	-----	12
250 - 260		12.2	-13.2	-----	15
260 - 270		10.4	-12.3	-----	12
270 - 280		9.7	-3.1	-----	14
280 - 290		16.6	-15.7	8.2	114
^b 290 - 300		3.1	-4.1	-----	3
300 - 950		-----	-----	-----	0
950 - 960		3.4	-2.2	-----	6
960 - 970		1.9	-3.8	-----	3
970 - 980		2.5	-4.1	-----	4

^aCloud entry.^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e\max}$ (fps)	Maximum true gust velocity $U_{t\max}$ (fps)	Gust gradient distance (ft)	No. of gusts			
June 7, 1947 - Flight 7								
Airplane 356 - Traverse 1 Length of traverse 2551.6 sec, 728,553 ft								
980 - 990	10,000	2.5	-2.2	----	-4.9	---	71	2
990 - 1000		3.8	-----	-----	-----	-----	---	1
1000 - 1010	10,500	3.4	-----	-----	-----	-----	---	3
^a 1010 - 1020		-----	-----	-----	-----	-----	---	0
1020 - 1040		-----	-----	-----	-----	-----	---	0
1040 - 1050		4.1	-----	-----	-----	-----	---	2
1050 - 1060		3.4	-2.8	-----	-----	-----	---	4
1060 - 1070		4.1	-----	-----	-----	-----	---	3
1070 - 1080		4.1	-4.1	-----	-----	-----	---	8
1080 - 1090		5.0	-4.4	-----	-9.0	---	30	7
1090 - 1100		2.8	-5.6	-----	-----	-----	---	7
1100 - 1110		2.8	-4.4	-----	-----	-----	---	8
1110 - 1120		4.1	-----	-----	-----	-----	---	2
1120 - 1130		4.1	-4.7	-----	-----	-----	---	4
1130 - 1140		4.1	-8.8	-----	-----	-----	---	5
1140 - 1150		8.8	-6.6	5.3	-----	29	---	10
1150 - 1160		5.3	-3.8	-----	-7.0	---	86	6
1160 - 1170		5.3	-----	-----	-----	-----	---	1
1170 - 1180		4.7	-----	10.2	-----	76	---	1
1180 - 1190		3.1	-----	-----	-5.9	---	78	3
1190 - 1200	11,000	-----	-3.8	-----	-----	-----	---	1
1200 - 1210		4.1	-----	-----	-----	-----	---	3
1210 - 1220		1.9	-----	-----	-----	-----	---	1
1220 - 1230		4.4	-4.4	-----	-5.3	---	84	3
1230 - 1240		-----	-----	-----	-----	-----	---	0
1240 - 1250		5.3	-11.3	12.0	-24.7	58	144	5
1250 - 1260	10,500	8.4	-5.0	-----	-----	-----	---	9
1260 - 1270		8.1	-10.6	-----	-25.1	---	135	7
1270 - 1280		-----	-7.8	-----	-----	-----	---	1
1280 - 1290		3.4	-----	5.7	-----	101	---	1
1290 - 1300		-----	-4.4	-----	-----	-----	---	2
1300 - 1310		3.4	-----	-----	-----	-----	---	1
1310 - 1320		3.4	-----	4.6	-----	185	---	1
1320 - 1330		1.9	-----	-----	-----	-----	---	1
1330 - 1340		1.9	-2.8	-----	-----	-----	---	4
1340 - 1350		1.9	-----	-----	-----	-----	---	1

