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# RESEARCH MEMORANDUM

EVALUATION OF GUST AND DRAFT VELOCITIES FROM FLIGHTS OF  
P-61C AIRPLANES WITHIN THUNDERSTORMS AUGUST 16, 1947  
TO AUGUST 20, 1947 AT CLINTON COUNTY  
ARMY AIR FIELD, OHIO

By

Jack Funk

Langley Memorial Aeronautical Laboratory  
Langley Field, Va.



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Langley Field, Va.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

RESEARCH MEMORANDUM



EVALUATION OF GUST AND DRAFT VELOCITIES FROM FLIGHTS OF  
P-61C AIRPLANES WITHIN THUNDERSTORMS AUGUST 16, 1947  
TO AUGUST 20, 1947 AT CLINTON COUNTY  
ARMY AIR FIELD, OHIO

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The results obtained from measurements of gust and draft velocities within thunderstorms at Clinton County Army Air Field, Ohio, for the period of August 16, 1947 to August 20, 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. In order to expedite handling of data, the lengths of traverses in feet were not computed.

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

RCM

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
August 16, 1947 - Flight 26					
Airplane 344 - Traverse 1 Length of traverse 134.0 sec					
0 - 60	24,500	----	----	----	0
60 - 70		1.9	----	3.8	1
<sup>a</sup> 70 - 80		4.1	-8.3	----	5
80 - 90		5.4	-4.8	----	6
<sup>b</sup> 90 - 100		----	-2.6	----	1
100 - 140		----	----	----	0
Airplane 344 - Traverse 2 Length of traverse 260.5 sec					
0 - 80	24,500	----	----	----	0
<sup>a</sup> 80 - 90		1.9	-2.9	----	2
90 - 100		----	-3.8	----	1
100 - 110		4.8	-4.1	----	3
110 - 120		----	-5.1	----	2
120 - 130		----	----	----	0
130 - 140	25,000	5.1	-6.4	9.4	5
140 - 150		17.8	-19.1	----	6
150 - 160		13.7	-18.1	----	10
160 - 170	24,500	10.8	-10.2	----	7
<sup>b</sup> 170 - 180		----	----	----	0
180 - 260		----	----	----	0
Airplane 344 - Traverse 3 Length of traverse 196.4 sec					
0 - 90	24,500	----	----	----	0
<sup>a</sup> 90 - 100		4.7	-7.9	7.5	3
100 - 110		----	-2.8	----	1
110 - 120		10.7	-4.7	----	12

<sup>a</sup>Cloud entry.

<sup>b</sup>Cloud exit.



TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

Time interval (sec)	Pressure altitude (ft)	Maximum effective gust velocity $U_{emax}$ (fps)		Maximum true gust velocity $U_{tmax}$ (fps)		Gust gradient distance (ft)		No. of gusts
August 16, 1947 - Flight 26								
Airplane 344 - Traverse 3 Length of traverse 196.4 sec								
120 - 130	24,500	5.4	-6.0	----	----	---	---	8
130 - 140		7.2	-6.0	----	----	---	---	6
140 - 150		5.4	-2.8	7.0	-12.2	327	97	5
<sup>b</sup> 150 - 160	25,000	----	-14.8	----	----	---	---	1
160 - 170		----	----	----	----	---	---	0
170 - 200	24,500	----	----	----	----	---	---	0
Airplane 344 - Traverse 4 Length of traverse 307.7 sec								
0 - 110	24,500	----	----	----	----	---	---	0
<sup>a</sup> 110 - 120		----	----	----	----	---	---	0
120 - 130		----	----	----	----	---	---	0
130 - 140		4.7	-5.0	----	----	---	---	2
140 - 150		2.5	-5.6	----	----	---	---	5
150 - 160		----	-2.2	----	-4.5	---	89	1
160 - 170		2.5	-13.5	----	----	---	---	5
170 - 180		2.5	-5.6	----	----	---	---	4
180 - 190		----	----	----	----	---	---	0
<sup>b</sup> 190 - 200		----	----	----	----	---	---	0
200 - 220		----	----	----	----	---	---	0
<sup>a</sup> 220 - 230		3.8	-4.1	----	----	---	---	5
230 - 240		8.2	-7.5	18.0	----	64	---	4
240 - 250		5.3	----	----	----	---	---	3
250 - 260		18.2	----	36.1	----	121	---	1
<sup>b</sup> 260 - 270		5.0	-13.5	----	----	---	---	7
270 - 310		----	----	----	----	---	---	0
Airplane 344 - Traverse 5 Length of traverse 249.4 sec								
0 - 70	24,500	----	----	----	----	---	---	0
<sup>a</sup> 70 - 80		5.0	-3.1	11.9	----	41	---	2
80 - 90		----	-4.4	----	----	---	---	2
90 - 120		----	----	----	----	---	---	0

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 16, 1947 - Flight 26						
Airplane 344 - Traverse 5 Length of traverse 249.4 sec						
<sup>b</sup> 120 - 130	24,500	----	----	----	0	
<sup>a</sup> 130 - 140		1.9	----	3.8	126	1
140 - 150		----	-7.2	----	----	2
150 - 160		5.6	----	----	----	1
160 - 170		----	-5.3	----	----	1
170 - 180		3.7	-4.1	----	----	2
180 - 190		3.4	-4.4	----	----	3
190 - 200		3.7	-4.4	10.4	88	7
200 - 210		----	----	----	----	0
210 - 220		2.8	----	----	----	1
<sup>b</sup> 220 - 230		----	-6.6	----	----	2
230 - 250		----	----	----	----	0
Airplane 344 - Traverse 6 Length of traverse 200.4 sec						
0 - 10	24,500	----	----	----	0	
<sup>a</sup> 10 - 20		----	-3.1	----	----	2
<sup>b</sup> 20 - 30		----	----	----	----	0
30 - 50		----	----	----	----	0
<sup>a</sup> 50 - 60		----	----	----	----	0
60 - 70		6.2	-4.3	----	----	3
<sup>b</sup> 70 - 80		----	----	----	----	0
80 - 90		----	----	----	----	0
<sup>a</sup> 90 - 100		----	----	----	----	0
100 - 110		1.9	-3.1	2.4	114	2
110 - 120		1.9	-5.3	----	----	3
120 - 130		----	----	----	----	0
130 - 140		3.4	----	----	----	1
140 - 150		----	----	----	----	0
<sup>b</sup> 150 - 160		----	----	----	----	0
160 - 200		----	----	----	----	0

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 16, 1947 - Flight 26					
Airplane 344 - Traverse 7 Length of traverse 164.2 sec					
0 - 40	24,500	----	-----	----	0
<sup>a</sup> 40 - 50		5.9	-----	----	3
50 - 60		8.7	-12.1	22.6	3
60 - 70		5.0	-4.3	-----	3
70 - 80		7.4	-----	----	3
80 - 90		----	-6.5	----	2
90 - 120		----	-----	----	0
120 - 130		1.9	-4.3	-----	4
130 - 140		----	-4.3	-----	2
<sup>b</sup> 140 - 150		----	-2.2	-----	1
150 - 170		----	-----	----	0
Airplane 351 - Traverse 1 Length of traverse 1204.5 sec					
0 - 50	19,500	----	-----	----	0
50 - 80	20,000	----	-----	----	0
<sup>a</sup> 80 - 90		10.8	-7.9	5.0	8
90 - 100		7.9	-17.7	-----	7
100 - 110	19,500	10.5	-5.4	-----	4
110 - 120		2.9	-2.9	5.8	7
120 - 130		4.1	-4.4	-----	6
130 - 140	20,000	1.9	-----	----	1
<sup>b</sup> 140 - 150		----	-----	----	0
150 - 160		----	-----	----	0
160 - 170	19,500	----	-----	----	0
170 - 210	20,000	----	-----	----	0
210 - 290	19,500	----	-----	----	0
290 - 320	20,000	----	-----	----	0
320 - 330		1.9	-----	3.5	2
<sup>a</sup> 330 - 340		1.9	-4.4	-----	3
340 - 350		2.9	-----	----	2
350 - 360		2.2	-2.2	-----	3

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 16, 1947 - Flight 26					
Airplane 351 - Traverse 1 Length of traverse 1204.5 sec					
360 - 370	20,000	----	-3.8	----	1
370 - 380		5.1	-4.4	----	3
380 - 390		----	-4.8	----	3
390 - 400		2.5	-3.5	----	3
400 - 410		10.0	-8.2	15.0	9
410 - 420		7.3	-11.7	----	11
420 - 430		8.6	-6.0	----	8
430 - 440		7.0	-12.0	----	8
440 - 450		2.9	-9.5	----	9
<sup>b</sup> 450 - 460		2.2	-4.4	----	3
460 - 470		----	-3.2	----	1
470 - 510	19,500	----	----	----	0
<sup>a</sup> 510 - 520	20,000	3.8	-2.8	----	2
520 - 530		5.0	-7.6	14.2	2
<sup>b</sup> 530 - 540		3.5	-9.8	----	4
540 - 1130		----	----	----	0
<sup>a</sup> 1130 - 1140		11.3	-10.4	----	9
<sup>b</sup> 1140 - 1150		3.8	-5.0	----	3
<sup>a</sup> 1150 - 1160		4.7	-6.6	----	7
1160 - 1170	19,500	16.3	-12.9	----	6
<sup>b</sup> 1170 - 1180		----	-6.9	----	1
1180 - 1210		----	----	----	0
Airplane 351 - Traverse 2 Length of traverse 956.5 sec					
0 - 10	19,500	----	----	----	0
10 - 70	20,000	----	----	----	0
<sup>a</sup> 70 - 80		----	----	----	0
80 - 90		1.9	-4.4	----	3
90 - 100		3.7	----	9.9	1

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 16, 1947 - Flight 26									
Airplane 351 - Traverse 2 Length of traverse 956.5 sec									
100 - 110	20,000	1.9	-5.0	----	-5.4	---	87	4	
110 - 120		2.5	-5.0	----	----	---	---	5	
120 - 130		3.7	-3.7	----	----	---	---	5	
130 - 140		4.4	-3.7	----	----	---	---	4	
140 - 150		4.7	-12.1	----	----	---	---	10	
150 - 160		7.2	-9.0	----	----	---	---	6	
160 - 170		4.7	-5.0	----	----	---	---	7	
170 - 180		----	-6.9	----	----	---	---	2	
<sup>a-b</sup> 180 - 190			15.0	-3.1	----	----	---	---	3
190 - 200			5.9	-11.2	13.0	----	109	---	5
200 - 210		2.2	-6.5	7.1	-10.9	37	176	3	
210 - 220		8.7	-5.0	----	----	---	---	5	
<sup>b</sup> 220 - 230		5.3	-8.7	----	----	---	---	4	
230 - 240	19,500	3.7	-5.6	----	----	---	---	4	
240 - 250		3.4	-4.4	----	----	---	---	2	
250 - 350		----	----	----	----	---	---	0	
350 - 390	20,000	----	----	----	----	---	---	0	
<sup>a</sup> 390 - 400		2.5	----	5.2	----	238	---	1	
400 - 410		7.5	-5.0	----	----	---	---	5	
410 - 420		3.7	-9.7	----	----	---	---	9	
420 - 430		10.0	-6.2	----	----	---	---	3	
430 - 440		5.6	-9.0	----	----	---	---	5	
440 - 450		9.0	-9.0	----	----	---	---	4	
450 - 460		----	-4.7	4.1	----	110	---	2	
460 - 470		5.9	-3.1	----	-5.8	---	113	4	
470 - 480		1.9	-4.7	----	----	---	---	8	
480 - 490		----	-3.7	----	----	---	---	1	
490 - 500		----	----	----	----	---	---	0	
500 - 510	19,500	3.1	----	5.8	----	252	---	1	
510 - 520		4.0	-4.0	----	----	---	---	4	
520 - 530	20,000	----	-4.0	----	----	---	---	3	
530 - 540		3.7	-1.2	5.8	-7.3	258	78	4	
540 - 550		2.2	----	----	----	---	---	1	
<sup>b</sup> 550 - 560		----	----	----	----	---	---	0	

<sup>a</sup>Cloud entry.  
<sup>b</sup>Cloud 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
August 16, 1947 - Flight 26					
Airplane 351 - Traverse 2 Length of traverse 956.5 sec					
560 - 570	20,000	----	----	----	0
570 - 580		----	-2.2	----	1
580 - 650	19,500	----	----	----	0
650 - 710	20,000	----	----	----	0
<sup>a</sup> 710 - 720		1.9	----	----	1
720 - 740		----	----	----	0
740 - 750		3.4	----	6.9	146
750 - 760		3.7	-2.8	----	4
760 - 770		3.1	-4.6	5.8	111
<sup>b</sup> 770 - 780		2.8	----	----	1
<sup>a</sup> 780 - 790		8.4	----	----	4
790 - 800		----	----	----	0
800 - 810		4.3	----	----	3
810 - 820		----	-2.2	----	2
820 - 830		1.9	-2.8	----	2
830 - 840		4.0	-3.7	5.8	221
840 - 850		3.1	-7.4	----	2
850 - 860		8.4	-6.5	8.1	44
860 - 870		6.2	-8.1	----	3
870 - 880		5.6	-7.1	----	9
880 - 890		----	-5.9	----	1
<sup>a-b</sup> 890 - 900		6.8	-7.4	----	4
<sup>b</sup> 900 - 910		2.1	-5.3	----	3
<sup>a</sup> 910 - 920		14.9	-11.5	----	5
920 - 930		6.5	-9.3	----	8
<sup>b</sup> 930 - 940		----	----	----	0
940 - 960		----	----	----	0
Airplane 351 - Traverse 3 Length of traverse 239.4 sec					
0 - 30	20,000	----	----	----	0
<sup>a</sup> 30 - 40		9.6	-8.7	----	6
<sup>b</sup> 40 - 50		2.5	-4.9	----	2
<sup>a</sup> 50 - 60		2.5	-5.3	----	3

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 16, 1947 - Flight 26									
Airplane 351 - Traverse 3 Length of traverse 239.4 sec									
b <sub>60</sub> - 70	20,000	1.2	-----	4.2	-----	91	---	1	
70 - 80		3.7	-2.2	----	----	---	---	4	
<sup>a</sup> 80 - 90		----	-4.3	----	-4.2	---	89	2	
90 - 100		----	-6.8	----	----	---	---	3	
100 - 110		1.9	----	----	----	---	---	1	
110 - 120		----	----	----	----	---	---	0	
120 - 130		3.7	-6.5	7.4	----	158	---	2	
130 - 150		----	----	----	----	---	---	0	
150 - 160		3.1	----	----	----	---	---	2	
160 - 170		----	----	----	----	---	---	0	
170 - 180		1.2	-2.8	----	----	---	---	2	
180 - 190		1.5	----	----	----	---	---	2	
190 - 200		5.6	-4.6	----	-8.0	---	202	2	
200 - 210		----	-2.8	----	----	---	---	1	
<sup>b</sup> 210 - 220	----	----	----	----	---	---	0		
220 - 230	19,500	----	----	----	---	---	0		
230 - 240	19,000	----	----	----	---	---	0		
Airplane 353 - Traverse 1 Length of traverse 443.8 sec									
0 - 230	14,000	----	----	----	----	---	---	0	
<sup>a</sup> 230 - 240		----	----	----	----	---	---	0	
240 - 250		7.2	-9.2	----	----	---	---	6	
250 - 260		8.1	-9.0	12.5	----	95	---	5	
260 - 270		----	-11.8	----	-9.0	---	92	3	
270 - 280		9.1	-5.2	----	----	---	---	4	
280 - 290		14,500	7.1	-6.1	----	----	---	---	3
290 - 300			----	----	----	----	---	---	0
300 - 310			----	-4.5	----	-8.7	---	147	1
310 - 320			2.4	-5.2	4.9	----	42	---	2
320 - 330		4.8	-5.1	----	----	---	---	3	
330 - 340		----	-4.4	----	----	---	---	1	
<sup>b</sup> 340 - 350		----	----	----	----	---	---	0	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 16, 1947 - Flight 26					
Airplane 353 - Traverse 1 Length of traverse 443.8 sec					
350 - 410	14,500	----	----	----	0
410 - 420		----	-4.7	----	1
420 - 430		----	-4.6	----	1
430 - 450		----	----	----	0
Airplane 353 - Traverse 2 Length of traverse 175.6 sec					
0 - 50	14,500	----	----	----	0
50 - 60		----	-3.5	----	1
<sup>a</sup> 60 - 70		3.2	-5.4	7.3	28
70 - 80		2.4	-5.0	----	2
80 - 90		----	-4.9	----	1
90 - 110	14,000	----	----	----	0
110 - 120		3.7	----	----	1
120 - 130		----	-4.2	-9.2	233
130 - 140		6.6	-10.4	----	4
140 - 150	14,500	3.4	-5.0	----	4
<sup>b</sup> 150 - 160		4.2	-4.4	----	2
160 - 180		----	----	----	0
Airplane 353 - Traverse 3 Length of traverse 1949.2 sec					
0 - 40	14,500	----	----	----	0
<sup>a</sup> 40 - 50		----	----	----	0
50 - 60		----	-7.1	-14.0	103
60 - 70		3.7	-6.1	----	3
70 - 80		2.2	----	----	1
80 - 90		6.3	----	----	2
90 - 100		13.9	-4.8	----	2
100 - 110		6.2	-17.1	----	11
110 - 120		8.0	-3.8	----	5
120 - 130		5.8	-4.5	----	3

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 16, 1947 - Flight 26						
Airplane 353 - Traverse 3 Length of traverse 1949.2 sec						
130 - 140	14,500	5.2	-5.1	----	4	
140 - 150		6.3	-8.9	-----13.9	2	
150 - 160		6.1	-5.1	-----	2	
160 - 170		----	-6.1	-----	2	
170 - 180		8.1	-8.0	-----12.5	6	
180 - 190		----	----	-----	0	
190 - 200		----	-7.3	-----	2	
200 - 270		----	----	-----	0	
<sup>b</sup> 270 - 280		2.3	----	6.6	88	1
280 - 530		----	----	-----	----	0
530 - 540	14,000	2.3	----	4.0	201	1
540 - 580		----	----	-----	----	0
580 - 590		----	-2.6	-----6.1	25	1
<sup>a</sup> 590 - 600		----	----	-----	-----	0
600 - 610		----	----	-----	-----	1
610 - 620		----	-4.3	-----	-----	1
620 - 670		----	-4.3	-----	-----	0
670 - 680		2.2	-5.2	-----	-----	3
680 - 690		6.1	-3.3	-----	-----	3
690 - 700		2.9	-6.9	-----11.6	97	7
700 - 710	7.5	-10.4	-----20.8	99	4	
710 - 720	4.9	-9.3	-----	-----	5	
720 - 730	10.6	-7.5	6.0	45	5	
730 - 740	9.4	-5.3	-----	-----	7	
740 - 750	----	-9.9	-----	-----	3	
750 - 760	4.3	-10.8	16.4	54	5	
760 - 770	14,500	10.7	-4.9	-----	-----	5
770 - 780		4.6	-4.0	-----	-----	2
780 - 790		6.0	-6.1	11.6	74	5
790 - 800		5.3	-9.1	-----	-----	5
800 - 810		5.4	-6.4	-----	-----	7
<sup>b</sup> 810 - 820	----	-5.0	-----	-----	1	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 16, 1947 - Flight 26					
Airplane 353 - Traverse 3 Length of traverse 1949.2 sec					
820 - 970	14,500	----	----	---	0
970 - 990	14,000	----	----	---	0
990 - 1080	14,500	----	----	---	0
<sup>a</sup> 1080 - 1090		5.9	-6.1	---	3
1090 - 1100		20.7	-14.0	---	10
1100 - 1110		18.3	-15.7	34.5	4
1110 - 1120		9.5	-7.6	-9.7	6
1120 - 1130		5.6	-3.9	8.6	4
1130 - 1140		----	----	---	0
1140 - 1150		4.9	----	---	1
1150 - 1160		3.0	----	---	1
1160 - 1170		----	----	---	0
1170 - 1180		7.3	----	---	3
1180 - 1190		2.8	-11.1	----	7
1190 - 1200		8.1	-4.1	14.6	7
1200 - 1210		----	-3.9	----	1
1210 - 1220		----	-5.1	----	1
1220 - 1230		2.1	----	3.7	1
1230 - 1240		4.2	-3.9	-7.1	3
1240 - 1250		----	----	----	0
1250 - 1260		5.0	----	7.1	1
<sup>b</sup> 1260 - 1270		----	----	----	0
1270 - 1490		----	----	----	0
<sup>a</sup> 1490 - 1500		----	----	----	0
1500 - 1510		----	----	----	0
1510 - 1610	14,000	----	----	----	0
1610 - 1620		3.1	-4.2	----	2
1620 - 1630		3.7	-5.4	----	2
1630 - 1640		----	-3.4	----	1
1640 - 1650		4.5	-4.8	-10.6	3
1650 - 1660		2.1	----	----	2
1660 - 1670		4.3	----	----	1

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 16, 1947 - Flight 26						
Airplane 353 - Traverse 3 Length of traverse 1949.2 sec						
1670 - 1680	14,000	4.5	-----	-----	---	
1680 - 1690		5.2	-----	-----	---	
1690 - 1700		7.0	-7.7	-----	-16.4	---
1700 - 1710		7.6	-6.7	14.5	-----	119
1710 - 1720		9.7	-----	10.1	-----	147
1720 - 1730		7.2	-10.4	12.3	-----	169
1730 - 1740		8.0	-4.9	18.0	-----	99
1740 - 1750		11.0	-6.6	22.6	-----	191
1750 - 1760		8.4	-7.6	-----	-8.5	---
<sup>b</sup> 1760 - 1770		-----	-----	-----	-----	---
1770 - 1790		-----	-----	-----	-----	---
1790 - 1800		4.4	-----	-----	-----	---
1800 - 1950		-----	-----	-----	-----	---
Airplane 327 - Traverse 1 Length of traverse 208.4 sec						
0 - 10	10,000	-----	-----	-----	---	
10 - 20		-----	-2.0	-----	-----	---
20 - 30		2.1	-----	-----	-----	---
30 - 40		-----	-----	-----	-----	---
40 - 50		2.5	-----	4.2	-----	254
50 - 110		-----	-----	-----	-----	---
<sup>a</sup> 110 - 120		-----	-3.2	-----	-----	---
120 - 130		2.4	-3.2	-----	-----	---
130 - 140		-----	-1.9	-----	-----	---
140 - 150		2.5	-3.2	3.4	-----	81
150 - 160		4.0	-5.6	-----	-----	---
160 - 170		5.5	-5.4	-----	-----	---
170 - 180		8.9	-10.3	-----	-----	---
180 - 190		3.2	-4.4	-----	-----	---
<sup>b</sup> 190 - 200		4.0	-----	8.7	-----	114
200 - 210		-----	-----	-----	-----	---