^aCloud entry.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)	Maximum true gust velocity $U_{t_{max}}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 7, 1947 - Flight 7					
Airplane 356 - Traverse 1 Length of traverse 2551.6 sec, 728,553 ft					
1350 - 1370	10,500	----	----	---	0
^b 1370 - 1380		2.5	----	---	3
1380 - 1390		3.4	6.3	51	3
1390 - 1400		2.8	-2.2	-6.4	88
1400 - 1410	10,000	3.8	----	---	1
1410 - 1420		----	----	---	0
1420 - 1430		3.4	----	---	1
1430 - 1440		----	----	---	0
1440 - 1450		4.4	-3.4	5.1	55
1450 - 1460		5.3	----	---	1
1460 - 1470		3.8	-4.1	5.7	97
1470 - 1480		3.4	----	5.5	137
1480 - 1490		6.6	-1.2	----	2
1490 - 1500		10.6	----	----	3
1500 - 1510		4.1	-2.2	----	4
1510 - 1520		5.3	----	----	5
1520 - 1530		3.4	-2.8	4.6	51
1530 - 1540		3.4	-2.2	----	6
1540 - 1550		3.4	-4.4	-3.6	121
1550 - 1560		----	----	----	0
1560 - 1570		3.4	----	----	1
1570 - 1600		----	----	----	0
1600 - 1610		3.4	----	----	4
1610 - 1620		----	-2.2	----	1
1620 - 1630		4.0	----	6.2	24
^a 1630 - 1640	10,500	12.4	-5.9	18.9	101
1640 - 1650	10,000	9.0	-9.3	----	12
1650 - 1660		15.8	-9.3	----	7
1660 - 1670		7.1	-6.2	----	6
1670 - 1680		7.8	-5.6	----	12
1680 - 1690		14.3	-18.3	-18.1	82
1690 - 1700	10,500	11.5	-8.4	6.9	75
1700 - 1710		10.9	-10.9	----	11
1710 - 1720		9.6	-7.4	18.4	240
1720 - 1730		5.9	-5.0	13.8	179

^aCloud entry.
^bCloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e_{max}}$ (fps)		Maximum true gust velocity $U_{t_{max}}$ (fps)		Gust gradient distance (ft)		No. of gusts
June 7, 1947 - Flight 7								
Airplane 356 - Traverse 1 Length of traverse 2551.6 sec, 728,553 ft								
1730 - 1740	10,500	8.4	-8.1	----	-----	---	---	8
1740 - 1750		12.7	-7.8	----	-----	---	---	12
1750 - 1760		3.4	-6.8	----	-----	---	---	6
1760 - 1770		5.6	-8.7	----	-----	---	---	6
1770 - 1780		15.8	-10.2	----	-----	---	---	12
1780 - 1790		12.1	-10.6	----	-11.9	---	69	9
1790 - 1800		20.5	-8.1	----	-----	---	---	11
1800 - 1810		14.0	-13.7	----	-----	---	---	11
1810 - 1820	11,000	11.2	-12.4	----	-11.1	---	37	10
^b 1820 - 1830		----	-3.4	----	-----	---	---	1
1830 - 1840		1.9	-----	4.6	-----	52	---	1
1840 - 1850		2.5	-3.4	----	-----	---	---	2
1850 - 1860	10,500	----	-----	----	-----	---	---	0
1860 - 1870		1.6	-----	2.0	-----	87	---	1
1870 - 1920		----	-----	----	-----	---	---	0
1920 - 1930	10,000	----	-----	----	-----	---	---	0
1930 - 2060		----	-----	----	-----	---	---	0
2060 - 2190	10,500	----	-----	----	-----	---	---	0
2190 - 2200		2.8	-3.1	6.2	-7.7	106	62	2
^a 2200 - 2210		15.5	-5.3	11.9	-7.6	101	71	11
2210 - 2220	10,000	8.0	-7.4	----	-----	---	---	9
2220 - 2230	10,500	10.5	-6.2	----	-----	---	---	9
2230 - 2240	11,000	4.6	-7.7	----	-----	---	---	7
2240 - 2250		5.9	-9.9	----	-----	---	---	9
2250 - 2260		9.3	-8.0	24.6	-----	235	---	6
2260 - 2270		9.3	-9.3	11.8	-14.9	30	163	
2270 - 2280		4.9	-4.6	----	-----	---	---	
2280 - 2290		14.5	-14.2	----	-----	---	---	13
2290 - 2300		12.1	-4.9	----	-----	---	---	8
2300 - 2310		5.9	-9.0	----	-----	---	---	10
2310 - 2320		9.9	-10.2	----	-----	---	---	11
2320 - 2330		6.2	-12.7	----	-20.7	---	88	8
2330 - 2340		14.5	-9.9	----	-----	---	---	8
2340 - 2350		6.8	-7.1	----	-----	---	---	7
2350 - 2360		4.9	-12.1	----	-----	---	---	9

^a Cloud entry.^b Cloud exit.