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 16, 1947 - Flight 26									
Airplane 327 - Traverse 2 Length of traverse 113.7 sec									
0 - 30	9,500	----	-----	----	-----	---	---	0	
30 - 40		10.2	-5.3	----	-----	---	---	5	
40 - 50		5.8	-5.5	14.2	-----	111	---	6	
50 - 60		4.7	-----	11.8	-----	208	---	3	
60 - 70		5.4	-----	-----	-----	---	---	1	
70 - 80		6.9	-6.0	-----	-----	---	---	5	
80 - 90		4.7	-5.9	-----	-----	---	---	6	
90 - 100		4.5	-----	4.4	-----	61	---	1	
100 - 110		2.5	-----	5.3	-----	129	---	1	
110 - 120		-----	-----	-----	-----	---	---	0	
Airplane 327 - Traverse 3 Length of traverse 383.3 sec									
0 - 150	9,500	----	-----	----	-----	---	---	0	
150 - 160		2.3	-3.2	----	-2.6	---	78	3	
160 - 170		5.8	-----	6.1	-----	80	---	2	
170 - 180		6.4	-6.4	-----	-----	---	---	6	
<sup>a</sup> 180 - 190		8.1	-----	-----	-----	---	---	2	
190 - 200		5.0	-2.2	----	-7.5	---	59	6	
200 - 210		10,000	----	-----	----	-----	---	---	0
210 - 220			4.0	-6.7	9.0	-----	83	---	3
220 - 230		9,500	----	-----	----	-----	---	---	0
230 - 240			-----	-----	-----	-----	---	---	0
240 - 250	4.4		-----	-----	-----	---	---	2	
250 - 260	-----		-4.2	-----	-----	---	---	2	
260 - 270	10,000	----	-----	----	-----	---	---	0	
270 - 310		-----	-----	-----	-----	---	---	0	
310 - 320		9,500	----	-----	----	-----	---	0	
320 - 330	9,500	4.4	-----	-----	-----	---	---	1	
330 - 340		3.6	-4.1	5.8	-----	130	---	3	
340 - 350		3.6	-3.0	-----	-----	---	---	3	
350 - 360		10,000	3.7	-2.3	----	-6.4	---	35	2
360 - 370	-----		-5.2	-----	-----	---	---	3	
370 - 380	-----		-----	-----	-----	---	---	0	
<sup>b</sup> 380 - 390	-----	-----	-----	-----	---	---	0		

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 16, 1947 - Flight 26								
Airplane 327 - Traverse 4 Length of traverse 439.5 sec								
0 - 30	9,500	----	----	----	----	---	---	0
30 - 40		2.4	-2.4	----	----	---	---	2
40 - 50		3.0	----	----	----	---	---	1
<sup>a</sup> 50 - 60		7.9	-4.4	9.5	-8.6	64	110	6
60 - 100		----	----	----	----	---	---	0
100 - 110	10,000	----	----	----	----	---	---	0
110 - 120		1.5	-3.3	----	----	---	---	3
120 - 130		4.8	----	----	----	---	---	1
130 - 160		----	----	----	----	---	---	0
160 - 170	9,500	2.7	-2.9	5.9	----	100	---	2
170 - 180		7.7	-5.3	11.4	----	233	---	3
180 - 190		9.5	-7.1	----	----	---	---	6
190 - 200	10,000	8.3	-9.3	----	----	---	---	4
200 - 210		7.0	-6.0	----	----	---	---	8
210 - 220		5.6	-7.0	----	-11.6	---	222	6
220 - 230	10,500	4.5	-8.4	----	----	---	---	3
230 - 240		----	----	----	----	---	---	0
240 - 250		----	-3.8	----	----	---	---	1
250 - 260		----	-4.3	----	-11.1	---	242	1
260 - 270		----	----	----	----	---	---	0
270 - 310	10,000	----	----	----	----	---	---	0
310 - 320	9,500	----	----	----	----	---	---	0
320 - 330		2.4	----	5.0	----	144	---	1
330 - 360		----	----	----	----	---	---	0
360 - 390	10,000	----	----	----	----	---	---	0
390 - 400		2.1	----	4.2	----	123	---	1
400 - 410	9,500	----	----	----	----	---	---	0
<sup>b</sup> 410 - 420		----	----	----	----	---	---	0
420 - 440		----	----	----	----	---	---	0
Airplane 327 - Traverse 5 Length of traverse 479.4 sec								
0 - 80	9,500	----	----	----	----	---	---	0
80 - 90		2.7	----	----	----	---	---	1
90 - 100		2.9	----	----	----	---	---	1

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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		
August 16, 1947 - Flight 26							
Airplane 327 - Traverse 5 Length of traverse 479.4 sec							
100 - 240	9,500	----	----	----	0		
<sup>a</sup> 240 - 250		----	----	----	0		
250 - 260		----	----	----	0		
<sup>b</sup> 260 - 270		----	----	----	0		
270 - 330		----	----	----	0		
<sup>a</sup> 330 - 340	9,000	2.7	-9.2	----	-6.8	143	4
340 - 350		6.5	-4.2	----	-14.2	116	3
350 - 360		2.2	----	----	----	----	1
360 - 370		4.9	-7.7	8.1	----	211	5
370 - 380		4.2	----	----	----	----	2
380 - 390		4.8	-4.9	9.4	----	86	6
390 - 400		7.7	-3.9	----	-5.0	71	5
400 - 410		4.8	-5.4	6.9	----	131	6
410 - 420		4.4	-8.3	----	----	----	6
420 - 430		9,500	13.2	-5.0	13.1	----	64
430 - 440	10.3		-9.3	----	-21.1	108	5
440 - 450	16.1		-19.5	----	----	----	6
450 - 470	----	----	----	----	----	0	
<sup>b</sup> 470 - 480	----	----	----	----	----	0	
Airplane 327 - Traverse 6 Length of traverse 305.9 sec							
0 - 10	10,000	----	----	----	----	0	
10 - 20	9,500	2.4	-2.4	4.6	-5.5	41	218
20 - 30		----	----	----	----	----	0
<sup>a-b</sup> 30 - 40	10,000	----	----	----	----	----	0
40 - 100		----	----	----	----	----	0
100 - 110		8.8	-4.1	----	-2.5	65	5
110 - 120		8.9	-9.6	----	----	----	9
120 - 130		7.6	-3.3	----	----	----	4
130 - 140	9,500	4.5	-5.1	5.1	----	65	4
140 - 150		2.3	----	----	----	----	1
150 - 160	2.3	----	----	----	----	1	
160 - 170	----	----	-3.6	----	----	2	
170 - 180	9.3	-9.1	12.8	----	134	3	
180 - 270	----	----	----	----	----	0	
270 - 310	9,000	----	----	----	----	0	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27					
Airplane 353 - Traverse 1 Length of traverse 1085.6 sec					
0 - 180	24,500	----	----	---	0
<sup>a</sup> 180 - 190		----	----	---	0
190 - 200		3.5	-3.5	6.9	69
200 - 210		4.1	----	----	1
210 - 220		9.8	-18.6	18.4	103
220 - 230		14.2	-16.1	----	3
230 - 240		10.7	-5.4	----	5
240 - 290		----	----	----	3
<sup>b</sup> 290 - 300	24,000	----	----	----	0
300 - 420		----	----	----	0
<sup>a</sup> 420 - 430		7.5	-3.1	----	0
430 - 440		3.5	-4.4	----	2
440 - 450		----	-8.8	----	3
450 - 460		6.6	----	----	174
460 - 490		----	----	----	3
490 - 500		4.4	-4.1	----	1
500 - 510		6.6	-5.7	----	0
510 - 520		3.5	-3.1	----	5
520 - 580		----	----	----	5
<sup>b</sup> 580 - 590		----	----	----	2
590 - 850		----	----	----	0
850 - 930	24,500	----	----	----	0
<sup>a</sup> 930 - 940		3.4	-6.6	----	0
940 - 950		----	-3.1	----	4
950 - 960		12.2	-3.1	----	1
960 - 970		3.4	----	----	5
970 - 980	24,000	4.4	-3.1	----	3
980 - 990		11.3	-4.4	----	2
990 - 1000		7.5	-12.2	6.2	-24.5
1000 - 1010		----	-5.3	----	110
1010 - 1020		3.1	-8.5	12.0	----
1020 - 1030		6.6	----	----	336
1030 - 1040		----	----	----	110
1040 - 1050		----	-2.8	----	92
1050 - 1060		4.1	-3.8	----	----
1060 - 1070		----	-2.2	----	----

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27					
Airplane 353 - Traverse 1 Length of traverse 1085.6 sec					
<sup>b</sup> 1070 - 1080	24,000	----	----	---	0
1080 - 1090		----	----	---	0
Airplane 353 - Traverse 2 Length of traverse 267.5 sec					
0 - 30	24,000	----	----	---	0
<sup>a</sup> 30 - 40		----	----	---	0
40 - 80		----	----	---	0
80 - 100	23,500	----	----	---	0
100 - 110		3.4	11.2	103	1
110 - 120		4.1	-9.4	-7.2	139
120 - 130		6.5	-5.0	---	6
130 - 140	24,000	3.4	-8.1	---	5
140 - 150		7.5	-15.6	---	4
150 - 160		5.6	-4.7	-7.2	151
160 - 170		---	-10.9	---	4
170 - 180		6.2	---	---	1
180 - 230		---	---	---	0
230 - 240		3.4	-5.6	---	3
240 - 250		4.1	---	---	1
250 - 260		---	-4.1	---	1
<sup>b</sup> 260 - 270		---	---	---	0
Airplane 353 - Traverse 3 Length of traverse 282.5 sec					
0 - 30	23,500	----	----	---	0
<sup>a</sup> 30 - 40	24,000	----	----	---	0
40 - 100		----	----	---	0
100 - 110		2.8	-5.0	---	3
110 - 120		4.3	-3.1	---	2
120 - 130		5.6	---	---	2
130 - 140		8.1	-3.1	---	2
140 - 150		3.4	-8.4	-15.1	177
150 - 160		5.6	---	---	4

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27								
Airplane 353 - Traverse 3 Length of traverse 282.5 sec								
160 - 170	24,000	4.0	-3.1	----	----	---	---	2
170 - 180		21.4	-11.8	----	----	---	---	7
180 - 190		13.0	-4.0	----	----	---	---	6
190 - 200		6.5	-11.2	----	----	---	---	6
200 - 210		16.5	-14.0	----	----	---	---	8
210 - 220		----	----	----	----	---	---	0
220 - 230		19.9	-2.2	----	----	---	---	2
230 - 240		4.0	-9.0	----	----	---	---	5
<sup>b</sup> 240 - 250		----	----	----	----	---	---	0
250 - 260		24,500	----	----	----	----	---	---
260 - 270	24,000	2.8	-4.0	----	----	---	---	2
270 - 280		3.1	----	----	----	---	---	1
280 - 290		----	----	----	----	---	---	0
Airplane 353 - Traverse 4 Length of traverse 421.9 sec								
0 - 100	20,000	----	----	----	----	---	---	0
100 - 150	19,500	----	----	----	----	---	---	0
<sup>a</sup> 150 - 160		----	----	----	----	---	---	0
160 - 170	20,000	3.1	-2.2	----	----	---	---	3
170 - 180		5.6	-9.0	----	----	---	---	6
180 - 190		7.4	-4.6	13.7	----	143	---	4
190 - 200		19,500	6.5	-8.3	----	----	---	---
200 - 210	----		----	----	----	---	---	0
<sup>b</sup> 210 - 220	----		----	----	----	---	---	0
220 - 270	----		----	----	----	---	---	0
270 - 280	2.5		----	----	----	---	---	1
280 - 340	----		----	----	----	---	---	0
<sup>a</sup> 340 - 350	----	----	----	----	---	---	0	
350 - 360	----	----	----	----	---	---	0	
360 - 370	7.7	-8.3	----	----	---	---	5	
370 - 380	17.0	-14.2	----	----	---	---	6	
380 - 390	8.6	-9.0	----	----	---	---	2	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 17, 1947 - Flight 27							
Airplane 353 - Traverse 4 Length of traverse 421.9 sec							
390 - 400	19,500	4.0	-13.9	----	----	3	
400 - 410		----	----	----	----	0	
<sup>b</sup> 410 - 420		----	----	----	----	0	
420 - 430		----	----	----	----	0	
Airplane 353 - Traverse 5 Length of traverse 27.7 sec							
0 - 30	19,500	----	-----	----	-----	0	
Airplane 356 - Traverse 1 Length of traverse 206.2 sec							
0 - 50	19,000	----	-----	----	-----	0	
<sup>a</sup> 50 - 60		6.1	-7.5	9.5	----	68	4
60 - 70		4.7	-5.1	12.1	----	170	5
70 - 80		----	-4.5	----	----	----	3
80 - 90		5.8	-4.6	----	----	----	6
90 - 100		5.8	----	----	----	----	2
100 - 110		4.0	----	----	----	----	2
110 - 120		4.6	-3.3	----	----	----	3
120 - 130		4.0	-3.2	7.5	----	101	4
<sup>b</sup> 130 - 140		3.2	-3.8	----	----	----	2
140 - 150	----	-3.8	----	----	----	2	
150 - 160	18,500	2.5	----	----	----	1	
160 - 170		4.7	----	----	----	1	
170 - 180	19,000	----	----	----	----	0	
180 - 210		----	----	----	----	0	
Airplane 356 - Traverse 2 Length of traverse 227.0 sec							
0 - 40	19,000	----	-----	----	-----	0	
40 - 50		2.6	----	----	----	1	
50 - 60		----	----	----	----	0	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27					
Airplane 356 - Traverse 2 Length of traverse 227.0 sec					
<sup>a</sup> 60 - 70	19,000	----	----	---	0
70 - 80		2.7	-7.5	----	4
80 - 90		4.8	-9.3	----	3
90 - 100		4.5	-3.9	----	5
100 - 110	18,500	6.7	-3.7	----	5
110 - 120		----	-4.9	----	1
120 - 140		----	----	----	0
140 - 150		3.5	-6.2	----	4
<sup>b</sup> 150 - 160		3.4	-10.1	----	4
<sup>a</sup> 160 - 170		7.9	-9.1	----	8
170 - 180		4.4	-6.0	----	3
<sup>b</sup> 180 - 190		----	----	----	0
190 - 230		----	----	----	0
Airplane 356 - Traverse 3 Length of traverse 242.2 sec					
0 - 70	18,500	----	----	---	0
<sup>a</sup> 70 - 80		5.8	-9.9	----	8
80 - 90		9.3	-8.5	----	8
90 - 100		9.9	-6.4	----	9
100 - 110		14.8	-11.1	----	6
110 - 120		7.3	-7.0	----	4
120 - 130		----	-8.1	----	3
<sup>b</sup> 130 - 140		5.4	-5.0	----	4
140 - 150		2.5	----	4.7	2
<sup>a</sup> 150 - 160		5.6	-4.8	----	2
<sup>b</sup> 160 - 170		9.2	-8.5	11.4	5
170 - 180		5.9	-10.3	----	2
180 - 190		----	----	----	0
190 - 200		2.6	-4.6	----	2
200 - 250		----	----	----	0

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27								
Airplane 356 - Traverse 4 Length of traverse 292.4 sec								
0 - 40	18,500	----	-----	----	-----	---	---	0
<sup>a</sup> 40 - 50		----	-4.0	----	-----	---	---	1
50 - 60		10.0	-9.5	21.9	-----	142	---	7
60 - 70		7.7	-8.1	9.4	-----	181	---	7
70 - 80		9.2	-17.0	----	-----	---	---	8
80 - 90		13.1	-11.0	----	-----	---	---	3
90 - 100		8.1	----	-----	-----	---	---	2
100 - 110		----	-1.9	----	-3.4	---	215	2
<sup>b</sup> 110 - 120		----	-----	-----	-----	---	---	0
120 - 150		----	-----	-----	-----	---	---	0
<sup>a</sup> 150 - 160		9.4	-----	15.2	-----	78	---	2
160 - 170		4.6	-8.6	----	-----	---	---	5
170 - 180		4.4	-9.7	5.8	-----	129	---	5
<sup>b</sup> 180 - 190	6.2	-----	-----	-----	---	---	2	
190 - 300	----	-----	-----	-----	---	---	0	
Airplane 356 - Traverse 5 Length of traverse 275.4 sec								
0 - 30	18,500	----	-----	----	-----	---	---	0
<sup>a</sup> 30 - 40		5.5	-6.1	7.9	-----	165	---	7
40 - 50		5.5	-6.6	----	-10.5	---	168	5
50 - 60		7.4	-4.7	----	-----	---	---	5
<sup>b</sup> 60 - 70		3.2	-----	-----	-----	---	---	2
70 - 80		----	-----	-----	-----	---	---	0
80 - 90		3.4	-5.2	11.7	-----	72	---	3
<sup>a</sup> 90 - 100		6.6	-4.5	----	-----	---	---	3
100 - 110		3.2	-6.2	----	-----	---	---	4
110 - 120		3.1	-3.1	----	-----	---	---	3
120 - 130		5.9	-10.4	----	-----	---	---	8
130 - 140		10.6	-8.6	----	-----	---	---	5
140 - 150		7.3	-9.3	----	-11.9	---	168	7
150 - 160	10.7	-----	19.4	-----	374	---	2	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 17, 1947 - Flight 27						
Airplane 356 - Traverse 5 Length of traverse 275.4 sec						
160 - 170	18,500	4.2	---	---	1	
<sup>b</sup> 170 - 180		5.0	8.3	79		2
180 - 190		4.4	---	---		1
190 - 210		---	---	---		0
210 - 220		-3.4	-7.1	132		1
220 - 280		---	---	---		0
Airplane 356 - Traverse 6 Length of traverse 257.5 sec						
0 - 120	18,500	---	---	---	0	
<sup>a</sup> 120 - 130		11.5	-5.1	---	2	
130 - 140		6.6	-8.6	---	10	
140 - 150		7.6	-6.8	---	8	
150 - 160		13.9	-9.4	---	9	
160 - 170		6.6	-5.1	---	7	
170 - 180		7.0	-7.0	---	5	
180 - 190		9.4	-4.9	---	3	
190 - 200		6.3	-3.2	-8.8	177	4
200 - 210		5.5	-6.7	---	---	6
<sup>b</sup> 210 - 220		5.1	---	---	---	1
220 - 230		---	---	---	---	0
230 - 240		3.8	-3.0	---	---	2
240 - 250	---	-5.4	-7.6	163	1	
250 - 260	---	-3.1	-6.3	145	1	
Airplane 344 - Traverse 1 Length of traverse 13.5 sec						
0 - 20	14,500	---	---	---	0	

<sup>a</sup>Cloud entry.  
<sup>b</sup>Cloud exit.

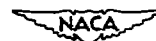




TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

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
August 17, 1947 - Flight 27					
Airplane 344 - Traverse 2 Length of traverse 1743.3 sec					
0 - 170	14,500	----	----	----	0
<sup>a</sup> 170 - 180		7.9	-7.0	16.9	6
180 - 190		5.4	-4.8	----	5
190 - 200		5.4	-9.2	----	3
200 - 210		10.5	-7.6	----	6
210 - 250		----	----	----	0
250 - 260		----	-4.1	----	1
260 - 270		3.5	-2.9	-5.4	4
270 - 280		1.6	-6.0	----	2
280 - 290		4.4	----	----	5
290 - 300		3.2	----	----	1
300 - 390		----	----	----	0
<sup>a-b</sup> 390 - 400		3.8	----	9.3	1
<sup>b</sup> 400 - 410		----	----	----	0
410 - 440		----	----	----	0
<sup>a</sup> 440 - 450		----	-3.2	----	1
450 - 460		5.7	-3.8	----	3
460 - 470		3.5	-4.4	----	6
470 - 480		3.5	----	9.4	3
480 - 490	14,000	8.6	-5.4	-8.2	5
490 - 500		10.1	-9.2	----	8
500 - 510		7.9	-13.9	----	4
510 - 520	14,500	7.0	-4.8	----	6
520 - 530		3.8	-4.1	----	5
530 - 540		8.2	-8.9	----	8
540 - 550		6.7	-7.0	----	6
550 - 560		7.6	-7.6	----	8
<sup>b</sup> 560 - 570		3.5	-6.3	4.3	4
<sup>b</sup> 570 - 580	15,000	5.1	----	----	2
580 - 600		----	----	----	0
600 - 650	14,500	----	----	----	0
650 - 680	14,000	----	----	----	0
680 - 780	14,500	----	----	----	0
780 - 790		2.8	----	----	1
790 - 800		6.0	-3.8	-5.0	4