TABLE I.- SUMMARY OF GUST MEASUREMENTS - Concluded

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{e\max}$ (fps)	Maximum true gust velocity $U_{t\max}$ (fps)	Gust gradient distance (ft)	No. of gusts
June 7, 1947 - Flight 7					
Airplane 356 - Traverse 1 Length of traverse 2551.6 sec, 728,553 ft					
2360 - 2370	11,000	20.4	-5.6	---	7
2370 - 2380		8.7	-9.3	---	11
2380 - 2390		3.7	-9.6	---	8
2390 - 2400	10,500	10.8	-6.2	---	8
2400 - 2410		6.5	-4.9	---	12
2410 - 2420		10.2	-19.2	---	7
2420 - 2430	10,000	18.8	-10.8	---	9
2430 - 2440		12.7	-19.2	---	4
2440 - 2450		3.4	---	---	1
^b 2450 - 2460		---	---	---	0
2460 - 2470		3.7	---	4.6	117
2470 - 2490		---	---	---	---
2490 - 2500		2.8	---	3.6	46
2500 - 2510		---	---	---	---
2510 - 2520		2.8	---	---	---
2520 - 2530		2.8	---	---	---
2530 - 2540		2.8	---	---	---
2540 - 2550		2.5	-4.9	---	---
2550 - 2560		---	-8.0	---	---

^bCloud exit.

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TABLE II.- SUMMARY OF DRAFT VELOCITY MEASUREMENTS FROM FLIGHTS
OF P-61C AIRPLANES WITHIN THUNDERSTORMS

Date	Flight no.	Air-plane no.	Assigned altitude (ft)	Tra-verse no.	Draft location from start of traverse (sec)		Draft extent (ft)	Average draft velocity (fps)										
					Start	End												
6-2-47	4	351	21,000	1	155.5	165.4	3,550	28.6										
					250.8	280.0	11,322	26.6										
					309.0	314.5	2,140	30.4										
					389.0	398.8	4,005	25.5										
	5	360	6,000	1	243.0	261.0	4,995	12.9										
					363.0	372.3	2,557	19.1										
	5	351	6,000	a ₁	2	525.0	576.8	14,977	14.4									
						145.0	178.8	10,151	10.0									
					3	11,000	a ₄	4	171.4	183.0	3,406	-20.4						
						11,000			353	6,000	a ₁	a ₂	11,000	a ₃				
					4	11,000	a ₁	2							105.3	141.3	12,289	24.1
															3	106.6	123.4	5,606
2					76.6	115.5	11,181	15.9										

^aNo draft velocities indicated by records.

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TABLE II. - SUMMARY OF DRAFT VELOCITY MEASUREMENTS - Concluded

Date	Flight no.	Air-plane no.	Assigned altitude (ft)	Tra-verse no.	Draft location from start of traverse (sec)		Draft extent (ft)	Average draft velocity (fps)		
					Start	End				
6-6-47	6	327	16,000	^a 3						
				4	68.4	83.3	3,412	36.2		
				^a 5						
				348	11,000	1	198.3	218.5	5,668	17.9
						2	82.2	141.2	16,197	-21.4
						^a 3				
						4	39.6	93.0	15,095	-5.4
				5	81.1	117.5	10,523	33.4		
				^a 6						
6-7-47	7	327	16,000	1	137.0	158.5	5,855	25.3		
				2	815.0	850.6	10,497	16.9		
				3	83.9	103.3	5,596	30.7		
					104.0	142.2	10,923	-20.8		
					211.6	268.2	16,963	32.7		
				356	10,000	1	956.6	985.0	8,090	-8.4
		1145.3	1200.2				15,641	11.1		
		1249.1	1264.0				4,176	-21.8		
		1294.3	1343.7				14,047	-8.1		
		1576.7	1615.2				10,528	5.5		
		1809.0	1828.6				6,124	37.7		
		2220.4	2240.5				5,923	36.7		
		2387.7	2441.8	14,902	-17.6					

^aNo draft velocities indicated by records.

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<u>Subject</u>	<u>Number</u>
Gusts - Structure	6.1.2.1
Gusts - Frequency	6.1.2.2
Gust - Turbulence	6.1.2.3

ABSTRACT

The gust and draft velocities from records of NACA instruments installed in P-61C airplanes participating in thunderstorm flights at Clinton County Army Air Field, Ohio, from June 2, 1947 to June 7, 1947, are presented.