<sup>a</sup> Cloud entry.<sup>b</sup> Cloud 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	
August 17, 1947 - Flight 27						
Airplane 344 - Traverse 2 Length of traverse 1743.3 sec						
<sup>a</sup> 800 - 810	14,500	2.8	-8.2	----	7	
810 - 820		9.2	-6.3	----	6	
820 - 830		5.7	-12.0	----	4	
830 - 840		----	----	----	0	
840 - 850		3.8	-3.5	----	3	
850 - 860		8.8	-6.0	----	6	
860 - 870		12.3	----	23.8	171	
870 - 880	15,000	4.7	-6.3	6.0	35	
880 - 890		3.5	-6.0	----	-6.6	185
890 - 900		3.8	-8.5	11.4	156	
900 - 910	14,500	9.5	-6.3	15.2	208	
910 - 920		9.8	-4.7	----	----	
920 - 930		12.6	-6.6	----	----	
930 - 940		6.3	-6.0	----	----	
<sup>b</sup> 940 - 950		----	----	----	----	
950 - 1100		----	----	----	0	
1100 - 1110		5.7	-2.8	9.8	157	
1110 - 1120		7.9	-4.1	----	-7.2	96
1120 - 1130		1.3	-4.4	----	----	
<sup>a</sup> 1130 - 1140		----	----	4.8	54	
1140 - 1150		13.9	-4.7	----	----	
1150 - 1160		14.8	-5.4	----	-10.8	179
1160 - 1170	15,000	11.1	-10.4	----	----	
1170 - 1180		4.1	-10.4	----	----	
1180 - 1190	15,500	----	----	----	----	
1190 - 1200	15,000	17.0	-11.6	----	----	
1200 - 1210		8.8	-3.8	12.3	69	
1210 - 1220		9.1	-11.0	----	----	
1220 - 1230		----	----	----	----	
1230 - 1240		----	----	----	-7.5	49
1240 - 1250		3.5	----	----	----	
1250 - 1260		4.4	-3.8	----	----	
1260 - 1270		9.1	-10.7	----	----	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27								
Airplane 344 - Traverse 2 Length of traverse 1743.3 sec								
1270 - 1280	15,000	8.2	-9.4	6.8	----	88	---	4
1280 - 1290		4.7	-2.8	----	----	---	---	1
1290 - 1300		----	-3.1	----	----	---	---	1
<sup>b</sup> 1300 - 1310		3.8	-4.4	5.2	----	74	---	3
1310 - 1320		----	----	----	----	---	---	0
1320 - 1460	14,500	----	----	----	----	---	---	0
<sup>a</sup> 1460 - 1470	15,000	6.9	-3.8	----	----	---	---	3
1470 - 1480		2.8	-6.0	----	-8.6	---	151	6
1480 - 1490		9.4	-2.2	----	----	---	---	5
1490 - 1500	14,500	4.7	-4.4	16.4	----	86	---	6
1500 - 1510		3.4	----	----	----	---	---	1
1510 - 1520	15,000	6.6	----	----	----	---	---	1
1520 - 1530		1.9	-5.0	4.0	----	39	---	3
1530 - 1540		3.4	-5.0	----	----	---	---	3
1540 - 1550		4.1	-5.0	----	----	---	---	4
1550 - 1560		19.4	-11.3	11.8	----	94	---	9
1560 - 1570		7.8	-4.7	----	----	---	---	7
1570 - 1580		4.7	-8.2	----	----	---	---	10
1580 - 1590	15,500	2.8	-3.8	----	-6.0	---	38	3
1590 - 1600		8.2	-6.0	----	----	---	---	8
1600 - 1610		7.5	-5.6	----	----	---	---	5
1610 - 1620	16,000	4.4	-11.3	5.9	-19.4	139	92	7
1620 - 1630		----	-4.1	----	----	---	---	1
1630 - 1640		1.9	----	----	----	---	---	1
1640 - 1650	15,500	----	----	----	----	---	---	0
<sup>b</sup> 1650 - 1660		----	----	----	----	---	---	0
1660 - 1680	15,000	----	----	----	----	---	---	0
1680 - 1750	14,500	----	----	----	----	---	---	0
Airplane 344 - Traverse 3 Length of traverse 260.8 sec								
0 - 50	14,500	----	----	----	----	---	---	0
<sup>a</sup> 50 - 60		----	----	----	----	---	---	0
60 - 70		----	----	----	----	---	---	0
70 - 80		8.3	-4.9	7.5	----	31	---	3

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27					
Airplane 344 - Traverse 3 Length of traverse 260.8 sec					
80 - 90	14,500	13.3	-7.1	---	8
90 - 100		5.6	-19.4	---	3
100 - 110		11.1	-2.2	---	2
110 - 120		11.1	-14.2	---	6
120 - 130	15,000	11.7	-2.8	---	11
130 - 140		5.2	-14.8	---	3
140 - 150		3.4	-9.9	---	5
150 - 160		4.6	-4.3	---	7
160 - 170		3.4	---	---	1
170 - 200		---	---	---	0
200 - 210		3.7	-4.0	-6.4	70
210 - 220		6.2	-4.0	6.7	85
220 - 230		6.5	---	---	1
<sup>b</sup> 230 - 240		---	---	---	0
240 - 270		---	---	---	0
Airplane 344 - Traverse 4 Length of traverse 298.8 sec					
0 - 50	14,500	---	---	---	0
50 - 60		1.9	---	3.5	78
60 - 120		---	---	---	---
120 - 130		---	-5.6	---	---
130 - 140	15,000	6.8	-5.0	2.5	38
<sup>a</sup> 140 - 150		8.4	-14.3	-25.6	266
150 - 160	14,500	3.7	-8.1	---	---
160 - 170		7.1	---	---	---
170 - 180		1.9	-6.8	4.3	139
180 - 190		---	-4.0	---	---
190 - 200		37.3	-11.2	---	---
200 - 210	15,000	7.5	-3.7	---	---
210 - 220		5.0	-3.7	---	---
220 - 230		7.5	-4.0	---	---
230 - 240		7.1	-4.4	---	---
240 - 250		4.7	-2.8	---	---
250 - 260		8.4	-10.3	---	---

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27								
Airplane 344 - Traverse 4 Length of traverse 298.8 sec								
260 - 270	15,000	7.1	-5.3	----	----	---	---	6
270 - 280	15,500	9.6	-9.0	----	----	---	---	4
280 - 290		8.4	-9.6	17.3	----	182	---	5
<sup>b</sup> 290 - 300		5.9	-3.7	6.5	----	131	---	4
Airplane 344 - Traverse 5 Length of traverse 573.3 sec								
0 - 20	14,500	----	----	----	----	---	---	0
<sup>a</sup> 20 - 30		8.4	-10.2	----	-16.8	---	218	2
30 - 40		7.4	-11.2	7.0	----	106	---	6
40 - 50		5.3	-7.1	----	----	---	---	6
50 - 60		8.7	-7.7	----	----	---	---	10
60 - 70		21.4	-10.8	----	----	---	---	6
70 - 80		11.5	-14.5	21.5	----	195	---	9
80 - 90		14.9	-6.8	----	----	---	---	8
90 - 100	15,000	15.2	-8.0	----	----	---	---	4
100 - 110		4.6	----	----	----	---	---	1
110 - 120		----	----	----	----	---	---	0
120 - 130		5.6	-7.4	----	----	---	---	6
130 - 140		6.8	-17.3	----	----	---	---	7
140 - 150	15,500	----	-3.7	----	----	---	---	1
150 - 160		3.7	-3.7	11.9	----	138	---	3
160 - 170	15,000	4.6	-5.0	----	----	---	---	3
170 - 180		4.6	----	10.6	----	92	---	6
180 - 190		6.8	-6.8	9.7	----	128	---	3
190 - 200		20.1	-5.0	----	----	---	---	2
200 - 210		12.4	-17.0	----	----	---	---	7
<sup>b</sup> 210 - 220		4.0	-12.7	----	----	---	---	2
220 - 230		----	----	----	----	---	---	0
230 - 380	14,500	----	----	----	----	---	---	0
<sup>a</sup> 380 - 390		5.6	-9.0	----	----	---	---	4
390 - 400	14,500	9.3	-7.4	----	----	---	---	5
400 - 410		11.5	-10.5	----	----	---	---	7

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27								
Airplane 344 - Traverse 5 Length of traverse 573.3 sec								
410 - 420	14,500	12.4	-7.7	----	-----	---	---	5
420 - 430		----	-4.3	----	-----	---	---	1
430 - 440	15,000	18.9	-12.7	----	-15.7	---	119	5
440 - 450		5.9	-9.9	----	-----	---	---	5
450 - 460		3.4	-----	----	-----	---	---	1
460 - 470		5.6	-5.0	----	-----	---	---	2
470 - 480		17.3	-7.4	----	-----	---	---	6
480 - 490		13.0	-9.9	----	-----	---	---	7
490 - 500		10.2	-17.6	----	-----	---	---	8
500 - 510	15,500	7.1	-13.0	----	-----	---	---	6
510 - 520		6.2	-6.5	----	-----	---	---	5
520 - 530	16,000	9.3	-11.1	----	-----	---	---	5
530 - 540		2.8	-7.4	----	-----	---	---	4
540 - 550		----	-4.0	----	-----	---	---	2
550 - 560	15,500	----	-2.8	----	-----	---	---	1
560 - 570		6.5	-5.6	----	-----	---	---	3
<sup>b</sup> 570 - 580		----	-----	----	-----	---	---	0
Airplane 351 - Traverse 1 Length of traverse 1138.2 sec								
0 - 10	10,000	4.3	-7.2	14.4	-----	76	---	6
10 - 20	9,500	----	-----	----	-----	---	---	0
20 - 30		4.6	-----	4.7	-----	52	---	1
30 - 70	10,000	----	-----	----	-----	---	---	0
<sup>a</sup> 70 - 80		3.2	-10.3	3.7	-----	83	---	4
80 - 90	9,500	17.6	-9.7	----	-----	---	---	6
90 - 100	10,000	20.4	-17.4	----	-----	---	---	7
100 - 110		6.1	-3.1	----	-----	---	---	2
110 - 120	10,500	11.0	-20.0	----	-----	---	---	5
120 - 130	10,000	8.8	-10.7	----	-----	---	---	2
130 - 140		----	-----	----	-----	---	---	0
140 - 150		7.8	-9.7	----	-----	---	---	7
150 - 160		4.9	-4.0	7.2	-----	28	---	4

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27					
Airplane 351 - Traverse 1 Length of traverse 1138.2 sec					
160 - 170	10,000	9.3	-4.5	---	4
170 - 180		14.3	-11.2	---	18
180 - 190		10.1	-19.5	---	12
190 - 200		14.6	-7.2	---	10
200 - 210		10.5	-6.7	---	10
210 - 220		3.2	-5.2	---	5
220 - 230	10,500	3.8	-7.7	---	6
230 - 240		---	---	---	0
<sup>a</sup> 240 - 250		---	-4.6	---	1
250 - 260		6.5	-11.2	12.9	6
260 - 270	10,000	7.9	-6.4	---	4
270 - 280		---	-5.3	---	2
280 - 290		5.3	-5.3	---	7
290 - 300		10.3	-6.4	5.7	6
300 - 310		8.3	-8.6	---	9
310 - 320		6.6	---	---	8
320 - 330		2.5	-4.5	---	2
330 - 340		---	-4.1	---	1
<sup>b</sup> 340 - 350		2.5	---	3.8	1
350 - 360	10,500	---	---	---	0
360 - 380		---	---	---	0
380 - 440	10,000	---	---	---	0
440 - 450		3.3	---	6.1	1
450 - 460		---	---	---	0
460 - 470		---	-4.3	---	1
470 - 480		---	---	---	0
480 - 490		1.2	---	3.6	1
490 - 500		3.7	---	---	5
500 - 510	9,500	4.2	-4.9	7.6	9
<sup>a</sup> 510 - 520		10.2	---	---	6
520 - 530		7.0	-6.0	---	8
530 - 540	10,000	16.0	-13.9	---	10
540 - 550		13.4	-17.8	---	7
550 - 560		16.0	-10.1	6.2	9
560 - 570	10,500	7.8	-8.2	---	5
570 - 580		10.5	-5.0	---	3
<sup>b</sup> 580 - 590		---	---	---	0

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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		
August 17, 1947 - Flight 27							
Airplane 351 - Traverse 1 Length of traverse 1138.2 sec							
590 - 620	10,500	----	-----	----	0		
620 - 640	10,000	----	-----	----	0		
640 - 650		4.4	-----	----	1		
650 - 730	9,500	----	-----	----	0		
730 - 750	10,000	----	-----	----	0		
750 - 760		2.4	-----	----	1		
<sup>a</sup> 760 - 770		2.9	-----	----	1		
770 - 780		6.5	-----	----	2		
780 - 790		7.8	-9.3	----	8		
790 - 800		7.8	-7.3	----	8		
800 - 810		5.1	-11.2	----	5		
810 - 820		9.0	-4.1	----	7		
820 - 830		7.5	-6.3	----	6		
830 - 840		20.8	-9.2	----	10		
840 - 850		10.4	-6.0	----	7		
850 - 860		2.2	-----	----	1		
860 - 870		----	-6.0	----	1		
870 - 880		7.0	-14.8	----	2		
880 - 890		----	-----	----	0		
890 - 900		1.3	-----	6.0	78	1	
900 - 910		----	-----	----	0		
910 - 920		3.3	-5.4	----	3		
920 - 930		----	-----	----	0		
930 - 940		----	-3.9	----	2		
940 - 950		2.8	-2.8	----	2		
950 - 960		4.4	-2.3	----	2		
960 - 980		----	-----	----	0		
980 - 990		6.3	-----	----	2		
<sup>b</sup> 990 - 1000		----	-2.5	----	3		
1000 - 1010		----	-----	----	0		
1010 - 1020		2.9	-----	7.4	32	3	
1020 - 1040		----	-----	----	0		
1040 - 1050		3.5	-3.6	----	-10.2	83	2
1050 - 1060		3.4	-----	----	----	2	
1060 - 1140		----	-----	----	----	0	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27					
Airplane 351 - Traverse 2 Length of traverse 612.7 sec					
0 - 20	10,000	----	----	---	0
<sup>a</sup> 20 - 30		----	----	---	0
30 - 50		----	----	---	0
50 - 60	9,500	1.3	----	---	1
60 - 70		3.8	----	---	2
70 - 80		3.8	8.3	42	3
80 - 90	10,000	2.9	-6.8	---	2
90 - 100		----	-5.2	---	1
100 - 110		5.2	-5.1	-13.8	200
110 - 120		2.9	-7.4	---	4
120 - 130		5.4	-4.9	---	5
130 - 140		2.9	-3.4	-11.3	71
140 - 150		2.0	----	---	1
150 - 160		----	-5.0	---	3
160 - 170		7.0	-6.6	10.5	210
170 - 180		4.2	-7.0	---	5
180 - 190		9.0	-10.3	---	8
190 - 200		2.0	-7.7	-15.0	79
200 - 210		----	-5.4	-8.9	105
210 - 220		4.6	-9.0	7.2	64
220 - 230		7.4	-6.4	---	7
230 - 240		5.9	-5.5	---	9
<sup>b</sup> 240 - 250		3.3	----	---	2
250 - 260		5.7	-5.0	-9.6	67
260 - 350		----	----	---	0
350 - 360	9,500	4.3	-2.8	---	3
<sup>a</sup> 360 - 370		7.2	-5.9	-5.6	76
370 - 380	10,000	4.4	-5.3	---	2
380 - 390		2.9	-4.5	---	4
390 - 400		2.4	-5.6	---	5
400 - 410		7.1	-8.0	---	8
410 - 420		5.2	-6.3	---	4
420 - 430		8.9	-8.4	---	5
430 - 440		10.6	-4.3	---	3
440 - 450		8.6	-8.7	---	5
450 - 460		4.2	-7.4	9.0	82

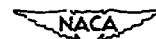
<sup>a</sup>Cloud entry.<sup>b</sup>Cloud exit.

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
August 17, 1947 - Flight 27								
Airplane 351 - Traverse 2 Length of traverse 612.7 sec								
460 - 470	10,000	----	-5.6	----	----	---	---	3
470 - 480		4.8	----	----	----	---	---	2
480 - 490	10,500	8.7	-12.7	----	----	---	---	9
490 - 500		10.5	-14.0	----	----	---	---	9
500 - 510		11.1	-5.4	12.1	----	41	---	10
510 - 520		8.0	-11.2	----	----	---	---	8
520 - 530		11.1	-10.5	----	----	---	---	6
530 - 540		9.3	-7.5	----	----	---	---	6
540 - 550		9.1	-7.0	----	----	---	---	6
550 - 560		----	-2.8	----	----	---	---	1
560 - 570		----	----	----	----	---	---	0
<sup>b</sup> 570 - 580		----	----	----	----	---	---	0
580 - 620		----	----	----	----	---	---	0
Airplane 351 - Traverse 3 Length of traverse 354.5 sec								
0 - 10	9,500	----	----	----	----	---	---	0
10 - 70	10,000	----	----	----	----	---	---	0
70 - 80		2.2	----	3.6	----	145	---	1
<sup>a</sup> 80 - 90		----	-1.7	----	-3.4	---	175	1
90 - 100		----	-1.7	----	----	---	---	1
100 - 110		----	-2.7	----	----	---	---	1
110 - 120		2.9	-8.0	----	----	---	---	2
120 - 130		5.3	-6.6	9.2	----	75	---	2
130 - 140	9,500	9.9	-7.6	----	----	---	---	9
140 - 150		8.9	-16.6	----	----	---	---	7
150 - 160	10,000	----	-3.6	----	----	---	---	3
160 - 180		----	----	----	----	---	---	0
180 - 190		5.9	----	----	----	---	---	1
190 - 200		6.6	-7.5	----	----	---	---	2
200 - 210	9,500	9.0	-4.7	----	----	---	---	3
210 - 220		7.2	-8.6	----	----	---	---	7
220 - 230	10,000	5.9	-6.4	----	----	---	---	8

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 17, 1947 - Flight 27								
Airplane 351 - Traverse 3 Length of traverse 354.5 sec								
230 - 240	10,000	6.9	-8.8	----	-5.2	---	73	7
<sup>b</sup> 240 - 250		1.3	-5.7	----	----	---	---	4
250 - 260		----	----	----	----	---	---	0
260 - 300	9,500	----	----	----	----	---	---	0
300 - 310		----	-15.2	----	----	---	---	2
310 - 320		8.0	-4.8	----	----	---	---	3
320 - 330		14.7	-9.4	----	----	---	---	7
330 - 340		5.8	-6.3	----	----	---	---	8
340 - 360		----	----	----	----	---	---	0
Airplane 351 - Traverse 4 Length of traverse 527.2 sec								
0 - 10	9,500	----	----	----	----	---	---	0
10 - 20		----	-4.2	----	----	---	---	1
<sup>a</sup> 20 - 30		5.7	-6.8	----	----	---	---	9
30 - 40		13.3	-8.8	----	----	---	---	7
40 - 50		6.8	-8.3	----	----	---	---	9
50 - 60		3.7	-8.8	----	----	---	---	8
60 - 70		4.3	-8.9	----	----	---	---	7
70 - 80		----	-5.4	----	-11.8	---	278	1
80 - 90		3.4	----	5.0	----	305	---	2
90 - 100	10,000	10.2	-4.6	3.7	----	141	---	4
100 - 110		10.6	-10.2	----	----	---	---	9
110 - 120		5.4	-12.4	----	----	---	---	4
120 - 130		4.7	-9.1	----	----	---	---	6
130 - 140		4.7	-5.7	----	-8.5	---	105	3
140 - 150		3.9	----	----	----	---	---	1
150 - 160		14.1	-10.0	----	----	---	---	13
160 - 170		12.7	-12.1	----	----	---	---	16
170 - 180		9.4	-9.2	----	----	---	---	11
180 - 190		10.2	-6.3	----	----	---	---	7
190 - 200		5.0	-7.5	----	----	---	---	4
200 - 210		4.5	-11.0	----	-13.3	---	88	7

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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		
August 17, 1947 - Flight 27							
Airplane 351 - Traverse 4 Length of traverse 527.2 sec							
210 - 220	9,500	8.8	-5.1	3.8	68	5	
<sup>b</sup> 220 - 230		3.0	-----	-----	---	2	
230 - 240		2.1	-2.5	-----	---	2	
240 - 250		4.6	-----	-----	---	2	
250 - 260		-----	-----	-----	---	0	
260 - 270		4.4	-----	-----	---	1	
270 - 300		-----	-----	-----	---	0	
300 - 310		-----	-6.7	-----	---	1	
310 - 320		3.7	-5.9	-----	---	3	
320 - 330		2.6	-9.4	-----	---	4	
<sup>a</sup> 330 - 340	10,000	2.5	-8.8	-----	---	5	
340 - 350		20.3	-4.3	-----	---	9	
350 - 360		8.9	-11.8	-----	---	11	
360 - 370		5.4	-----	-----	---	1	
370 - 390		-----	-----	-----	---	0	
390 - 400		6.8	-7.2	13.7	137	12	
400 - 410		10.3	-7.4	-----	---	11	
410 - 420		9.6	-6.4	-----	---	9	
420 - 430		23.5	-17.5	-----	---	15	
430 - 440		13.2	-12.1	-----	---	9	
440 - 450	18.1	-8.6	-----	---	3		
<sup>b</sup> 450 - 460	9,500	-----	-----	-----	---	0	
460 - 480		-----	-----	-----	---	0	
480 - 490		19.1	-13.6	-----	---	6	
490 - 500		6.9	-17.0	-----	---	2	
500 - 530		9,500	-----	-----	-----	---	0
		9,000	-----	-----	-----	---	
August 20, 1947 - Flight 28							
Airplane 344 - Traverse 1 Length of traverse 307.4 sec							
0 - 70	24,500	-----	-----	-----	---	0	
70 - 80		11.7	-7.2	8.1	137	6	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 20, 1947 - Flight 28								
Airplane 344 - Traverse 1 Length of traverse 307.4 sec								
a80 - 90	24,500	7.9	-5.9	----	----	---	---	7
90 - 100	25,000	15.6	-9.2	----	----	---	---	7
100 - 110		22.8	-15.9	----	----	---	---	7
110 - 120		17.4	-13.5	----	----	---	---	3
120 - 130		6.3	-10.0	----	----	---	---	7
b130 - 140		5.8	----	9.1	----	72	---	2
140 - 160		----	----	----	----	---	---	0
160 - 170		4.1	-3.8	8.1	----	171	---	2
170 - 180		5.5	----	----	----	---	---	1
180 - 240		----	----	----	----	---	---	0
a240 - 250		9.1	-3.6	14.8	-7.8	75	73	3
250 - 260		7.1	-10.1	----	----	---	---	6
260 - 270		6.4	-6.8	----	----	---	---	3
b270 - 280		----	----	----	----	---	---	0
280 - 310		----	----	----	----	---	---	0
Airplane 344 - Traverse 2 Length of traverse 53.8 sec								
0 - 60	24,500	----	----	----	----	---	---	0
Airplane 344 - Traverse 3 Length of traverse 48.0 sec								
a0 - 10	24,500	9.6	-4.8	----	----	---	---	6
10 - 20		7.8	-6.7	----	----	---	---	6
b20 - 30		9.1	-6.6	20.4	----	225	---	3
30 - 50		----	----	----	----	---	---	0
Airplane 344 - Traverse 4 Length of traverse 224.5 sec								
0 - 100	24,500	----	----	----	----	---	---	0
a100 - 110		6.9	----	----	----	---	---	2
110 - 120		5.6	-5.8	----	-6.5	---	57	4

<sup>a</sup>Cloud entry.

<sup>b</sup>Cloud exit.

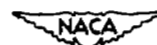


TABLE I.- SUMMARY OF GUST MEASUREMENTS - Continued

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
August 20, 1947 - Flight 28						
Airplane 344 - Traverse 4 Length of traverse 224.5 sec						
120 - 130	24,500	6.9	-8.5	----	----	9
130 - 140		10.5	-9.6	----	----	5
140 - 150	25,000	4.1	-5.9	----	----	3
<sup>b</sup> 150 - 160		2.7	-----	----	----	1
160 - 180		-----	-----	----	----	0
180 - 230	24,500	-----	-----	----	----	0
Airplane 344 - Traverse 5 Length of traverse 197.0 sec						
0 - 80	24,500	-----	-----	----	----	0
<sup>a</sup> 80 - 90		5.4	-6.9	----	-16.2	3
90 - 100		14.4	-11.5	----	-----	8
100 - 110	25,000	6.8	-7.9	----	-----	9
110 - 120		8.5	-18.9	----	-----	5
120 - 130	25,500	9.1	-4.8	----	-9.5	3
130 - 140		5.5	-7.0	----	-----	4
140 - 150		-----	-3.0	----	-----	1
<sup>b</sup> 150 - 160		-----	-----	----	-----	0
160 - 200		-----	-----	----	-----	0
Airplane 344 - Traverse 6 Length of traverse 122.8 sec						
0 - 50	24,500	-----	-----	----	-----	0
<sup>a</sup> 50 - 60		11.5	-----	----	-----	1
60 - 70		12.7	-7.7	----	-----	6
70 - 80	25,000	3.3	-6.8	----	-----	3
<sup>b</sup> 80 - 90		3.3	-7.6	----	-----	2
90 - 130		-----	-----	----	-----	0

<sup>a</sup>Cloud entry.  
<sup>b</sup>Cloud 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
August 20, 1947 - Flight 28								
Airplane 344 - Traverse 7 Length of traverse 130.0 sec								
0 - 20	24,500	----	----	----	----	---	---	0
<sup>a</sup> 20 - 30		6.0	----	13.4	----	233	---	2
30 - 50		----	----	----	----	---	---	0
50 - 60		11.1	-10.2	----	-22.5	---	182	3
60 - 70	25,000	5.6	-8.4	13.4	----	54	---	6
70 - 80		3.8	-6.0	11.8	----	69	---	4
80 - 90		5.2	----	----	----	---	---	2
<sup>b</sup> 90 - 100		----	----	----	----	---	---	0
100 - 130		----	----	----	----	---	---	0
Airplane 344 - Traverse 8 Length of traverse 196.8 sec								
0 - 60	24,500	----	----	----	----	---	---	0
<sup>a</sup> 60 - 70		12.9	-4.9	----	-8.1	---	221	3
70 - 80		9.7	-12.8	----	----	---	---	7
80 - 90	25,000	11.9	-7.5	18.6	----	51	---	5
90 - 100		5.5	-6.9	----	-8.8	---	75	3
100 - 110		----	-7.8	----	----	---	---	2
110 - 120		----	-8.0	----	----	---	---	2
120 - 130		3.6	-6.1	----	----	---	---	2
130 - 140		----	-5.2	----	----	---	---	2
140 - 150		----	----	----	----	---	---	0
<sup>b</sup> 150 - 160		----	----	----	----	---	---	0
160 - 200		----	----	----	----	---	---	0
Airplane 344 - Traverse 9 Length of traverse 197.8 sec								
0 - 110	24,500	----	----	----	----	---	---	0
<sup>a</sup> 110 - 120		7.4	-6.1	----	-11.6	---	166	5
120 - 130		6.6	-7.9	----	-10.8	---	148	3
130 - 140		----	-5.9	----	-16.4	---	60	1
140 - 150		----	-6.7	----	----	---	---	1
150 - 160		9.3	-3.9	----	----	---	---	4

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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		
August 20, 1947 - Flight 28								
Airplane 344 - Traverse 9 Length of traverse 197.8 sec								
160 - 170	24,500	2.7	-4.8	9.1	-7.0	53 121	2	
<sup>b</sup> 170 - 180		----	-----	----	-----	---	0	
180 - 200		----	-----	----	-----	---	0	
Airplane 356 - Traverse 1 Length of traverse 258.2 sec								
0 - 20	19,500	----	-----	----	-----	---	0	
20 - 30		4.5	-5.6	----	-----	---	3	
30 - 40		8.5	-7.4	----	-----	---	7	
<sup>a</sup> 40 - 50		12.2	-10.1	15.9	-----	128	6	
50 - 60		8.4	-10.4	----	-----	---	9	
60 - 70		10.7	-11.5	----	-17.7	---	6	
70 - 80		6.5	-12.8	----	-----	---	4	
80 - 90		12.1	-5.2	----	-----	---	5	
<sup>b</sup> 90 - 100		----	-5.5	----	-6.6	---	128	1
100 - 150		----	----	----	-----	---	0	
150 - 160		----	-3.4	----	-----	---	1	
160 - 170		6.2	----	----	-----	---	1	
<sup>a</sup> 170 - 180		5.0	----	----	-----	---	1	
180 - 190		5.1	-5.5	----	-----	---	2	
190 - 220		----	----	----	-----	---	0	
<sup>b</sup> 220 - 230		----	----	----	-----	---	0	
230 - 260		----	----	----	-----	---	0	
Airplane 356 - Traverse 2 Length of traverse 32.0 sec								
<sup>a</sup> 0 - 10	19,500	11.4	-10.7	----	-----	---	4	
10 - 20		4.9	-3.5	----	-----	---	6	
20 - 30		----	----	----	-----	---	0	
<sup>b</sup> 30 - 40		----	----	----	-----	---	0	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 20, 1947 - Flight 28								
Airplane 356 - Traverse 3 Length of traverse 167.0 sec								
0 - 60	19,500	----	-----	----	-----	---	---	0
<sup>a</sup> 60 - 70		----	-----	----	-----	---	---	0
70 - 80		4.3	-4.9	----	-----	---	---	2
80 - 90		8.6	-7.6	----	-7.8	---	95	3
90 - 100		13.1	-15.1	----	-----	---	---	7
100 - 110		4.8	-6.4	----	-----	---	---	6
110 - 120		10.0	-3.7	----	-----	---	---	6
<sup>b</sup> 120 - 130		----	-----	----	-----	---	---	0
130 - 170		----	-----	----	-----	---	---	0
Airplane 356 - Traverse 4 Length of traverse 374.0 sec								
0 - 60	19,500	----	-----	----	-----	---	---	0
<sup>a</sup> 60 - 70		5.0	-----	----	-----	---	---	1
70 - 80		10.8	-9.7	----	-----	---	---	6
80 - 90	20,000	17.3	-11.1	----	-----	---	---	5
90 - 100		5.1	-18.6	----	-----	---	---	8
<sup>b</sup> 100 - 110		8.6	-----	7.1	-----	68	---	5
110 - 140		----	-----	----	-----	---	---	0
140 - 240	19,500	----	-----	----	-----	---	---	0
<sup>a</sup> 240 - 250		8.7	-----	----	-----	---	---	3
250 - 260		13.3	-21.4	----	-----	---	---	10
260 - 270		9.5	-11.2	----	-----	---	---	3
270 - 280		7.4	-9.6	----	-----	---	---	3
<sup>b</sup> 280 - 290		5.8	-----	----	-----	---	---	1
290 - 380		----	-----	----	-----	---	---	0
Airplane 356 - Traverse 5 Length of traverse 624.3 sec								
0 - 50	19,500	----	-----	----	-----	---	---	0
<sup>a</sup> 50 - 60		----	-----	----	-----	---	---	0
60 - 70		----	-----	----	-----	---	---	0

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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	
August 20, 1947 - Flight 28							
Airplane 356 - Traverse 5 Length of traverse 624.3 sec							
70 - 80	19,500	4.8	-6.7	----	----	5	
80 - 90		5.0	-11.4	----	-23.1		63
90 - 100		3.5	-7.6	5.3	----	80	5
<sup>b</sup> 100 - 110		6.0	-5.2	----	----	----	3
110 - 370		----	----	----	----	----	0
<sup>a</sup> 370 - 380		7.3	-4.1	15.4	----	93	4
380 - 390		5.7	-5.3	----	----	----	3
390 - 400		6.1	-4.0	----	----	----	3
400 - 410		----	-9.5	----	----	----	3
410 - 420		5.2	----	----	----	----	1
420 - 430		----	-4.0	----	----	----	1
<sup>b</sup> 430 - 440	----	-4.0	----	----	----	1	
440 - 630	----	----	----	----	----	0	
Airplane 356 - Traverse 6 Length of traverse 186.0 sec							
0 - 90	19,500	----	----	----	----	0	
<sup>a</sup> 90 - 100		----	----	----	----	0	
100 - 110		----	----	----	----	0	
110 - 120		----	-5.0	----	----	1	
120 - 140		----	----	----	----	0	
140 - 150		10.0	-7.4	----	----	8	
150 - 160		6.7	-7.4	----	----	4	
160 - 170		----	----	----	----	0	
<sup>b</sup> 170 - 180		----	----	----	----	0	
180 - 190	----	----	----	----	0		
Airplane 353 - Traverse 1 Length of traverse 2911.2 sec							
0 - 240	14,000	----	----	----	----	0	
240 - 260	14,500	----	----	----	----	0	
<sup>a</sup> 260 - 270	9.5	-9.0	----	----	----	8	

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 20, 1947 - Flight 28								
Airplane 353 - Traverse 1 Length of traverse 2911.2 sec								
270 - 280	14,000	2.3	-9.1	8.3	-----	70	---	2
280 - 290		6.1	-4.2	-----	-----	---	---	4
290 - 300		5.0	-5.2	-----	-----	---	---	7
300 - 310		3.9	-3.7	-----	-----	---	---	2
<sup>b</sup> 310 - 320		-----	-----	-----	-----	---	---	0
320 - 330		-----	-----	-----	-----	---	---	0
330 - 340		5.1	-1.5	8.0	-----	64	---	2
340 - 470		-----	-----	-----	-----	---	---	0
470 - 500	14,500	-----	-----	-----	-----	---	---	0
500 - 510	14,000	3.0	-3.3	-----	-6.1	---	70	2
510 - 520		-----	-----	-----	-----	---	---	0
520 - 530		7.0	-6.0	-----	-13.5	---	89	5
530 - 680		-----	-----	-----	-----	---	---	0
<sup>a</sup> 680 - 690		3.2	-----	7.2	-----	28	---	1
690 - 700		7.2	-9.3	-----	-----	---	---	8
700 - 710		14.9	-14.5	-----	-----	---	---	5
<sup>b</sup> 710 - 720		7.8	-----	12.0	-----	130	---	2
720 - 810		-----	-----	-----	-----	---	---	0
810 - 850	14,500	-----	-----	-----	-----	---	---	0
850 - 930	14,000	-----	-----	-----	-----	---	---	0
<sup>a</sup> 930 - 940		6.3	-11.3	-----	-----	---	---	8
<sup>b</sup> 940 - 950		-----	-----	-----	-----	---	---	0
950 - 960		-----	-----	-----	-----	---	---	0
960 - 970		-----	-4.6	-----	-----	---	---	1
970 - 990	14,500	-----	-----	-----	-----	---	---	0
990 - 1000		3.4	-4.6	13.5	-----	224	---	2
<sup>a</sup> 1000 - 1010		-----	-5.2	-----	-----	---	---	1
1010 - 1020		13.5	-5.3	-----	-----	---	---	4
1020 - 1030		16.2	-9.8	-----	-----	---	---	8
1030 - 1040		15.5	-21.8	-----	-----	---	---	8
1040 - 1050	15,000	12.0	-6.8	-----	-----	---	---	7
1050 - 1060	15,500	4.5	-11.3	-----	-----	---	---	5
<sup>b</sup> 1060 - 1070		-----	-----	-----	-----	---	---	0
1070 - 1080	15,000	-----	-----	-----	-----	---	---	0

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud 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
August 20, 1947 - Flight 28								
Airplane 353 - Traverse 1 Length of traverse 2911.2 sec								
1080 - 1220	14,500	----	----	----	----	---	---	0
1220 - 1250	14,000	----	----	----	----	---	---	0
1250 - 1260		5.0	-6.6	10.3	----	175	---	5
1260 - 1270		7.7	-11.7	----	----	---	---	6
1270 - 1280		9.8	-9.5	7.0	----	305	---	7
a-b 1280 - 1290		----	----	----	----	---	---	0
1290 - 1310	14,500	----	----	----	----	---	---	0
1310 - 1490	15,000	----	----	----	----	---	---	0
a 1490 - 1500		12.9	----	25.3	----	152	---	2
1500 - 1510		6.8	-6.6	6.1	----	136	---	6
1510 - 1520	14,500	4.2	-5.8	----	-11.4	---	141	5
b 1520 - 1530		4.2	----	----	----	---	---	1
1530 - 1550		----	----	----	----	---	---	0
1550 - 1590	15,000	----	----	----	----	---	---	0
1590 - 1600		5.5	-4.2	----	----	---	---	3
1600 - 1610	14,500	3.7	-5.4	----	----	---	---	6
1610 - 1630		----	----	----	----	---	---	0
1630 - 1720	15,000	----	----	----	----	---	---	0
a 1720 - 1730		3.3	-3.4	7.0	-7.6	37	235	2
1730 - 1740		3.2	-7.1	----	----	---	---	5
1740 - 1750		10.3	-2.3	----	----	---	---	3
1750 - 1760		3.6	-9.5	----	----	---	---	4
b 1760 - 1770		6.4	-4.7	----	----	---	---	3
1770 - 1820	15,500	----	----	----	----	---	---	0
1820 - 1890	16,000	----	----	----	----	---	---	0
1890 - 1900		6.5	-6.6	----	----	---	---	6
1900 - 1920		----	----	----	----	---	---	0
1920 - 1930		----	-9.2	----	----	---	---	2
a 1930 - 1940		7.9	-13.3	----	----	---	---	5
1940 - 1950	15,500	11.0	----	24.9	----	113	---	3
b 1950 - 1960		2.2	-3.0	----	----	---	---	2
1960 - 1990		----	----	----	----	---	---	0
1990 - 2000	15,000	----	----	----	----	---	---	0

<sup>a</sup>Cloud entry.<sup>b</sup>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
August 20, 1947 - Flight 28					
Airplane 353 - Traverse 1 Length of traverse 2911.2 sec					
2000 - 2010	14,500	3.9	4.0	108	2
2010 - 2260	13,500	----	----	----	0
2260 - 2290	13,000	----	----	----	0
2290 - 2300		5.6	8.1	134	2
2300 - 2310	13,500	9.7	-4.1	----	7
<sup>a</sup> 2310 - 2320		6.7	-3.8	----	3
2320 - 2330		7.1	----	----	1
2330 - 2340	13,000	8.0	-12.8	----	9
2340 - 2350		----	-3.2	-5.6	86
2350 - 2360		----	----	----	0
2360 - 2370		----	-3.9	----	1
2370 - 2380		----	----	----	0
2380 - 2400	13,500	----	----	----	0
2400 - 2410		6.2	-5.2	9.4	86
2410 - 2420		----	-8.6	----	53
2420 - 2430		7.8	-6.9	----	3
2430 - 2440	13,000	5.3	-14.3	----	8
2440 - 2450		16.5	-14.2	-30.2	143
2450 - 2460		5.9	-9.8	----	7
2460 - 2470		19.0	-15.0	----	6
2470 - 2480		12.2	-12.2	----	7
<sup>b</sup> 2480 - 2490		9.7	-13.4	----	3
2490 - 2790	14,000	----	----	----	0
2790 - 2800		3.4	-4.6	----	2
2800 - 2810		3.5	-5.1	----	5
<sup>a</sup> 2810 - 2820		4.3	-8.9	11.3	62
<sup>b</sup> 2820 - 2830		5.7	-3.8	----	2
2830 - 2870		----	----	----	0
2870 - 2880	13,500	----	----	----	0
2880 - 2920	13,000	----	----	----	0

<sup>a</sup>Cloud entry.<sup>b</sup>Cloud exit.

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

Date	Flight no.	Air-plane no.	Assigned altitude (ft)	Traverse no.	Draft location from start of traverse (sec)		Draft extent (ft)	Average draft velocity (fps)		
					Start	End				
8-16-47	26	344	25,000	a <sub>1</sub>						
				a <sub>2</sub>						
				3	115.0 132.2	119.5 150.4	1,581 6,538	35.6 23.0		
				4	136.8	151.6	5,112	-12.2		
				a <sub>5</sub>						
				a <sub>6</sub>						
				a <sub>7</sub>						
				351	20,000	1	100.0	111.2	3,621	-27.1
						2	134.0	152.5	6,174	10.8
						a <sub>3</sub>				
				353	15,000	a <sub>1</sub>				
						a <sub>2</sub>				
						3	785.0 1115.5 1178.8 1216.4	804.2 1132.0 1187.0 1225.2	5,546 4,961 2,492 2,564	14.9 10.4 20.5 -26.0
						1	170.6	178.3	2,364	32.5
						a <sub>2</sub>				
				327	10,000	3	152.2 189.9	169.0 215.1	4,358 6,567	-10.4 12.9

<sup>a</sup>No draft velocities indicated by records.



TABLE II.- SUMMARY OF DRAFT-VELOCITY MEASUREMENTS - Continued

Date	Flight no.	Air-plane no.	Assigned altitude (ft)	Traverse no.	Draft location from start of traverse (sec)		Draft extent (ft)	Average draft velocity (fps)		
					Start	End				
8-16-47	26	327	10,000	4	180.8	198.1	4,893	22.4		
					201.0	215.9	4,083	28.5		
				5	363.0	370.4	1,965	-18.6		
					421.9	449.0	7,173	16.1		
				6	106.1	133.2	7,332	12.0		
8-17-47	27	353	25,000	1	428.5	435.5	2,351	17.1		
					513.5	518.8	1,866	22.6		
					978.0	987.5	3,308	-16.8		
					1003.5	1111.0	2,671	26.7		
				2	120.0	131.0	3,654	14.5		
					178.5	191.0	4,775	33.8		
				a <sub>4</sub>						
				356	20,000	1	75.5	83.7	2,757	-24.4
							148.2	174.5	8,682	-9.5
		a <sub>2</sub>								
		a <sub>3</sub>								
		a <sub>4</sub>								
		a <sub>5</sub>								
6	15,000	a <sub>1</sub>	144.0	162.5	6,153	17.1				
		344	15,000	a <sub>1</sub>						

<sup>a</sup>No draft velocities indicated by records.



TABLE II.- SUMMARY OF DRAFT-VELOCITY MEASUREMENTS - Continued

Date	Flight no.	Air-plane no.	Assigned altitude (ft)	Traverse no.	Draft location from start of traverse (sec)		Draft extent (ft)	Average draft velocity (fps)
					Start	End		
8-17-47	27	344	15,000	2	181.5	202.2	6,352	-18.4
					494.0	501.5	2,326	17.2
				510.0	555.0	13,563	8.3	
				842.0	858.2	4,848	19.4	
				1151.0	1176.5	7,665	31.9	
				1568.8	1593.4	7,240	17.4	
				1603.0	1613.5	3,308	28.6	
				3	112.5	133.3	6,439	37.8
				4	183.0	228.0	13,402	10.2
				5	118.0	152.0	10,125	11.4
			474.0	491.0	5,368	11.8		
		351	10,000	1	81.8	94.0	3,736	25.6
					206.4	226.0	5,791	13.4
				500.0	510.6	3,261	-21.2	
				532.6	549.0	4,923	34.3	
				554.4	559.6	1,541	31.2	
				2	227.0	249.0	6,156	12.5
				367.0	384.0	4,907	20.6	
				438.0	450.2	3,378	23.6	
				455.0	464.0	2,413	19.4	
477.0	498.0			5,885	13.1			
a <sub>3</sub>	4	12.0	32.2	5,832	-9.9			
		36.0	50.6	4,375	-6.8			
		159.4	168.4	2,619	32.0			
		341.0	358.4	4,824	34.5			
8-20-47	28	344	25,000	1	93.2	103.5	3,621	44.7
					a <sub>2</sub>			
				3	2.4	14.5	4,252	19.0

<sup>a</sup>No draft velocities indicated by records.



TABLE II.- SUMMARY OF DRAFT-VELOCITY MEASUREMENTS - Concluded

Date	Flight no.	Air-plane no.	Assigned altitude (ft)	Traverse no.	Draft location from start of traverse (sec)		Draft extent (ft)	Average draft velocity (fps)
					Start	End		
8-20-47	28	344	25,000	4	134.3	146.4	4,040	29.8
				5	95.5	123.0	9,464	30.2
				<sup>a</sup> 6				
				<sup>a</sup> 7				
		8	80.5	119.4	13,346	14.9		
		<sup>a</sup> 9						
		<sup>a</sup> 1						
		<sup>a</sup> 2						
		3	103.5	116.8	3,937	-20.1		
		4	259.0	269.0	3,010	-23.3		
		<sup>a</sup> 5						
		<sup>a</sup> 6						
		1	270.3	303.2	9,358	-16.1		
			1026.4	1050.6	7,764	41.3		
	1260.0	1271.9	3,507	-21.6				
	1506.5	1521.5	4,387	-9.5				
	2437.3	2443.7	1,734	-40.2				
	2451.5	2457.3	1,637	32.1				
	2814.6	2822.7	2,323	-21.1				

<sup>a</sup>No draft velocities indicated by records.



INDEX

<u>Subject</u>	<u>Number</u>
Gusts - Structure	6.1.2.1
Gusts - Frequency	6.1.2.2
Gusts - 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 August 16, 1947 to August 20, 1947 are presented.